GUIDELINES FOR THE MEDICAL SELECTION OF OCULAR TISSUE DONORS. EDITION 3.0 © AUGUST 2019: Edited by Graeme Pollock graemeap@unimelb.edu.au

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About EBAANZ

The Eye Bank Association of Australia & New Zealand (EBAANZ) is a not-for-profit organisation, and the peak body for eye donation and transplantation services in Australia and New Zealand (ANZ).

EBAANZ is dedicated to helping restore sight, provide national and international leadership, develop standards for eye banking, and advocate for the eye banking sector by promoting the unique requirements of eye banks, and facilitating the sharing of information and expertise amongst EBAANZ members.

Special Thanks

EBAANZ would like to thank the Centre for Eye Research Australia, the University of Melbourne, and the Victorian Lions Clubs for their financial and collegial support towards the development of this framework, and our volunteer Steering Committee, Peer Comentators and External Policy Advisors for their invaluable expertise and support.
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Introduction

**Purpose**

These guidelines are intended as a reference document to assist the medical selection of eye donors for transplantation purposes. It is hoped that it will be useful as

- a teaching tool for new eye donor coordinators (in particular)
- a reference for other organ donor and tissue donor coordinators who may be involved the referral of a potential eye donor
- a guideline to assist in the interpretation and application of standards applicable to ocular tissue for transplantation

Although written using definitive terminology, this document is a *guideline* and should not be considered a definitive standard but rather as a helpful starting point in determining medical suitability for eye donation (explanations and additional information are therefore kept deliberately brief). It should be read in conjunction with applicable regulatory body and professional associations’ standards. (In Australia this includes the applicable standards dictated by the Therapeutic Goods Administration and in Australia and New Zealand the Eye Bank Association of Australia and New Zealand Medical and Quality Standards). These standards are considered mandatory minimal standards within their jurisdictions, and their application has been incorporated within these guidelines.

These guidelines are only for eye donor selection. The advice given may not be applicable (and may be in conflict) to the standards and guidelines that are applicable for other forms of donation.

The guidelines also seek to expand on specific eye conditions (e.g. cataract, acanthamoeba) and provide direction on the suitability of the corneas for specific keratoplasty procedures.

**Acknowledgements and Reference Documents**


Many of the guidelines are those of the United Kingdom Blood Transfusion Service and the National Institute for Biological Standards and Control. The Guidelines are also informed by the Eye Bank Association of Australia and New Zealand Medical and Quality Standards, the Eye Bank Association of America Medical Standards, the European Eye Bank Association Minimum Medical Standards, the Therapeutic Good Administration Therapeutic Goods Orders 85 and 88, and the Australian Red Cross Blood Service Guidelines for the Selection of Blood Donors.

**General Principles**

Eye/corneal donors are selected to ensure that their tissue is unlikely to harm any recipient. Where there is recognised risk to the recipient the guidelines must be followed.
The immediate responsibility is with the trained and qualified Eye Donation Professional who must ensure that the donor fulfils the respective selection guidelines. When it is not clear from these guidelines if an individual donation is acceptable, no tissue should be used without further discussion with the Eye Bank’s Medical Director.

The following terms are used throughout the A-Z listing:

**Including**

Lists any other terms which may be covered by the Guideline

**Definition**

Where additional clarity is required, a definition is provided

**Action**

This indicates the recommended action that should be taken. If an Action statement is included in a listing it may include the term(s):

- **Must Not Donate** - The donor must not donate if any of the statements apply to them, unless an “accept” statement clearly applies. Often the exclusion will depend on time related factors.
- **Accept** – The donation is acceptable for transplant purposes. It may also provide reasons why a donor may be permitted to donate (especially if preceded by a “do not donate” statement. The statements are conditional. All statements that must be fulfilled come before the final statement that they may be accepted. If the donor fulfils these requirements, as well as others that apply, then they can be accepted.
- **Refer to Medical Director** - This is used when there may be a need for further discussion or expert opinion regarding a specific case.

*Where the guideline states “Cornea-only” this refers to the use (transplant) not the donation. Thus “cornea-only” indicates that corneas may be used for transplant but not the sclera for the same donor.*

**Advisory**

Although a condition is not excluded by any Medical Standards it may be possible to reduce any further risk by following the advisory.

**See if Relevant**

Is used when an A-Z entry may or may not need to be consulted. This will depend on the information at hand regarding the donor.

**See**

Means that the specified A-Z entry should be consulted

**Additional Information**

This provides background information on the disease or condition (and provides information as to why a particular “Action” may be required.

**Additional TGA Criteria**

Where the TGA have criteria that are in addition to those of the EBAANZ Medical Standards, or where further clarity of explanation is required, the TGA criteria are listed here (in blue). Australian Eye Banks must adhere to these additional criteria.
Use of the A-Z Listing
Any medical condition, or possible contraindication to donation elicited at any point in the donation process (eg. written history, physicians’ history, medical and lifestyle interview) should be managed according to the A-Z listing.

It is recognised that the listing is not comprehensive of all possible diseases, conditions or signs and symptoms that may arise during a specific donation. Therefore donations must not be accepted from donors that exhibit health risks that are not listed in this guidance without referral to and acceptance by the Medical Director.

Revisions and Up-to-Date Releases
These guidelines will be regularly reviewed to ensure that they are contemporary with world-best-practice, changing standards, improved knowledge of the disease process and with developments in technology, diagnosis and prognosis.

To assist in the further development and content of these guidelines, including notification of error, omissions and suggestions for improvements, the users are encouraged to contact the author.

Document Control
Extensive revisions of this document are known as Editions.

Changes involving additions, minor revision and corrections are known as Revisions (beginning at 1 for each Edition).

Thus for example: Edition 1, Revision 3 will be known shorthand as “Guidelines for the Selection of Eye Donors 1.3”.

Release date of each Revision will be listed on the document.

Changes from Version 2.1 August 2016.

Addiction and Drug Abuse
Additional information provided on UK approach to individual risk assessment for those injecting 3-12 months period.

Bi-sexual male
Reduced deferral period from 4 to 3 months following MSM if NAT performed.

Body Piercing
Reduction to 3 months exclusion if NAT performed. Six months without NAT (serology only).

Ebola Fever
Now referral to Viral Haemorrhagic Fever

Hepatitis A
Reduction in deferral period from 12 to 6 months after recovery

Hepatitis B
Rewrite and simplification of all sections. Acceptability of sexual partners and house sharers if more than 3 months since last contact - if less than 3 months acceptable if donor shown to be immunised against HBV

Hepatitis C
Inclusion of information on treatment. Accept current or former sexual partners if more than 3 months since last sexual contact.

Hepatitis E
Reduction in deferral period from 12 to 6 months after recovery. Removal of household and sexual contacts guidelines. Update of additional information to reflect new knowledge.
HIV
Acceptance of sexual partners of HIV infected individuals if 3 months since last sexual contact (down from 4 months)

Homosexual Male
Reduced deferral period from 4 to 3 months following MSM if NAT performed

HTLV infection
Introduced sections on current or former sexual partners and Current and former persons sharing a home.

Inoculation Injury
Reduced deferral from 4 to 3 months from inoculation if NAT performed

Marburg Fever
Now referral to Viral Haemorrhagic Fever

Poisoning
New addition

Prostitution
Changed entry to Sex Worker

Reyes syndrome
Added that now acceptable is more than 3 months after recovery

Sex Change
Removed and replaced with Transgender Individuals

Sex Worker
Introduced entry to replace “Prostitution”. Reduced deferral period from 4 to 3 months with NAT. Defined practice.

Viral Haemorrhagic Fever
New addition to encompass all viral haemorrhagic disease. Ebola and Marburg are now referred to here. Changed individual affected to permanent deferral. Contacts and travel have been changed and clarified. Additional information on these conditions added.
# Guidelines for the Medical Selection of Eye Donors (A-Z)

## Acanthamoeba (ocular infection):

**Action**  
Must not donate if past or active infection.

**Additional Information**  
Acanthamoeba keratitis is a rare disease in which amoebae invade the cornea of the eye. It may result in permanent visual impairment or blindness.  
In the developed world it is nearly always associated with contact lens use, as Acanthamoeba can survive in the space between the lens and the eye.

## Accident:

**Includes**  
Trauma.

**Action**  
Accept if no eye involvement.

**See if relevant**  
Transfusion.

**Additional Information**  
If there is significant trauma, in particular penetrating trauma – an open wound or other source of infection is a risk for tissues becoming contaminated. Blunt chest trauma can result in damage to cardiovascular tissue.  
Note that if trauma has resulted in severe blood loss, the validity of any blood sample must be checked due to the possibility of plasma dilution of the donor.

## Achondroplasia:

**Action**  
Accept.

**Additional Information**  
Achondroplasia is a common cause of dwarfism. It occurs as a sporadic mutation in approximately 80% of cases (associated with advanced paternal age) or may be inherited as an autosomal dominant genetic disorder.  
People with achondroplasia have abnormal structural bone, so structural bone is not suitable for donation.

## Acne:

**Action**  
Accept if no ocular surface disease.

**See if relevant**  

**Additional Information**  
Secondary infection of acne is usually obvious with swelling and redness of affected spots. There is a risk of bacteria entering the blood. This could be a serious threat to anybody receiving tissues other than ocular as the bacteria can multiply to dangerous levels.  
For corneas preserved by organ culture (but not hypothermic) there is an opportunity to detect contaminating bacteria in the tissue and it should be safe to donate, but if there is no ocular involvement hypothermic storage would also present no significant risk. Secondary infection of the lid margin (blepharitis) on its own should not preclude eye donation, but donations must not be taken if there is also ocular surface disease.
## Acne - Treatment:

**Action**
Accept for corneas even if treated with Etretinate (Tigason), Acitretin (Neotigason), Isotretinoin (Roaccutane) or Alitretinoin (Toctino).

**Additional Information**
Etretinate (Tigason), Acitretin (Neotigason), Isotretinoin (Roaccutane) and Alitretinoin (Toctino) can cause birth defects in babies exposed to them while inside the womb. It is important to allow time for the drug to be cleared from the donor. It takes longer to clear some drugs than others. However, it is not considered to accumulate in corneas, nor present a risk to a corneal recipient.

Etretinate was approved by the FDA in 1986 to treat severe psoriasis. It was subsequently removed from the market in the late 1990s due to the high risk of birth defects. It has an extremely long half-life and all tissues (other than corneas) must not be donated.

Acitretin and Isotretinoin can cause birth defects but have a lower half-life than Etretinate. Tissues other than corneas should not be donated if less than 24 months from last dose of Acitretin and 4 weeks from last dose of Isotretinoin.

## Acne Rosacea:

**Action**
Accept if no ocular involvement.

**Additional Information**
Rosacea, or acne rosacea, is a type of non-contagious skin inflammation that typically affects the face. The small surface blood vessels (capillaries) of the skin enlarge, giving the appearance of a permanent flush. The forehead, cheeks and chin may develop yellow-headed pimples. Unlike acne, rosacea does not scar.

In severe cases of rosacea, the nose can become reddened and enlarged (rhinophyma). The condition tends to appear between the ages of 30 and 50 years, initially with frequent flushing. Over time, this flushing becomes permanent as the capillaries enlarge and pustules begin to form. The symptoms tend to worsen with advancing age. The cause is unknown and there is no permanent cure.

Complications include Ocular Rosacea: Red (due to telangiectasias), dry, irritated or gritty, eyes and eyelids. Watery eyes. Eyelids often develop cysts. Some other symptoms include foreign body sensations, itching, burning, stinging, and sensitivity to light. Eyes can become more susceptible to infection. Blurry vision and loss of vision can occur.

## Acupuncture:

**Action**
Accept, if performed with sterile single use needles. No deferral period required.

**Must not donate if**
- a) Less than six months from completing treatment or four months if NAT HCV is performed when single-use sterile needles cannot be confirmed
- b) The condition for which treatment was given is not acceptable

**Additional TGA Criteria**
Six month and four month exclusion periods are mandated by the TGA.
**Additional Information**

Acupuncture needles that have been reused have passed infection from person to person.

**Australia**

In 2012 the Chinese Medicine Board of Australia (CMBA) was created, and in 2013 established an interim accreditation standard for the profession in partnership with the Australian Health Practitioner Regulation Agency. The legislation put in place stipulates that only practitioners who are state-registered may use the following titles: Acupuncture, Chinese Medicine, Chinese Herbal Medicine, Registered Acupuncturist, Registered Chinese Medicine Practitioner, and Registered Chinese Herbal Medicine Practitioner. The aim of registration was to protect the public from the risks of acupuncture by ensuring a high baseline level of competency and education of registered acupuncturists, enforcing guidelines regarding continuing professional education and investigating complaints of practitioner conduct.

The Infection prevention and control guidelines for acupuncture practice (available at [http://www.chinesemedicineboard.gov.au/Codes-Guidelines.aspx](http://www.chinesemedicineboard.gov.au/Codes-Guidelines.aspx)) stipulate that only sterile single use needles are to be used. Therefore in practice in Australia, there should be no concerns or deferral periods following acupuncture.

**New Zealand**

Currently the acupuncture industry is self-regulated. There are a few organisations offering voluntary membership including New Zealand Register of Acupuncture Incorporated and New Zealand Acupuncture Standards Authority Incorporated. These organisations in their code of practice (available at [http://www.acupuncture.org.nz/uploadGallery/NZRA%20clinical%20guidelines.%20October%202012.pdf](http://www.acupuncture.org.nz/uploadGallery/NZRA%20clinical%20guidelines.%20October%202012.pdf)) stipulate the use of sterile single use needles.

**Addiction and Drug Abuse:**

**Action**

Must not donate:

Persons who have ever performed intravenous, intramuscular or subcutaneous non-prescribed drug use (even if only once) within the previous six months (or 4 months if HCV NAT is performed) or where history or examination gives cause to suspect non-medical intravenous drug use. This includes body-building drugs.

May be acceptable if injected drugs were prescribed by the donor’s physician for a condition that would not lead to exclusion.

Previous use of non-parenteral drugs does not necessarily require exclusion.

**Additional TGA Criteria**

The TGA mandates a five year exclusion period.

**Additional Information**

Injecting drug use has been linked with the passing on of many infections, including hepatitis and HIV.

This guidelines recommendation of six month exclusion period is a rational approach based on the worst case scenario “window periods” for hepatitis and HIV testing. It is also internally consistent with other risk of infectious disease exclusion periods. The TGA mandate for Australian Eye Banking of five years appears to be based on the theoretical risk of recidivism in addiction and drug abuse.

UK and Netherlands approaches have changed towards individual assessment of risk if injected drugs of addition within past 3-12 months by a “designated officer” if the risk of acquiring an infectious disease may be outweighed by the risk of delaying a transplant. UK will also accept if the donor has not injected with other non-prescription drugs (other than drugs of addition), such as bodybuilding drugs or injectable tanning agents within the past 3 months.
**African Trypanosomiasis (Sleeping Sickness):**

**Action**  
Accept for corneas but not sclera.

**Additional Information**  
Corneas are avascular and therefore there is considered to be no risk of transmitting a protozoal infection.

Human African trypanosomiasis, sleeping sickness, African lethargy, or Congo trypanosomiasis] is a parasitic disease of humans and other animals, caused by protozoa of the species Trypanosoma brucei and transmitted by the tsetse fly.

**Age:**

**Action**  
Lower age limit for donation of eye tissue for transplantation is two years.

The upper age limit is left to the discretion of the Medical Director, since no definite relationship has been established between the quality of donor tissue and advanced age.

**Additional Information**  
Low age problems relate to both the technical difficulties in using infant tissue and the complication of post-operative myopia. The extreme thinness of the infant cornea means that it is likely to fold upon itself during handling. This, combined with the small diameter of the cornea, creates problems during the donation surgery, trephining, and during placement and suturing in the host bed. The myopic shift after keratoplasty with infant donor corneas has been related to the steep curvature of these corneas.

**Age-related Macular Degeneration (AMD):**

**Action**  
Accept.

**Additional Information**  
Age-related macular degeneration (AMD) is a medical condition which usually affects older adults and results in a loss of vision in the centre of the visual field (the macula) because of damage to the retina. It occurs in "dry" and "wet" forms. It is a major cause of blindness and visual impairment in older adults (>50 years).

It does not affect the cornea or suitability for transplant.

**AIDS:**

See HIV.

**Alcoholism:**

**Action**  
Accept.

See if relevant Cirrhosis

**Additional Information**  
Of relevance to non-ocular tissue donation - If nutrition is poor the quality of bone is likely to be poor and not suitable for donation.

**Allergy:**

**Action**  
Accept.

See if relevant Steroid therapy
### Alternative Therapies:

**Action**
- Accept

For therapies involving penetration by needles - accept, if performed with sterile single use needles. No deferral period required.

**Must not donate if**
- a) Therapies involving the penetration by needles - less than six months from completing treatment or four months if NAT HCV is performed
- b) The condition for which treatment was given is not acceptable

**See if relevant**
- Acupuncture

### Amyotrophic lateral sclerosis (Motor Neurone Disease):

**Action**
- Must not donate

**See**
- Motor Neurone Disease

**Additional Information**
- Amyotrophic Lateral Sclerosis (ALS) – also referred to as Motor Neurone Disease (MND), as Lou Gehrig’s disease in the United States – is a debilitating disease with varied aetiology characterised by rapidly progressive weakness, muscle atrophy and fasciculations, muscle spasticity, difficulty speaking (dysarthria), difficulty swallowing (dysphagia), and difficulty breathing (dyspnea). **ALS is the most common of the five motor neuron diseases.**

The precise cause of ALS is still not known. Where no family history of the disease is present – i.e., in around 90% of cases – there is no known cause for ALS. Approximately 20% of Familial ALS has been associated with mutations in the gene that produces the Cu/Zn superoxide dismutase (SOD1) enzyme.

### Anaemia:

**Action**
- Accept if underlying cause of anaemia (or iron deficiency) is not a reason to exclude

**See if relevant**
- Haemoglobin Disorders
  - Malignancy
  - If treated with blood components or products: Transfusion

### Angelman Syndrome:

**Action**
- Consult with Medical Director on likely risk of pathology to cornea.

**Additional Information**
- It is associated (20-80%) with strabismus and/or hypo-pigmented eyes (and skin) but there is no suggestion of direct congenital effects on the cornea.

Angelman syndrome is a neuro-genetic disorder characterized by severe intellectual and developmental disability, sleep disturbance, seizures, jerky movements (especially hand-flapping), frequent laughter or smiling, and usually a happy demeanour.

AS is a classic example of genomic imprinting in that it is caused by deletion or inactivation of genes on the maternally inherited chromosome 15 while the paternal copy, which may be of normal sequence, is imprinted and therefore silenced. The sister syndrome, Prader-Willi syndrome, is caused by a similar loss of paternally inherited genes and maternal imprinting.
Animal Derived Tissue Products:
See Tissue Products / Tissue Grafts (Animal Derived)

Ankylosing Spondylitis:
Action Accept if no ocular involvement.
Note: Condition may be associated with higher risk of uveitis or iritis.

Additional Information
Ankylosing spondylitis, previously known as Bechterew’s disease (or syndrome) and Marie-Strümpell disease, is a chronic inflammatory disease of the axial skeleton with variable involvement of peripheral joints and nonarticular structures. AS is a form of spondyloarthritis, a chronic, inflammatory arthritis where immune mechanisms are thought to have a key role. It mainly affects joints in the spine and the sacroiliac joint in the pelvis.

About one third to 40% of people with spondylitis will experience anterior uveitis or iritis at least once. AS can also affect the heart valves and the aorta.

See Autoimmune Disorders

Anthrax:
Action Infection: Must not donate until six months post-recovery
Contact/Exposure: Must not donate until six months after last exposure

Additional Information
Anthrax is an acute disease caused by the bacterium Bacillus anthracis. Most forms of the disease can be lethal. Some forms of the disease respond well to antibiotic treatment. Bacillus anthracis can form dormant endospores that are able to survive in harsh conditions for decades or even centuries. Such spores can be found on all continents, even Antarctica. When spores are inhaled, ingested, or come into contact with a skin lesion on a host, they may become reactivated and multiply rapidly.

It most commonly affects the skin through direct contact with the infected material such as animal hides. If spores have been inhaled there is no evidence that there is any spread to the bloodstream until the person has developed signs of infection. In the UK it is considered safe to accept exposed donors provided they have not shown signs of infection, even if they have been given prophylactic antibiotics.

Antibiotic Therapy:
Action Accept if disorder being treated is not a reason to exclude

Additional Information
Treatment with antibiotics is not of itself a reason for deferral but the reason for the treatment may be.

See Infection – General

Antidepressant Therapy:
See Mental Health Problems
**Antifungal Therapy:**

**Action**
Accept, if on local therapy only for chronic superficial fungal infections.

Must not donate if treatment is for an unresolved systemic fungal infection.

**Additional Information**
Fungaemia is the presence of fungi or yeasts in the blood. It is most commonly caused by Candida species, but can be caused by other fungi as well, including Saccharomyces, Aspergillus and Cryptococcus. It is most commonly seen in immunosuppressed or immunocompromised patients with severe neutropenia, oncology patients, or in patients with intravenous catheters.

Organ culture of corneas will not necessarily eliminate the risk of transmission of a fungal infection to the recipient’s eye causing a fungal endophthalmitis.

See Infection – General

**Antiviral Therapy:**

See Infection – General

**Arthritis:**

See if relevant
Ankylosing Spondylitis
Autoimmune Disorders
Osteoarthritis
Psoriasis
Rheumatoid Arthritis

**Arthropod Borne Encephalitis (Arbovirus infection):**

**Action**
Accept for corneas but not sclera only after clinical opinion that the infection has resolved.

Barmah Forest Virus
Chikungunya Virus
Dengue Fever
Japanese encephalitis virus
Murray Valley encephalitis virus
Ross river virus
Tick-borne encephalitis
West Nile virus
Yellow Fever virus
Arbovirus is a term used to refer to a group of viruses that are transmitted by arthropod vectors. The word arbovirus is an acronym (ARthropod-BOrne virus). Symptoms of arbovirus infection generally occur 3–15 days after exposure to the virus and last 3 or 4 days. The most common clinical features of infection are fever, headache and malaise, but encephalitis and haemorrhagic fever may also occur.

Arboviruses maintain themselves in nature by going through a cycle between a host, an organism that carries the virus, and a vector, an organism that carries and transmits the virus to other organisms. Vectors are commonly mosquitoes, ticks and sandflies.

Person-to-person transmission of arboviruses is not common, but can occur. Blood transfusions, organ transplantation and the use of blood products can transmit arboviruses if the virus is present in the donor's blood or organs. Corneas are avascular and therefore there is considered to be low or no risk of transmitting an infection.

Common arboviruses include: Murray Valley encephalitis virus*, Ross River virus*, Barmah Forest virus* Tick-borne encephalitis virus, Japanese encephalitis virus, Yellow fever virus, West Nile virus.

(*of immediate relevance to Australia).

**Australian Bat Lyssavirus:**

**Action** Must not donate

**See** Bites and Scratches – Bat

**Additional Information** Australian bat lyssavirus (ABLV) is a zoonotic virus closely related to rabies virus. It was first identified in a 5-month old juvenile Black Flying Fox collected near Ballina in northern New South Wales, Australia in January 1995 during a national surveillance program for the recently identified Hendra virus. ABLV is distributed throughout Australia in a variety of bat species which are believed to be the primary reservoir for the virus.

There have been three confirmed cases of ABLV in humans, all of them fatal. The first occurred in November 1996 when an animal carer was scratched by a Yellow-bellied Sheath-tailed Bat. Onset of a rabies-like illness occurred 4–5 weeks following the incident, with death twenty days later.

In August 1996, a woman in Queensland was bitten on the finger by a flying fox while attempting to remove it from a child it had landed on. After a 27 month incubation a rabies-like illness developed. The condition worsened after hospital admission and she died 19 days after the onset of illness.

In December 2012 an eight-year-old boy was bitten or scratched by a bat in north Queensland. He became ill three weeks later, and died on 22 February 2013.

Rabies vaccine and immunoglobulin are effective in prophylactic and therapeutic protection from ABLV infection. Since the emergence of the virus, rabies vaccine is administered to individuals with a heightened risk of exposure and vaccine and immunoglobulin are provided for post exposure treatment.

ABLV is one of four zoonotic viruses discovered in Pteropid bats since 1994, the others being Hendra virus, Nipah virus and Menangle virus. Of these, ABLV is the only virus known to be transmissible to humans directly from bats without an intermediate host.

**Autoimmune Disorders:**

**Action** Accept if no ocular involvement

**See** Is there an entry for the condition?
See if relevant
If treated with immunoglobulin or plasma exchange:
Immunosuppression
Transfusion

**Avodart Therapy:**
See Dutasteride Therapy

**Babesiosis:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept for corneas but not sclera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Information</td>
<td>Corneas are avascular and therefore there is considered to be no risk of transmitting a protozoal infection. Babesiosis is a malaria-like parasitic disease caused by infection with Babesia, a genus of protozoal piroplasms. After trypanosomes, Babesia is thought to be the second most common blood parasite of mammals. However, human babesiosis is uncommon, but reported cases have risen because of expanded medical awareness.</td>
</tr>
</tbody>
</table>

**Bacteraemia:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate unless corneas are preserved by organ culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Information</td>
<td>Septicaemia (and thus bacteraemia) is a contraindication in a prospective corneal donor because of the risk of pathogenic organisms being harbourled in the conjunctiva, surviving the antibiotics used throughout the retrieval and buttoning process, and eventually leading to an endophthalmitis in the recipient’s eye. The only exception to this is if the corneas are to be placed in organ culture for preservation. The microbiological surveillance during organ culture allows the exclusion prior to transplantation of those corneas that may be harbouring organisms.</td>
</tr>
</tbody>
</table>

**Barmah Forest Virus:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if within 12 months of last infection or recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>See</td>
<td>Arthropod Borne Encephalitis (Arbovirus infection)</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Barmah Forest virus is a virus currently found only in Australia. Although there is no specific treatment for infection with the Barmah Forest virus, the disease is non-fatal and most infected people recover. The Barmah forest virus causes similar symptoms as the Ross River virus. The virus can only be transmitted to humans by bites from infected mosquitos. Direct contact with an infected person or animal does not cause infection. The virus is hosted mainly by marsupials, especially possums, kangaroos and wallabies.</td>
</tr>
</tbody>
</table>

**Basal Cell Carcinoma:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept unless ocular area is involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Information</td>
<td>Although basal cell carcinoma (BCC) is a form of cancer it only spreads locally. As it does not spread by the blood stream it is not generally considered a risk to people receiving donated material.</td>
</tr>
</tbody>
</table>

**BCG/BCG Immunisation:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept if more than 4 weeks after inoculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must not donate if</td>
<td>a) The inoculation site has not yet healed</td>
</tr>
<tr>
<td></td>
<td>b) Less than 4 weeks after inoculation.</td>
</tr>
</tbody>
</table>
Additional Information

Bacillus Calmette–Guérin (BCG) is a vaccine against tuberculosis that is prepared from a strain of the attenuated (weakened) live bovine tuberculosis bacillus, Mycobacterium bovis.

As a live bacteria vaccine, by four weeks, the infection caused by the inoculation should have been controlled. If the wound has not healed it is possible that there may still be infection present.

Bilharzia:
See Schistosomiasis

Binswanger’s disease:
See Dementia

Bipolar Disorder:
See Mental Health Problems

Bisexual and Homosexual – Female:
Action Accept
Additional information There is no evidence that there is an increased risk of sexually transmitted infections in bisexual or homosexual females compared to heterosexual females.

Bisexual – Male:
Action Must not donate if any oral or anal sex with another man in the past six months (even if a condom or other protective was used)

Additional TGA Criteria The TGA mandates 12 month exclusion for increased risk sexual practice but does not define it

Additional information Men who have had sex with other men have a higher chance of having an undiagnosed communicable disease infection. Therefore on an epidemiological population basis, male to male sex is considered high-risk behaviour.

If one considers having a good knowledge of an individual’s behaviour, then male to male sex may not be considered high-risk behaviour (e.g. in the instance of a long-term monogamous relationship).

The suggested six month exclusion period is consistent with that of other high-risk for infectious disease exclusions, based on “worse-case scenario” of hepatitis and HIV window periods. 6 months or 4 months if HCV NAT performed

Bisexual – Female partners of Bisexual male:
Action Must not donate if any oral or anal sex with another man in the past six months by the male partner was determined to be high-risk behaviour.

Additional TGA Criteria The TGA mandates 12 month exclusion for increased risk sexual practice but does not define it

See also Bisexual – Male, Additional information

Bites - Human:
Action Must not donate less than six months from receiving bite, or four months if NAT HCV is performed

Additional TGA Criteria The six month exclusion period for these increased risks (mucosal splash with blood, needle stick injury, tattoo, body piercing) is mandated by the TGA

Additional Information Human bites are considered to have the same risk as exposure to the following risks of acquiring a blood borne transmissible infection: mucosal splash with blood, needle stick injury, tattoo, body piercing
Bites and Scratches – Bat:

**Action**

Must not donate if less than **12 months** since the bat bite or scratch - in any country (including Australia and New Zealand)

**See**

Rabies
Australian Bat Lyssavirus

**Additional Information**

Worldwide, bats are considered a risk for rabies infections. In Australia they are also considered a risk for lyssavirus (which is a rhabdovirus like rabies and caused 3 deaths in Queensland) and Hendra virus (4 deaths in Queensland)

Bites and Scratches – Non-human, non-bat mammal:

**Action**

Must not donate if potential donor was bitten or scratched in a rabies endemic area in the past **12 months** (if the donor was NOT pre-immunised against rabies)

Accept if the donor was bitten or scratched in a rabies endemic area and had been **pre-immunised** against rabies

**See**

Rabies

**Additional Information**

In essence, rabies is considered endemic in any area outside of Australia, New Zealand and the British Isles.

Bites and Stings – Envenomation:

**Action**

Must not donate if potential donor died as a result of the envenomation

Must not donate if venom has directly contacted the eyes or peri-orbital area

**Additional Information**

Venom is composed of hundreds to thousands of different proteins and enzymes, all serving a variety of purposes, such as interfering with a prey's cardiac system or increasing tissue permeability so that venom is absorbed faster. Depending on the family or species, venom can be a combination of many toxins, including cytotoxins, haemotoxins, neurotoxins, and myotoxins.

Relatively little is known about the protein structure of the venom of Australian creatures - including reptiles, arachnids, cephalopods, fish and cnidarian. Little is known about the distribution of toxins throughout the body and the accumulation and retention of toxins. Effects on the body are as varied as the venoms, and venoms also vary within a species.

Therefore the risk to the recipient of receiving a dose of venom toxin from their transplant, or receiving tissue damaged by the venom, is largely unknown.

Blind Donor:

**Action**

Accept if no corneal disorder. If necessary discuss with Medical Director.

**Additional Information**

All other tissues should be suitable unless there is a contraindication to the disease causing the blindness (eg. River Blindness).

Blood Components and Blood Products:

**See**

Transfusion

Body Piercing:

**Includes**

Permanent and Semi-permanent Makeup

**Action**

Must not donate if less than **six months** after last piercing or four months if NAT HCV performed
The six month exclusion period for these increased risks (mucosal splash with blood, needle stick injury, tattoo, body piercing) is mandated by the TGA

Piercing has passed infection from person to person. Waiting six months (four with NAT HCV) ensures that the infections tested for will be picked up

**Bone Graft:**
See Tissue and Organ Recipients

**Borreliosis (Lyme Disease):**
See Infection – Acute

Lyme disease (Lyme borreliosis) is an infectious disease caused by at least three species of bacteria belonging to the genus Borrelia transmitted to humans by the bite of infected ticks belonging to a few species of the genus Ixodes ("hard ticks"). Identified in Europe and North America its presence in Australia or New Zealand is largely unknown

**Brain Surgery:**
See Neurosurgery

**Brain Tumour:**
See Neurosurgery

**Breast Lump:**
See If related to malignancy, see Malignancy

**Bronchitis – Acute:**
See Infection – Acute

**Bronchitis – Chronic:**
See if relevant Infection – General

Steroid Therapy

**Brucellosis (Undulant Fever):**
Action Must not donate
Brucellosis, also called Bang’s disease, Crimean fever, Gibraltar fever, Malta fever, Maltese fever, Mediterranean fever, rock fever, or undulant fever is a highly contagious zoonosis caused by ingestion of unsterilized milk or meat from infected animals or close contact with their secretions. Transmission from human to human, through sexual contact or from mother to child, is rare but possible. It is uncommon in Australia and New Zealand.

Brucella are small, gram-negative, non-motile, non-spore-forming, rod shaped (coccobacilli) bacteria. They function as facultative intracellular parasites causing chronic disease, which usually persists for life.

The duration of the disease can vary from a few weeks to many months or even years. In the first stage of the disease, septicemia occurs and leads to the classic triad of undulant fevers, sweating (often with characteristic smell, likened to wet hay), and migratory arthralgia and myalgia. With combination antibiotic therapy, most individuals recover in 2 to 3 weeks. Untreated, however, the infection may progress and increase in severity and also affect new tissues. Brucellosis can take a chronic form, with periods of illness alternating with periods of no symptoms. Approximately 10% of individuals may have a relapse, even after treatment is completed.

This disease has a low mortality rate (lower than 2%); the most likely cause of death is endocarditis caused by Brucella melitensis.

Cancer:
See Malignancy

Cannabis:
See Addiction and Drug Abuse

Cardiomyopathy:
Action Must not donate if:
   a) Associated with extra-ocular muscle paresis e.g. Kearns-Sayre Syndrome
   b) Not recovered from a possible viral cause of the cardiomyopathy

If a bacterial infective process is thought to be involved it may be preferable to preserve the corneas by organ culture.

Additional Information Kearns–Sayre syndrome (abbreviated KSS) also known as oculocraniosomatic disease or Oculocraniosomatic neuromuscular disease is a mitochondrial myopathy with a typical onset before 20 years of age. KSS is a more severe syndromic variant of chronic progressive external ophthalmoplegia, a syndrome that is characterised by isolated involvement of the muscles controlling eyelid movement (levator palpebrae, orbicularis oculi), and those controlling eye movement (extra-ocular muscles). This results in ptosis and ophthalmoplegia respectively.

Cardiovascular Disease:
Action Accept, but consider those entries under “See if relevant”.

See if relevant Cardiomyopathy Endocarditis Myocarditis

Cataract:
Includes Cataract Surgery
A cataract is a clouding of the lens inside the eye which leads to a decrease in vision. It is the most common cause of blindness and is conventionally treated with surgery.

Cataract by itself (untreated) will not affect the cornea.

Surgical removal of the lens (cataract) and its replacement with an intraocular lens (IOL) has the potential to affect the cornea and make it slightly less likely that the cornea will be suitable for transplantation. However, eye bank assessment will determine if there has been any significant effect on the cornea and, if so, the cornea may still be suitable for anterior lamellar corneal transplantation.

The common surgery today which is less likely to affect the cornea than past surgery is Phacoemulsification, or phaco. A small incision is made on the side of the cornea, the clear, dome-shaped surface that covers the front of the eye. A small probe is inserted into the eye. This device emits ultrasound waves that soften and break up the lens so that it can be removed by suction.

Most cataract surgery today is done by phacoemulsification, also called "small incision cataract surgery."

Extracapsular cataract extraction (ECCE), consists of removing the lens manually, but leaving the majority of the capsule intact. Extracapsular extraction is less frequently performed than phacoemulsification but can be useful when dealing with very hard cataracts or other situations where emulsification is problematic.

Intracapsular cataract extraction (ICCE) is now rarely performed. The lens and surrounding capsule are removed in one piece through a large incision while pressure is applied to the vitreous membrane.

**Central Nervous System Disease:**

**Action**

Must not donate if:

- a) Dementia
- b) History of CNS disease of possible infective origin (e.g. multiple sclerosis and Creutzfeldt-Jakob disease)
- c) Neurodegenerative conditions of unknown aetiology (e.g. Parkinson’s disease)

**Accept:**

- a) Individuals who have had Bell’s palsy more than four weeks ago and have discontinued any treatment for the condition for at least seven days, even if they have residual paralysis.
- b) If a definite diagnosis of transient global amnesia has been made.

**See if relevant**

- Neurosurgery
- Prion Associated Diseases
- Rabies
Additional Information

Often the exact cause of a degenerative brain condition only becomes known after death. For this reason, when there is any doubt as to the underlying cause of a brain condition, it is considered safest not to accept a donation. It is thought that degenerative brain disease in the form of vCJD has been transmitted by blood transfusion. Transient global amnesia is a temporary and isolated disorder of memory. Affected individuals are usually over 50 years of age and there is an association with migraine. There is no association with cerebrovascular disease.

Cervical Carcinoma in Situ:
Action  Accept – see Malignancy

Chagas’ Disease (South American Trypanosomiasis):
Action  Accept for corneas but not sclera

Additional Information

Chagas disease, also called South American trypanosomiasis, is a tropical parasitic disease caused by the flagellate protozoan Trypanosoma cruzi. T. cruzi is commonly transmitted to humans and other mammals by an insect vector, the blood-sucking "kissing bugs" of the subfamily Triatominae.

The disease may also be spread through blood transfusion and organ transplantation, and ingestion of food contaminated with parasites. Infection is very common in many parts of South or Central America and is often symptomless. It can be passed from an infected mother to her unborn baby and by transfusion. The insect that passes the infection on is only common in rural areas and the greater time that an individual has spent living in housing conditions with thatched roofs or mud lined walls which harbour the insect vector, the greater their risk of becoming infected. Camping or trekking in the jungle in South or Central America (including Southern Mexico) is not considered of high enough risk to merit exclusion for other tissues.

Donations (other than eye) will defer:
   a) if the potential donor (or their Mother) was born in South America, Central America (including southern Mexico)
   b) if ever had a transfusion in South America or Central America (including Mexico)
   c) has lived or worked in rural subsistence farming communities in these countries for 4 weeks or more.

As corneas are avascular there is not considered to be a risk of transmitting protozoal infections.

Chicken Pox - Herpes Zoster (Varicella Zoster):
Action  Do not donate unless infection has completely resolved
See  Infection – Acute
      Herpes – Ocular
      Infectious Disease – Contact with
Chickenpox, also known as varicella, is a highly contagious disease caused by the initial infection with varicella zoster virus (VZV). It is an airborne disease which spreads easily through the coughs and sneezes of an infected person. It may be spread from one to two days before the rash appears until all lesions have crusted over. It may also spread through contact with the blisters. Those with shingles may spread chickenpox to those who are not immune through contact with the blisters.

Symptoms usually last five to ten days. Complications may occasionally include pneumonia, inflammation of the brain, or bacterial infections of the skin among others. The disease is often more severe in adults (especially men) than children. Symptoms begin ten to twenty one days after exposure to the virus.

In 2013 chickenpox resulted in 7,000 deaths globally – down from 8,900 in 1990. Death occurs in about 1 per 60,000 cases. Non-immune pregnant women and those with a suppressed immune system are at highest risk of serious complications.

**Chikungunya Virus:**

**Definition**

Chikungunya endemic areas are shown and updated in the United Kingdom’s Geographical Disease Risk Index (http://www.transfusionguidelines.org.uk/Index.aspx?Publication=GDRI&Section=66&pageid=7631)

The Centers for Disease Control and Prevention (CDC) also have valuable current information on disease outbreaks by geography (http://www.cdc.gov/)

**Action**

Must not donate if

- a) It is less than six months from a donor’s return from a chikungunya endemic area and the donor has been diagnosed or has had symptoms suggestive of chikungunya.
- b) In other cases, it is less than four weeks from a donor’s return from a chikungunya endemic area.

Accept if six months after their return from an affected area. This may be reduced to four weeks if they have neither symptoms nor evidence of infection

**See if relevant**

Arthropod Borne Encephalitis (Arbovirus infection)

Malaria

South American Trypanosomiasis Risk

Infection – Tropical

**Additional Information**

Chikungunya virus (CHIKV) is an arthropod-borne virus, of the genus Alphavirus that is transmitted to humans by virus-carrying Aedes mosquitoes. There have been recent breakouts of CHIKV associated with severe illness to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever, and a macropapular rash.

It is geographically widespread but has reached epidemic proportions in parts of India and islands in the Indian Ocean since 2005. It is known to be spread by blood in symptomatic cases and on theoretical grounds could be spread by transfusion and transplantation of organs and tissues from people with pre-symptomatic or asymptomatic disease. It is spread by the same mosquitos as dengue fever.

The problem can vary both in relation to geography and time of year, so it is not possible to state areas from which donors need to be deferred and dates of disease activity. Take note of the UK Index and CDC notifications.

**Chlamydia:**

**Action**

Must not donate if current infection
See Infection - Acute
Lymphogranuloma Venereum

Additional Information
Chlamydia infection is a common sexually transmitted infection (STI) in humans caused by the bacterium Chlamydia trachomatis. The term Chlamydia infection can also refer to infection caused by any species belonging to the bacterial family Chlamydiaceae. C. trachomatis is found only in humans. Chlamydia is a major infectious cause of human genital and eye disease.

Chlamydia conjunctivitis or trachoma was once the most important cause of blindness worldwide. The infection can be spread from eye to eye by fingers, shared towels or cloths, coughing and sneezing and eye-seeking flies.

Cholera Immunisation:
See Immunisation- Non-Live

Chronic Fatigue Syndrome:
Action Consider possible underlying causes and differential diagnoses.
Additional Information
Chronic fatigue syndrome (CFS) is the common name for a group of debilitating medical conditions characterised by persistent fatigue and other specific symptoms that lasts for a minimum of six months. The fatigue is not due to exertion, not significantly relieved by rest, and is not caused by other medical conditions. CFS may also be referred to as myalgic encephalomyelitis (ME), post-viral fatigue syndrome (PVFS), chronic fatigue immune dysfunction syndrome (CFIDS), or by several other terms. Biological, genetic, infectious and psychological mechanisms have been proposed, but the etiology of CFS is not understood and it may have multiple causes.

The most commonly used diagnostic criteria and definition of CFS for research and clinical purposes were published by the United States Centers for Disease Control and Prevention (CDC).

The CDC recommends the following three criteria be fulfilled:
1. A new onset (not lifelong) of severe fatigue for six consecutive months or greater duration which is unrelated to exertion, is not substantially relieved by rest, and is not a result of other medical conditions.
2. The fatigue causes a significant reduction of previous activity levels.
3. Four or more of the following symptoms that last six months or longer:
   • Impaired memory or concentration
   • Post-exertional malaise, where physical or mental exertions bring on "extreme, prolonged exhaustion and sickness"
   • Unrefreshing sleep
   • Muscle pain (myalgia)
   • Pain in multiple joints (arthralgia)
   • Headaches of a new kind or greater severity
   • Sore throat, frequent or recurring
   • Tender lymph nodes (cervical or axillary)

Cirrhosis:
Action Accept.

If related to malignancy, see Malignancy.
Coeliac Disease:

Action: Accept

Coeliac disease is an autoimmune disorder of the small intestine that occurs in genetically predisposed people of all ages. Symptoms include pain and discomfort in the digestive tract, chronic constipation and diarrhoea, failure to thrive (in children), anaemia and fatigue.

Coeliac disease is caused by a reaction to gliadin, a prolamin (gluten protein) found in wheat, and similar proteins found in the crops of the tribe Triticeae (which includes other common grains such as barley and rye).

Congenital Disorders:

Action: Must not donate if the congenital disorder is high-risk for ocular disease, dysplasia, dystrophy, malformation or a metabolic disorder that may affect normal ocular function.

Accept if it can be firmly established (through ophthalmic examination during the person's lifetime) that there is no ocular dysplasia or malformation.

See:
- Achondroplasia
- Down Syndrome
- Angelman Syndrome
- Marfan Syndrome
- Sanfilippo Syndrome
- Turners Syndrome
- Wilsons Disease
- Ehlers-Danlos Syndrome

Additional Information:
A congenital disorder, or congenital disease, is a condition existing at birth and often before birth, or that develops during the first month of life, regardless of causation. A congenital disorder may be the result of genetic abnormalities, the intrauterine (uterus) environment, errors of morphogenesis, infection, epigenetic modifications on a parental germline, or a chromosomal abnormality.

Subtle changes in the cornea may be difficult to detect after death and donation (e.g. keratoconus) and therefore exclusion should be on the basis of the risk of the congenital disorder being associated with ocular manifestations.

Colitis:

See if relevant:
- Infection – General
- Inflammatory Bowel Disease
- Malignancy

Congo Fever (Crimean Fever):

Action: Must not donate if less than 12 months following recovery.
Crimean–Congo hemorrhagic fever (CCHF) is a widespread tick-borne viral disease, a zoonosis of domestic animals and wild animals that may affect humans. The pathogenic virus, especially common in East and West Africa, is a member of the Bunyaviridae family of RNA viruses. Clinical disease is rare in infected mammals, but commonly severe in infected humans, with a 30% mortality rate. Outbreaks of illness are usually attributable to handling infected animals or people.

Contact Lenses:
Action
Accept if no underlying disease process, infection or corneal scarring.

Must not donate if related to or involved in an underlying disease e.g. keratoconus, infection.

Contact with Infectious Disease:
See Infectious Disease – Contact with

Contagious Pustular Dermatitis (Orf virus):
See Infection – Acute

Additional Information
Orf is an exanthemous disease caused by a parapox virus and occurring primarily in sheep and goats. It is also known as contagious pustular dermatitis, infectious labial dermatitis, ecthyma contagiosum, thistle disease and scabby mouth. Orf virus is zoonotic.

It causes a purulent-appearing papule locally and generally no systemic symptoms. Infected locations can include the finger, hand, arm, face. The papule may persist for 7 to 10 weeks and spontaneously resolves. It is an uncommon condition and may be difficult to diagnose. There have been no reported cases of human to human contraction.

While Orf is usually a benign self-limiting illness, it can be progressive and even life-threatening in the immune-compromised host.

Cortisone Tablets:
See Steroid Therapy

Coxsackie Virus:
See Hand, Foot and Mouth Disease

Creutzfeldt-Jakob Disease:
See Prion Associated Diseases

Crimean Fever:
See Congo Fever

Crohn’s Disease:
Action
Accept if eyes are unaffected (Note below)
See Inflammatory Bowel Disease
**Additional Information**

Crohn's disease, also known as Crohn syndrome and regional enteritis, is a type of inflammatory bowel disease that may affect any part of the gastrointestinal tract from mouth to anus, causing a wide variety of symptoms. It primarily causes abdominal pain, diarrhoea (which may be bloody if inflammation is at its worst), vomiting (can be continuous), or weight loss but may also cause complications outside the gastrointestinal tract such as anaemia, skin rashes, arthritis, inflammation of the eye, tiredness, and lack of concentration. Crohn's disease is caused by interactions between environmental, immunological and bacterial factors in genetically susceptible individuals.

The cause of this condition is not fully understood and may include infection. Lesions caused by the disease can increase the risk of bacteria entering the blood stream. *Therefore it may be relevant to only accept eyes if the corneas are to be preserved by organ culture.*

There is a chance that other organs and tissues may not be accepted for donation.

**Cytomegalovirus:**

**Action**

Accept

**See**

Infection – General

**Additional Information**

Human cytomegalovirus is a species of virus that belongs to the viral family known as Herpesviridae or herpesviruses. It is typically abbreviated as HCMV and is alternatively known as Human herpesvirus 5 (HHV-5). After infection, HCMV has an ability to remain latent within the body over long periods.

Although they may be found throughout the body, HCMV infections are frequently associated with the salivary glands. HCMV infection is typically unnoticed in healthy people, but can be life-threatening for the immune-compromised, such as HIV-infected persons, organ transplant recipients, or new born infants.

The majority of the population are infected with HCMV. Its presence is not considered relevant for eye donation as corneal recipients are not immune-compromised like organ recipients.

**Death from Unknown Cause:**

**Action**

Accept if there is nothing to suggest that a possible cause of death or any other co-morbidities are contraindications to donation.

Must not donate in all other instances.
<table>
<thead>
<tr>
<th><strong>Dementia:</strong></th>
<th><strong>Action</strong></th>
</tr>
</thead>
</table>
| **Must not donate if:** | a) Rapidly progressive dementia. e.g. CJD  
   b) Slowly progressive dementia that is not Vascular dementia e.g. Alzheimer’s disease, Frontotemporal lobar degeneration, Dementia with Lewy bodies. |
| **Accept:** | a) Fixed cognitive impairment due to traumatic brain injury, stroke, past infections, alcohol dementia. |
| **Accept with caution:** | b) Slowly progressive dementia due to vascular disease e.g. multi-infarct dementia, Binswanger disease. |
| **Accept with caution because slowly progressive dementia due to vascular disease and slowly progressive dementia due to Alzheimer’s disease, can be almost impossible to tell apart clinically and are often misdiagnosed. Indeed they often occur together.** |  

A definitive diagnosis and how that diagnosis was arrived at should be required. For example Binswanger disease, whilst a vascular dementia, mimics Alzheimer’s disease and is difficult to definitively diagnose (even with MRI) until brain histology is done after death. |

**Additional Information**

Dementia is a serious loss of global cognitive ability in a previously unimpaired person, **beyond what might be expected from normal aging**. It may be static, the result of a unique global brain injury, or progressive, resulting in long-term decline due to damage or disease in the body. Although dementia is far more common in the geriatric population (about 5% of those over 65 are said to be involved), it can occur before the age of 65, in which case it is termed “early onset dementia”.

Dementia is not a single disease, but a non-specific syndrome (i.e., set of signs and symptoms). Affected cognitive areas can be memory, attention, language, and problem solving. Normally, symptoms must be present for at least six months to support a diagnosis. Cognitive dysfunction of shorter duration is called delirium.

Some of the most common forms of dementia are: Alzheimer’s disease, vascular dementia, frontotemporal dementia, semantic dementia, dementia with Lewy bodies and Binswanger disease (also known as subcortical leukoencephalopathy).

**Fixed cognitive impairment:**

Various types of brain injury may cause irreversible but fixed cognitive impairment. Traumatic brain injury may cause generalized damage to the white matter of the brain, or more localized damage (as also may neurosurgery). A temporary reduction in the brain’s supply of blood or oxygen may lead to hypoxic-ischemic injury. Strokes (ischemic stroke, or intracerebral, subarachnoid, subdural or extradural haemorrhage) or infections (meningitis and/or encephalitis) affecting the brain, prolonged epileptic seizures and acute hydrocephalus may also have long-term effects on cognition. Excessive alcohol use may cause alcohol dementia, Wernicke’s encephalopathy and/or Korsakoff’s psychosis.
**Slowly progressive dementia:**

Dementia that begins gradually and worsens progressively over several years is usually caused by neurodegenerative disease—that is, by conditions that affect only or primarily the neurons of the brain and cause gradual but irreversible loss of function of these cells.

Causes of dementia depend on the age at which symptoms begin. In the elderly population (usually defined in this context as over 65 years of age), a large majority of dementia cases are caused by Alzheimer’s disease, vascular dementia, or both. Dementia with Lewy bodies is another commonly exhibited form, which again may occur alongside either or both of the other causes. Hypothyroidism sometimes causes slowly progressive cognitive impairment as the main symptom, and this may be fully reversible with treatment.

Dementia is much less common under 65 years of age. Alzheimer's disease is still the most frequent cause, but inherited forms of the disease account for a higher proportion of cases in this age group. Frontotemporal lobar degeneration and Huntington’s disease account for most of the remaining cases. Vascular dementia also occurs, but this in turn may be due to underlying conditions. People who receive frequent head trauma, such as boxers or football players, are at risk of chronic traumatic encephalopathy.

In young adults (up to 40 years of age) who were previously of normal intelligence, it is very rare to develop dementia without other features of neurological disease, or without features of disease elsewhere in the body. Most cases of progressive cognitive disturbance in this age group are caused by psychiatric illness, alcohol or other drugs, or metabolic disturbance.

At all ages, a substantial proportion of patients who complain of memory difficulty or other cognitive symptoms have depression rather than a neurodegenerative disease. Vitamin deficiencies and chronic infections may also occur at any age; they usually cause other symptoms before dementia occurs, but occasionally mimic degenerative dementia. These include deficiencies of vitamin B12, folate or niacin, and infective causes including cryptococcal meningitis, HIV, Lyme disease, progressive multifocal leukoencephalopathy, subacute sclerosing panencephalitis, syphilis and Whipple’s disease.

**Rapidly progressive dementia:**

Creutzfeldt-Jakob disease typically causes a dementia that worsens over weeks to months, being caused by prions. The common causes of slowly progressive dementia also sometimes present with rapid progression: Alzheimer’s disease, dementia with Lewy bodies, frontotemporal lobar degeneration (including corticobasal degeneration and progressive supranuclear palsy).

On the other hand, encephalopathy or delirium may develop relatively slowly and resemble dementia. Possible causes include brain infection (viral encephalitis, subacute sclerosing panencephalitis, Whipple’s disease) or inflammation (limbic encephalitis, Hashimoto’s encephalopathy, cerebral vasculitis); tumors such as lymphoma or glioma; drug toxicity (e.g. anticonvulsant drugs); metabolic causes such as liver failure or kidney failure; and chronic subdural hematoma.
As a feature of other conditions:

There are many other medical and neurological conditions in which dementia only occurs late in the illness. For example, a proportion of patients with Parkinson's disease develop dementia. When dementia occurs in Parkinson's disease, the underlying cause may be dementia with Lewy bodies or Alzheimer's disease, or both. Cognitive impairment also occurs in the Parkinson-plus syndromes of progressive supranuclear palsy and corticobasal degeneration. Chronic inflammatory conditions of the brain may affect cognition in the long term, including Behçet's disease, multiple sclerosis, sarcoidosis, Sjögren's syndrome and systemic lupus erythematosus.

**Dengue Fever:**

See Arbovirus

Infection – Acute

**Additional Information**

Dengue fever is an infectious tropical disease caused by the dengue virus (Arbovirus). Dengue is transmitted by several species of mosquito within the genus Aedes and is the most common viral disease transmitted by arthropods. Symptoms include fever, headache, muscle and joint pains, and a characteristic skin rash that is similar to measles. In a small proportion of cases the disease develops into the life-threatening dengue haemorrhagic fever, resulting in bleeding, low levels of blood platelets and blood plasma leakage, or into dengue shock syndrome, where dangerously low blood pressure occurs.

Most people with dengue recover without any ongoing problems. The mortality is 1–5% without treatment.

**Depression:**

See Mental Health Problems

**Dermatitis:**

Action Accept

See Infection – Acute

Steroid Therapy

Acne

**Additional Information**

Skin donation is not appropriate for the infected areas of skin

**Diabetes Insipidus:**

Action Accept, if underlying cause does not exclude.

See if relevant Neurosurgery

**Additional Information**

Diabetes insipidus is either a problem with the production of antidiuretic hormone (central diabetes insipidus) or kidney's response to antidiuretic hormone (nephrogenic diabetes insipidus). It is characterized by excessive thirst and excretion of large amounts of severely diluted urine, with reduction of fluid intake having no effect on the concentration of the urine.
**Diabetes Mellitus:**

**Action**
Accept

**Additional Information**
*Diabetes mellitus type 1:*
(also known as type 1 diabetes, or T1DM; formerly insulin dependent diabetes or juvenile diabetes)
is a form of diabetes mellitus that results from autoimmune destruction of insulin-producing beta cells of the pancreas. The subsequent lack of insulin leads to increased blood and urine glucose.

*Diabetes mellitus type 2:*
(formerly noninsulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes) is a metabolic disorder that is characterised by high blood glucose in the context of insulin resistance and relative insulin deficiency. Type 2 diabetes makes up about 90% of cases of diabetes.

**Diabetic Retinopathy:**

**Action**
Accept

**Additional Information:**
Diabetic retinopathy, is retinopathy (damage to the retina) caused by complications of diabetes, which can eventually lead to blindness. It affects up to 80% of all patients who have had diabetes for 10 years or more (although this could be reduced with more vigilance and monitoring).

The retinopathy itself will not affect the cornea or suitability for transplant. There is a suggestion however that long-term diabetes may affect the cornea’s suitability for transplantation but generally this is not significant.

**Diphtheria:**

**Action**
Accept, if the clinician caring for the potential donor thinks that therapy given for an infection has successfully cleared it.

**See**
Infection – Acute

**Additional Information**
Diphtheria is an upper respiratory tract illness caused by Corynebacterium diphtheriae, an anaerobic, Gram-positive bacterium. It is characterized by sore throat, low fever, and an adherent membrane on the tonsils, pharynx, and/or nasal cavity.

It is considered a highly infectious disease spread by direct physical contact or breathing the aerosolized secretions of infected individuals.

**Diphtheria Immunisation:**

**Action**
Accept

**See**
Immunisation – Non-live
<table>
<thead>
<tr>
<th><strong>Diptheria Tetanus Immunisation:</strong></th>
<th></th>
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<tbody>
<tr>
<td>Action</td>
<td><strong>Accept</strong></td>
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<tr>
<td>See</td>
<td>Immunisation – Non-live</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Diptheria Tetanus Pertussis Immunisation:</strong></th>
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<tbody>
<tr>
<td>Action</td>
<td><strong>Accept</strong></td>
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<tr>
<td>See</td>
<td>Immunisation – Non-live</td>
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<table>
<thead>
<tr>
<th><strong>Disease of Unknown Aetiology:</strong></th>
<th></th>
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<tbody>
<tr>
<td>Action</td>
<td><strong>Must not donate</strong></td>
</tr>
<tr>
<td>Additional Information</td>
<td>When the cause of an illness is not clear, there is an unknown risk to any recipient</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Diverticulosis:</strong></th>
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<tbody>
<tr>
<td>Action</td>
<td><strong>Accept</strong></td>
</tr>
<tr>
<td>See if relevant</td>
<td>Infection – General</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Down Syndrome:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td><strong>Do not donate</strong></td>
</tr>
<tr>
<td>Additional Information</td>
<td>Eye disorders are common in people with DS. Almost half have strabismus. Refractive errors requiring glasses or contacts are also common. Cataracts (opacity of the lens), keratoconus (thin, cone-shaped corneas), and glaucoma (increased eye pressures) are common</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Drowning:</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Action</td>
<td>Refer to the Medical Director</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Need to determine a likelihood of damage to the corneas due to immersion in water. Type of water (fresh, stagnant, sea-water, chlorinated) and length of time immersed need to be considered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Drug Abuse:</strong></th>
<th></th>
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<tbody>
<tr>
<td>See</td>
<td>Addiction and Drug Abuse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Drug Treatment:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>The taking of some drugs may make a donor ineligible. This could be due to the underlying disease or to the medication. However for eyes this is unlikely. Self-medication with some drugs e.g. vitamins, over the counter analgesics need not prevent a donation being accepted</td>
</tr>
<tr>
<td>See if relevant</td>
<td>Addiction and Drug Abuse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Dry Eye Syndrome:</strong></th>
<th></th>
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<tbody>
<tr>
<td>See</td>
<td>Keratoconjunctivitis Sicca</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>DTP Immunisation (Triple Antigen):</strong></th>
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<tbody>
<tr>
<td>See</td>
<td>Immunisation – Non-live</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Duodenal Ulcer:</strong></th>
<th></th>
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<tbody>
<tr>
<td>See</td>
<td>Gastric Ulcer</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Dutasteride (Avodart):</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Action</td>
<td><strong>Accept for corneas only not for sclera</strong></td>
</tr>
</tbody>
</table>
**Additional Information**

Dutasteride is used for the symptoms of benign prostatic hyperplasia (BPH); colloquially known as an "enlarged prostate".

The FDA has added a warning to dutasteride about an increased risk of high-grade prostate cancer. Evidence has suggested it could mask the early detection of prostate cancer.

Precaution for organ and tissue is warranted as residual amounts (especially in the blood) can cause birth defects.

**Ear Piercing:**

See Body Piercing

**Ebola Fever:**

**Action** Must not donate if less than 12 months following recovery

a) Asymptomatic travellers or residents returning from an EVD affected area should be deferred from donation for six month after return, provided they have reported no EVD symptoms (eg. undiagnosed febrile illness)

b) Anyone with a confirmed EVD exposure (eg. contact with an infected person), cannot donate within six months of exposure or if being monitored for exposure, within six months of the commencement of the monitoring period

**Additional Information**

Ebola virus disease (EVD) or Ebola haemorrhagic fever (EHF) is the human disease which may be caused by any of four of the five known ebola viruses. EVD is a viral haemorrhagic fever (VHF), and is clinically nearly indistinguishable from Marburg virus disease (MVD).

Prognosis is generally poor (average case-fatality rate of all EVD outbreaks to date = 68%). If a patient survives, recovery may be prompt and complete, or protracted with sequelae, such as orchitis, arthralgia, myalgia, desquamation or alopecia. Ocular manifestations, such as photophobia, hyperlacrimation, iritis, iridocyclitis, choroiditis and blindness have also been described.

Outbreaks of EVD have mainly been restricted to Africa. The virus often consumes the population. EVD is believed to occur after an ebolavirus is transmitted to a human case via contact with an infected animal host. Human-to-human transmission occurs via direct contact with blood or bodily fluids from an infected person (including embalming of a deceased victim) or by contact with contaminated medical equipment such as needles. There is a higher concentration of EVD in the blood, organs and tissues during the immediate death or recovery phase as the body excretes live and infective viruses. A person can remain infectious for up to 7 weeks.

Bats are considered the most likely candidate as a natural reservoir of the disease.

**Eczema:**

See Dermatitis

**Ehlers-Danlos Syndrome:**

**Action** Must not donate

**Additional Information**

Ehlers–Danlos syndrome (EDS) is an inherited connective tissue disorder with different presentations. It is caused by a defect in the synthesis of collagen. Depending on the individual, the severity of the mutation can vary from mild to life-threatening. On concern with any form of donation is that the structural integrity of the tissue is likely to be compromised.

**Electrolysis:**

**Action** Accept
<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elliptocytosis</td>
<td>See Hereditary Elliptocytosis</td>
<td></td>
</tr>
<tr>
<td>Emphysema</td>
<td>Accept</td>
<td></td>
</tr>
<tr>
<td>Encephalitis</td>
<td>Accept If caused by bacterial infection and the corneas are to be stored by organ culture</td>
<td>Infection – General</td>
</tr>
<tr>
<td>Endocarditis</td>
<td>a) Accept If infection resolved.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Accept If the cause is bacterial and the corneas are to be stored by organ culture.</td>
<td></td>
</tr>
<tr>
<td>Epilepsy</td>
<td>Must not donate if</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Recent onset and not fully investigated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Secondary to degenerative neurological disease</td>
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<tr>
<td></td>
<td>Accept all other cases</td>
<td></td>
</tr>
<tr>
<td>Episcleritis</td>
<td>Must not donate if active</td>
<td>Inflammatory Eye Disease</td>
</tr>
<tr>
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<tr>
<td></td>
<td>Additional Information</td>
<td>Episcleritis is a benign, self-limiting inflammatory disease affecting the episclera (thin layer of tissue that lies between the conjunctiva and sclera). Symptoms of include mild eye pain, redness, and watery eyes. Discharge is absent and vision is unaffected. It does not cause the presence of cells or flare in the anterior chamber of the eye. Most of the time, episcleritis is idiopathic. Several diseases are associated with episcleritis, including systemic vasculitic diseases (polyarteritis nodosa, Wegener’s granulomatosis), connective tissue diseases, rosacea, atopy, gout, and ulcerative colitis.</td>
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<tr>
<td>Extended-Spectrum Beta-lactamase (ESBL):</td>
<td>See Multi Resistant Organisms</td>
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</table>
### Eye Disease:

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>a) Active ocular inflammation or infection</td>
</tr>
<tr>
<td></td>
<td>b) Congenital or acquired ocular disorders or previous ocular surgery that may preclude a successful transplant outcome</td>
</tr>
<tr>
<td></td>
<td>c) History of malignant tumours of the anterior segment or retinoblastoma</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Accept:</th>
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</thead>
<tbody>
<tr>
<td>a) Laser refractive surgery to the cornea but not for penetrating or anterior keratoplasty</td>
</tr>
<tr>
<td>b) If laser surgery to the retina or lens capsule</td>
</tr>
<tr>
<td>c) If cataract surgery</td>
</tr>
<tr>
<td>d) If glaucoma</td>
</tr>
<tr>
<td>e) If refractive error</td>
</tr>
<tr>
<td>f) If retinal disease</td>
</tr>
</tbody>
</table>

### See also
- Autoimmune Disorders
- Glaucoma
- Immunosuppression
- Infection – General
- Laser Treatment (Surgery)
- Malignancy
- Ocular Surgery
- Steroid Therapy

### Eye Drops:

<table>
<thead>
<tr>
<th>Action</th>
<th>Determine what the drops are being used to treat and then see if there is any relevant entry</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>See if relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoimmune Disorders</td>
</tr>
<tr>
<td>Glaucoma</td>
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<tr>
<td>Infection – General</td>
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<tr>
<td>Steroid Therapy</td>
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### Fever:

<table>
<thead>
<tr>
<th>Includes</th>
<th>Febrile episodes</th>
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</table>

<table>
<thead>
<tr>
<th>Action</th>
<th>If less than two weeks from an undiagnosed episode(s) – investigate further and refer to Medical Director</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>See if relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection – General</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Information</th>
<th>A fever can be caused by many different conditions ranging from benign to potentially serious</th>
</tr>
</thead>
</table>
**Filariasis:**

**Action**  
Must not donate

**See**  
Infection – Tropical  
Onchocerciasis  
River Blindness

Filariasis is a parasitic disease (usually an infectious tropical disease) that is caused by thread-like nematodes belonging to the superfamily Filarioidea, also known as "filariae". These are transmitted from host to host by blood-feeding arthropods, mainly black flies and mosquitoes.

The adult worms, which usually stay in one tissue, release early larval forms known as microfilariae into the host's bloodstream. These circulating microfilariae can be taken up with a blood meal by the arthropod vector; in the vector, they develop into infective larvae that can be transmitted to a new host.

**Finasteride (Proscar):**

**Discretionary**  
Accept for corneas only not for sclera

**Additional Information**  
Finasteride (brand names Proscar and Propecia by Merck, among other generic names) is a synthetic drug for the treatment of benign prostatic hyperplasia (BPH) and male pattern baldness (MPB).

The FDA has added a warning to Finasteride about an increased risk of high-grade prostate cancer. Evidence has suggested it could mask the early detection of prostate cancer.

Precaution for organ and tissue is warranted as residual amounts (especially in the blood) can cause birth defects. Recommendation is not to accept if less than 4 weeks from completion of therapy.

**Fits:**

**See**  
Epilepsy

**Foreign Travel:**

**See**  
Travel

**Fungal Infection:**

**See**  
Infection – General

**G6PD Deficiency (Glucose-6-phosphate dehydrogenase deficiency):**

**Action**  
Accept

**Additional Information**  
Glucose-6-phosphate dehydrogenase deficiency (G6PD) is an X-linked recessive hereditary disease characterized by abnormally low levels of glucose-6-phosphate dehydrogenase, a metabolic enzyme involved in the pentose phosphate pathway, especially important in red blood cell metabolism. G6PD deficiency is the most common human enzyme defect. Individuals with the disease may exhibit non-immune haemolytic anaemia in response to a number of causes, most commonly infection or exposure to certain medications or fava beans.

**Gall Bladder Disease:**

**Includes**  
Gall Stones

**Action**  
Accept

**See if relevant**  
Infection – General  
Malignancy

**Gastrointestinal Disease:**
<table>
<thead>
<tr>
<th>Action</th>
<th>Accept but see Crohn’s Disease and Ulcerative Colitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>See if relevant</td>
<td>Crohn’s Disease</td>
</tr>
<tr>
<td></td>
<td>Malignancy</td>
</tr>
<tr>
<td></td>
<td>Ulcerative Colitis</td>
</tr>
<tr>
<td><strong>Gastric Ulcer:</strong></td>
<td></td>
</tr>
<tr>
<td>Includes</td>
<td>Duodenal Ulcer and Erosions</td>
</tr>
<tr>
<td>Action</td>
<td>Accept. If associated with malignancy see Malignancy.</td>
</tr>
<tr>
<td><strong>Genital Herpes Infection:</strong></td>
<td></td>
</tr>
<tr>
<td>See</td>
<td>Herpes – Genital</td>
</tr>
<tr>
<td><strong>Genital Warts:</strong></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Accept</td>
</tr>
<tr>
<td>See if relevant</td>
<td>Sexually Transmitted Diseases</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Genital warts (or condylomata acuminata, venereal warts, anal warts and anogenital warts) are symptoms of a highly contagious sexually transmitted disease caused by some types of human papillomavirus (HPV). It is spread through direct skin-to-skin contact, usually during oral, genital, or anal sex with an infected partner. Warts are the most easily recognized symptom of genital HPV infection. Although some types of HPV are known to cause cervical cancer and anal cancers, these are not the same types of HPV that cause genital warts.</td>
</tr>
<tr>
<td><strong>German Measles:</strong></td>
<td></td>
</tr>
<tr>
<td>See</td>
<td>Rubella</td>
</tr>
<tr>
<td><strong>Giardiasis:</strong></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Accept</td>
</tr>
<tr>
<td>Additional Information</td>
<td>This is a local intestinal infection that does not affect donation.</td>
</tr>
<tr>
<td><strong>Gilbert Syndrome:</strong></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Accept</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Gilbert’s syndrome, also called Gilbert–Meulengracht syndrome, is the most common hereditary cause of increased bilirubin. Mild jaundice may appear under conditions of exertion, stress, fasting, and infections, but the condition is otherwise usually asymptomatic and has no serious consequences.</td>
</tr>
<tr>
<td><strong>Glandular Fever:</strong></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Accept</td>
</tr>
<tr>
<td>See</td>
<td>Infection – Acute</td>
</tr>
</tbody>
</table>
**Additional Information**

Infectious mononucleosis (IM; also known as mono, glandular fever, Pfeiffer's disease, Filatov's disease, and sometimes colloquially as the kissing disease from its oral transmission) is an infectious, widespread viral disease caused by the Epstein–Barr virus (EBV), one type of herpes virus, against which over 90% of adults are likely to have acquired immunity by the age of 40. It is most common among adolescents and young adults.

Especially in adolescents and young adults, the disease is characterized by fever, sore throat and fatigue, along with several other possible signs and symptoms. It is generally a self-limiting disease, and little treatment is normally required.

---

**Glasses (Spectacles):**

<table>
<thead>
<tr>
<th>Action</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept</td>
<td>Refractive error</td>
</tr>
<tr>
<td></td>
<td>Laser Therapy</td>
</tr>
<tr>
<td></td>
<td>Refractive surgery</td>
</tr>
</tbody>
</table>

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**Glaucoma:**

<table>
<thead>
<tr>
<th>Includes</th>
<th>Primary glaucoma and its variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Accept</td>
</tr>
<tr>
<td>Additional TGA criteria</td>
<td>Must not donate if:</td>
</tr>
<tr>
<td>a)</td>
<td>Received a transplant of sclera during glaucoma surgery within the past 6 months if outside of Australia (or 4 months if HCV NAT performed)*</td>
</tr>
<tr>
<td>b)</td>
<td>Ever received a transplant of sclera during glaucoma surgery in the United Kingdom</td>
</tr>
</tbody>
</table>

This is in accordance with TGA standards of deferment of donor who have received human tissue outside of Australia.

<table>
<thead>
<tr>
<th>See if relevant</th>
<th>Tissue and Organ Recipients</th>
</tr>
</thead>
</table>

**Additional Information**

Glaucoma is a term describing a group of ocular disorders with multi-factorial aetiology united by a clinically characteristic intraocular pressure-associated optic neuropathy. Glaucoma can be roughly divided into two main categories, "open-angle" and "closed-angle" (or "angle closure") glaucoma. The angle refers to the area between the iris and cornea, through which fluid must flow to escape via the trabecular meshwork. Closed-angle glaucoma can appear suddenly and is often painful; visual loss can progress quickly, but the discomfort often leads patients to seek medical attention before permanent damage occurs. Open-angle, chronic glaucoma tends to progress at a slower rate and patients may not notice they have lost vision until the disease has progressed significantly.

---

**Goitre:**

| See | Thyroid Disease |

---

**Gonorrhoea:**

| See | Sexually Transmitted Diseases |
Additional Information

Gonorrhea is a common human sexually transmitted infection caused by the bacterium Neisseria gonorrhoeae. The usual symptoms in men are burning with urination and penile discharge. Women, on the other hand, are asymptomatic half the time or have vaginal discharge and pelvic pain. In both men and women if gonorrhea is left untreated, it may spread locally causing epididymitis or pelvic inflammatory disease or throughout the body, affecting joints and heart valves.

Gout:
Action Accept

Grand Mal:
See Epilepsy

Granuloma Inguinale:
Action Must not donate
Additional Information Granuloma inguinale is a bacterial disease caused by Klebsiella granulomatis characterized by ulcerative genital lesions. It is endemic in many less developed regions. The microorganism spreads from one host to another through contact with the open sores.

Grave's Disease:
See Thyroid Disease

Growth Hormone:
Action Must not donate if:
- Has ever received human pituitary growth hormone
  Accept, if treated exclusively with recombinant-derived growth hormone. (in Australia and New Zealand this will be since 1987)

See if relevant Prion Associated Diseases
Additional Information Worldwide (and 5 cases within Australia) human pituitary-derived hormones have transmitted classical CJD. From 1963 to 1986 such hormones were administered in Australia and New Zealand until the practice was ceased in 1987. Since 1987 all growth and fertility hormones administered in Australia (but not necessarily overseas) have been exclusively recombinant-derived, and are acceptable for donation.

Recipients of human pituitary growth hormone are considered to be a high-risk for CJD transmission.

Guillain-Barre Syndrome:
Action Must not donate if:
  a) Less than 24 months from resolution
  b) There has been any recurrence of symptoms
  c) The doctor who managed the donor cannot confirm a typical monophasic Guillain-Barre syndrome that recovered completely within 12 months.

See if relevant If treated with immunoglobulin or plasma exchange:
Transfusion
Guillain–Barré syndrome, sometimes Landry’s paralysis or Guillain–Barré–Strohl syndrome, is an acute polyneuropathy, a disorder affecting the peripheral nervous system. Ascending paralysis, weakness beginning in the feet and hands and migrating towards the trunk, is the most typical symptom, and some subtypes cause change in sensation or pain, as well as dysfunction of the autonomic nervous system. It can cause life-threatening complications, in particular if the respiratory muscles are affected or if the autonomic nervous system is involved. The disease is usually triggered by an infection.

Guillain–Barré syndrome is rare, at one to two cases per 100,000 people annually, but is the most common cause of acute non-trauma-related paralysis.

Guillain–Barré syndrome is now considered to be due to an immune response to foreign antigens (such as infectious agents) that mis-targets host nerve tissues. The most described antecedent infection is the bacterium Campylobacter jejuni. In addition, cytomegalovirus has a known association with GBS. In many cases, identification of a specific cause is impossible. Some cases may be triggered by the influenza virus.

Guillain–Barré, unlike disorders such as multiple sclerosis (MS) and Lou Gehrig’s disease (ALS), is a peripheral nerve disorder and does not in general cause nerve damage to the brain or spinal cord.

### Haemotological Disease:

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) Malignant</td>
</tr>
<tr>
<td></td>
<td>b) Clonal disorder such as primary polycythaemia (rubra vera), essential thrombocytthaemia and monoclonal gammopathy of unknown significance (MGUS).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discretionary</th>
<th>If polycythaemia is secondary to a non-malignant condition, accept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>See if relevant</td>
<td>Haemoglobin Disorders</td>
</tr>
<tr>
<td></td>
<td>Immune Thrombocytopenia Pupura</td>
</tr>
<tr>
<td></td>
<td>Polycythaemia</td>
</tr>
</tbody>
</table>

| Additional Information | Clonal disorders result from the proliferation of a single cell. Because they have the potential to become malignant they are treated in the same way as malignancy. |

### Haemochromatosis:

| Action | Accept |

### Additional Information

Haemochromatosis (or hemochromatosis) type 1 (also HFE hereditary haemochromatosis or HFE-related hereditary haemochromatosis) is a hereditary disease characterized by excessive intestinal absorption of dietary iron resulting in a pathological increase in total body iron stores. Excess iron accumulates in tissues and organs disrupting their normal function.

The late effects of iron accumulation can be wholly prevented by periodic phlebotomies (by venesection) comparable in volume to blood donations.

### Haemoglobin Disorders:

<p>| Action | Accept |</p>
<table>
<thead>
<tr>
<th>See if relevant</th>
<th>Sickle-cell disease</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thalassaemia</td>
</tr>
<tr>
<td></td>
<td>Transfusion</td>
</tr>
</tbody>
</table>

**Haemolytic Anaemia:**

**Action**
- See:
  - a) Is there an entry for the condition?
  - b) If not refer to Medical Director

<table>
<thead>
<tr>
<th>See if relevant</th>
<th>Autoimmune disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G6PD Deficiency</td>
</tr>
<tr>
<td></td>
<td>Haemoglobin Disorders</td>
</tr>
<tr>
<td></td>
<td>Hereditary Elliptocytosis</td>
</tr>
<tr>
<td></td>
<td>Hereditary Spherocytosis</td>
</tr>
<tr>
<td></td>
<td>Pyruvate Kinase Deficiency</td>
</tr>
<tr>
<td></td>
<td>Transfusion</td>
</tr>
</tbody>
</table>

**Haemophilus Influenzae Type B Immunisation:**

**See**
- Immunisation – Non-live

**Hand, Foot and Mouth Disease:**

**Action**
- Accept

**See**
- Infection – Acute

**Additional Information**
- Hand, foot and mouth disease (HFMD) is a human syndrome caused by intestinal viruses of the picornaviridae family.
- It usually affects infants and children, and is quite common. It is moderately contagious but self-limiting. There is no specific treatment and only the symptoms are treated.

**Hashimoto’s Disease:**

**See**
- Thyroid disease

**Hendra Virus (Henipavirus):**

**Action**
- Must not donate
Henipavirus is a genus of the family Paramyxoviridae, order Mononegavirales containing three established species: Hendra virus, Nipah virus and Cedar Virus. The henipaviruses are naturally harboured by Pteropid fruit bats (flying foxes) and some microbat species. Henipavirus is characterised by a large genome, a wide host range, and their recent emergence as zoonotic pathogens capable of causing illness and death in domestic animals and humans.

Hendra virus:
(originally Equine morbillivirus) was discovered in September 1994 when it caused the deaths of thirteen horses, and a trainer at a training complex in Hendra, a suburb of Brisbane in Queensland, Australia. As of September 2012, a total of thirty-nine outbreaks of Hendra virus have occurred in Australia, all involving infection of horses. As a result of these events, seventy-six horses have died or been euthanised, with a further four having died or been euthanised as a result of possible hendra infection. Four of these outbreaks have spread to humans as a result of direct contact with infected horses.

There have been two human deaths. A horse trainer, Victory ('Vic') Rail, and a stable hand were involved in nursing the first outbreak in horses, and both fell ill with an influenza-like illness within one week of the first horse’s death. The stable hand recovered while Mr Rail died of respiratory and renal failure. The source of the virus was most likely frothy nasal discharge from the horse. A second outbreak occurred in August 1994 in Mackay resulting in the deaths of two horses and their owner who assisted in necropsies of the horses and within three weeks was admitted to hospital suffering from meningitis. He recovered, but 14 months later developed neurologic signs and died.

Case fatality rate in humans is 60% and in horses 75%. There is no evidence of transmission to humans directly from bats, and, as such it appears that human infection only occurs via an intermediate host, a horse.

Nipah virus:
was identified in April 1999, when it caused an outbreak of neurological and respiratory disease on pig farms in peninsular Malaysia, resulting in 257 human cases, including 105 human deaths and the culling of one million pigs. Symptoms of infection from the Malaysian outbreak were primarily encephalitic in humans and respiratory in pigs. Later outbreaks have caused respiratory illness in humans, increasing the likelihood of human-to-human transmission and indicating the existence of more dangerous strains of the virus. Based on seroprevalence data and virus isolations, the primary reservoir for Nipah virus was identified as Pteropid fruit bats.

Cedar Virus:
(CedPV) was first identified in pteropid urine during work on Hendra virus undertaken in Queensland in 2009. Although the virus is reported to be very similar to both Hendra and Nipah, it does not cause illness in laboratory animals.

Hepatitis:

Action

Note:

Hepatitis has a number of causes including infection and hypersensitivity to drugs. Of concern is Viral Hepatitis.

Accept If fully recovered from non-viral hepatitis
### Hepatitis A - Infection:

<table>
<thead>
<tr>
<th>Action</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must not donate if less than 6 months from recovery</td>
<td>Hepatitis A (formerly known as infectious hepatitis) is an acute infectious disease of the liver caused by the hepatitis A virus (HAV), an RNA virus, usually spread by the faecal-oral route; transmitted person-to-person by ingestion of contaminated food or water or through direct contact with an infectious person. HAV infection produces a self-limited disease that does not result in chronic infection or chronic liver disease.</td>
</tr>
</tbody>
</table>

### Hepatitis A – Sexual Partner of Confirmed Case:

<table>
<thead>
<tr>
<th>Action</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must not donate if less than 6 months from recovery of partner</td>
<td>There is a risk of transmitting the disease through sexual activity. The 6-month exclusion allows any infection to run its course and for any risk of passing the illness on through donation to have passed.</td>
</tr>
<tr>
<td>Accept if donor is shown to be immune to Hepatitis A (immunised)</td>
<td></td>
</tr>
</tbody>
</table>

### Hepatitis A – Person Sharing Home:

<table>
<thead>
<tr>
<th>Action</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must not donate if less than 6 months from recovery of last affected person in the home.</td>
<td></td>
</tr>
<tr>
<td>Accept if donor is shown to be immune to Hepatitis A (immunised)</td>
<td></td>
</tr>
</tbody>
</table>

### Hepatitis A – Immunisation:

<table>
<thead>
<tr>
<th>Action</th>
<th>See</th>
<th>See if relevant</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept</td>
<td>Immunisation – Non-live</td>
<td>Hepatitis B – Immunisation</td>
<td>There are two types of vaccines: one type contains inactivated Hepatitis A virus, the other contains a live but attenuated virus. Both types stimulate active immunity against a future infection – the type used in Australia and New Zealand is the inactivated type. May be combined with Hepatitis B immunisation.</td>
</tr>
</tbody>
</table>

### Hepatitis B - Infection:

| Action                                                                 ||
|------------------------------------------------------------------------||
| Must not donate if active infection                                    |
Additional Information

Hepatitis B is an infectious inflammatory illness of the liver caused by the hepatitis B virus (HBV). Originally known as "serum hepatitis", the disease has caused epidemics in parts of Asia and Africa, and it is endemic in China. About a third of the world population has been infected at one point in their lives.

The virus is transmitted by exposure to infectious blood or body fluids such as semen and vaginal fluids, while viral DNA has been detected in the saliva, tears, and urine of chronic carriers. Perinatal infection is a major route of infection in endemic (mainly developing) countries. Other risk factors for developing HBV infection include working in a healthcare setting, transfusions, dialysis, acupuncture, tattooing, sharing razors or toothbrushes with an infected person, travel in countries where it is endemic, and residence in an institution. However, hepatitis B viruses cannot be spread by holding hands, sharing eating utensils or drinking glasses, kissing, hugging, coughing, sneezing, or breastfeeding.

The hepatitis B virus is highly infectious (50 to 100 times more infectious than HIV) and there is evidence (2 reports) of transmission by corneal transplantation.

Hepatitis B – History of Infection:

Action If more than 12 months from recovery, obtain history and analyse blood samples
Accept if:
   a) HBsAg negative, HBcAb negative
   or
   b) HBsAg negative, HBcAb positive, HBV-DNA negative* and HBsAb documented at more than 100 mIU/ml at some time (i.e. past infection with immunity)
*HBV-DNA negative is required if HBcAb positive to exclude for Occult HBV.

Hepatitis B – Current or Former Sexual Partners of infected Individuals:

Action Obtain history (including time since last sexual contact, and the dates that HBV immunisation given
Must not donate if less than 3 months from last sexual contact
Accept if:
   a) More than 3 months since last sexual contact
   b) If less than 3 months since last sexual contact and the donor is shown to be naturally immune

Additional TGA criteria
The TGA mandates 12 month exclusion for increased risk sexual practice but does not define it
### Hepatitis B – Current or Former Sexual Partners of Person who has recovered from Hepatitis B:

**Action**  
Obtain history (including time since last sexual contact, date that the partner was diagnosed with HBV and the dates that HBV immunisation of the donor was given)

*Most not donate if less than 3 months from last sexual contact with the partner who has been diagnosed with HBV infection less than 12 months ago*

Accept if:

a) More than 3 months since last sexual contact regardless of when partner was diagnosed with HBV

b) If partner was diagnosed with HBV infection more than 12 months ago and has cleared the infection at the time of last sexual contact

### Hepatitis B – Person Sharing Home with a person with Hepatitis B infection:

**Action**  
Obtain history to determine if they are still sharing a home, and if not, the time sharing ceased

*Must not donate if less than 3 months since sharing ceased*

Accept if:

a) More than 3 months since sharing ceased

b) If less than 3 months since sharing ceased, and the donor is shown to be naturally immune

### Hepatitis B – Immunisation:

**Action**  
Accept

**See**  
Immunisation – Non-live

**Additional Information**  
Sensitive assays for HBsAg may be positive following recent immunisation. Full screening for Hepatitis may be required.

### Hepatitis C:

**Action**  
*Must not donate*

For individuals that have been successfully treated seek Medical Director opinion. Note that such individuals will be HCV NAT negative but may retain HCV antibody reactivity.
Hepatitis C is an infectious disease affecting primarily the liver, caused by the hepatitis C virus (HCV). The infection is often asymptomatic, but chronic infection can lead to scarring of the liver and ultimately to cirrhosis, which is generally apparent after many years. In some cases, those with cirrhosis will go on to develop liver failure or liver cancer (hepatoma). It has also been linked with malignant lymphomas and autoimmune disease.

Individuals who are chronically infected are sometimes referred to as carriers. They often have no, or minimal, symptoms associated with their infection. Many cases are linked to previous drug use, and before the introduction of HCV screening of blood, to transfusion.

It has the longest “window period” for testing of the mandatory tests (HIV, HBV, HCV).

There is now sufficient evidence to establish that individuals who have a sustained virological response to treatment for Hepatitis C infection (defined as remaining Hepatitis C RNA negative six months after cessation of the treatment) are likely to have been cured and the chance of a relapse is less than 1%.

It is not considered contagious and is usually only spread through a direct blood to blood route. There is no evidence HCV can be spread by corneal transplantation.

### Hepatitis C – Current and Former sexual partners of HCV positive individuals:

**Action**

- Must not donate if less than 3 months from the last sexual contact
- Accept if the donor’s HCV positive partner has been successfully treated for Hepatitis C infection and has been free of therapy for 12 months.

**Additional Information**

- There is sufficient evidence to establish that individuals who have a sustained virological response to treatment for Hepatitis C infection (defined as remaining hepatitis C RNA negative six months after cessation of treatment) are likely to have been cured and the chance of relapse is less than 1%.
- The very low risk of relapse combined with the rarity of sexual transmission of HCV means the transmission from a successfully treated individual to a sexual partner is most unlikely.

### Hepatitis C – Person currently or formerly Sharing Home:

**Action**

- Accept

**Additional Information**

- Hepatitis C is neither contagious nor spread by faecal-oral route. It is usually only spread through a direct blood to blood route. For these reasons household contacts do not need to be deferred.

### Hepatitis E:

**Action**

- Must not donate if less than 6 months from recovery

**Additional Information**

- Hepatitis E is an infectious hepatitis that is usually spread through contaminated food or water. Infection may be associated with travel to countries with poor hygiene/sewage conditions but increasingly, cases of hepatitis E are being identified due to consumption of undercooked contaminated meat. Hepatitis E can affect non-human animals and has been found in pigs. There have been reports of transmission by transfusion and transplant. Infection in healthy individuals is often symptom free but in people with underlying problems in their immune systems it can be serious and occasionally fatal.

### Hereditary Elliptocytosis:

**Action**

- Accept

**Additional Information**

- Hereditary elliptocytosis, also known as ovalocytosis, is an inherited blood disorder in which an abnormally large number of the patient’s erythrocytes are elliptical rather than the typical biconcave disc shape.
**Hereditary Spherocytosis:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Information</td>
<td>Hereditary spherocytosis (also known as Minkowski–Chauffard syndrome) is a genetic disorder characterised by the production of red blood cells that are sphere-shaped rather than bi-concave disk shaped, and therefore more prone to haemolysis. It is the most common disorder of the red cell membrane, affecting 1 in 2,000 people of Northern European ancestry.</td>
</tr>
</tbody>
</table>

**Herpes – Genital:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept if lesions are healing and there is no history of other Sexually Transmitted Diseases.</th>
</tr>
</thead>
<tbody>
<tr>
<td>See if relevant</td>
<td>Sexually Transmitted Diseases</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Genital herpes is a common sexually transmissible infection (STI) caused by the herpes simplex virus. There are two forms of the herpes simplex virus – HSV1 and HSV2. HSV1 more commonly occurs around the mouth, but it can also occur on the genitals. HSV2 occurs mainly on and around the genital area. It is estimated that about one in eight people have the virus that causes genital herpes and about 80 per cent of those infected may be unaware they have this infection. The herpes virus is spread by skin-to-skin contact and can be transmitted during vaginal, oral or anal sex. The infection can occur anywhere on the genitals, in areas around the groin or pubic area, and in or around the anus. Cold sores on the mouth can cause genital infection during oral sex for those who do not already have the cold sore virus. Recurrences are usually less painful and shorter in duration than the first episode. Over time, episodes usually become less frequent and may eventually stop altogether. Infections caused by HSV1 are less likely to recur in the genital area than infections caused by HSV2.</td>
</tr>
</tbody>
</table>

**Herpes – Ocular:**

<table>
<thead>
<tr>
<th>Includes</th>
<th>Simplex and Zoster Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Must not donate if active or past infection of eyes.</td>
</tr>
</tbody>
</table>
Caused by HSV-1, ocular herpes is a common, recurrent viral infection affecting the eyes. Ocular herpes of the eye can be transmitted through close contact with an infected person whose virus is active or through self-contact and contamination during an active herpes infection (such as a cold sore of the lip).

Ranging from a simple infection to a condition that can possibly cause blindness, there are several forms of ocular herpes:

1. Herpes keratitis is the most common form. It generally only affects the epithelium and usually heals without scarring.
2. Stromal keratitis occurs when the infection goes deeper into the layers of the cornea. This can lead to scarring, loss of vision and, occasionally, blindness. Stromal keratitis is thought to be caused by a late immune response to the original infection. Although the condition is rare, the NEI reports that stromal keratitis is the leading cause of corneal scarring that subsequently causes blindness in the United States.
3. Iridocyclitis is a serious form where the iris and surrounding tissues inside the eye become inflamed, causing severe sensitivity to light, blurred vision, pain and red eyes.
4. Herpes retinitis is when infection occurs in the retina.

Herpes zoster ophthalmicus occurs when the varicella-zoster virus is reactivated in the ophthalmic division of the trigeminal nerve. It represents up to one fourth of all cases of herpes zoster. Most patients present with a periorbital vesicular rash distributed according to the affected dermatome. A minority of patients may also develop conjunctivitis, keratitis, uveitis, and ocular cranial-nerve palsies. Permanent sequelae of ophthalmic zoster infection may include chronic ocular inflammation, loss of vision, and debilitating pain.

Oral herpes is commonly referred to as “cold sores” and “fever blisters” and is typically caused by herpes simplex virus type 1 (HSV-1; oral HSV-2 is rare and is more commonly associated with genital herpes. More than 50 percent of the adult population has oral herpes and more than 80% of the population are infected with HSV-1. Oral herpes is transmitted through direct contact between the contagious area and broken skin (a cut or break) and mucous membrane tissue (such as the mouth or genitals). Most people contract the virus when they are children by receiving a kiss from a friend or relative.

While symptoms of oral herpes most commonly appear on or around the lips, oral herpes is not always limited to this area. For some, symptoms may appear between the upper lip, on or inside the nose, or on the chin or cheek. In these instances, herpes is referred to as oral-facial herpes.
### Herpes Zoster:
- **See if relevant**
  - Infection – Acute
  - Infectious Disease – Contact with Herpes – Ocular

### HIV - Infection:
- **Includes** AIDS
- **Action** Must not donate

### HIV- Current or Former Sexual Partners of Confirmed Case:
- **Action** Must not donate if less than 3 months from last sexual contact
- **Additional Information**
  - HIV infection can be spread through sexual activity, including oral and anal sex. Despite regular sexual contact transmission of infection may not happen. It may however not be transmitted for a long time into a relationship. This could be because the infection becomes more active in the infected partner, the uninfected partner acquires another infection or injury to a mucous membrane, or there is a change in the use of, or failure of, barrier contraceptives.

  Waiting 3 months from the last sexual contact will ensure that any infection is picked up by the NAT tests used in ANZ.

### Hodgkin Lymphoma (Disease):
- **Action** Must not donate
- **See** Lymphoma
- **Additional Information**
  - Hodgkin’s lymphoma is characterized by the orderly spread of disease from one lymph node group to another and by the development of systemic symptoms with advanced disease. When Hodgkins cells are examined microscopically, multinucleated Reed–Sternberg cells (RS cells) are the characteristic histopathologic finding.

  The cause is unknown but probably multifactorial. Risk factors include: male, family history, history of infection with Epstein-Barr virus, weakened immune system including AIDS, prolonged use of human growth hormone, exposure to exotoxins such as Agent Orange.

### Homosexual – Female:
- **Action** Bi-sexual and Homosexual Female

### Homosexual – Male:
- **Action** Do not donate if any oral or anal sex with another man in the past six months **(3 months with HCV)**
  - Accept homosexuality in the absence of male-to-male sex

- **Additional TGA criteria**
  - The TGA mandates 12 month exclusion for increased risk sexual practice but does not define it
Additional Information

Men who have had sex with other men have a higher chance of having an undiagnosed communicable disease infection. Therefore on an epidemiological population basis, male to male sex is considered high-risk behaviour.

If one considers having a good knowledge of an individual’s behaviour, then male to male sex may not be considered high-risk behaviour (e.g. in the instance of a long-term monogamous relationship).

The suggested six month exclusion period is consistent with that of other high-risk for infectious disease exclusions, based on “worse-case scenario” of hepatitis and HIV window periods. 3 months if NAT is performed

**Hormone Replacement Therapy:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>a) A recipient of human gonadotrophin of pituitary origin</td>
</tr>
<tr>
<td></td>
<td>b) A recipient of human pituitary growth hormone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accept if:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Treated with gonadotrophins that were exclusively non-pituitary derived (post 1987)</td>
</tr>
<tr>
<td>b) Treated with growth hormone that was exclusively recombinant (post 1987)</td>
</tr>
</tbody>
</table>

**See if relevant**

- Prion Associated Diseases
- Thyroid Disease

**HTLV Infection:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate</th>
</tr>
</thead>
</table>

| Additional Information | The Human T-lymphotropic virus Type I (HTLV-1) is a human RNA retrovirus that is known to cause adult T-cell leukemia and lymphoma, and a demyelinating disease called HTLV-I associated myelopathy/Tropical spastic paraparesis (HAM/TSP). HTLV-I and HTLV-II are sexually transmitted. The transmission of HTLV by lymphocyte cells is valid for blood donations, but uncertain for tissues and cells and the prevalence outside of Japanese populations is insignificant. Therefore HTLV-1 & 2 testing is most often only required for the donation of leucocyte rich tissues. |

**HTLV- Former and Current Sexual Partners of Confirmed Case:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if less than 3 months from last sexual contact</th>
</tr>
</thead>
</table>

| Additional Information | There is no defined infectious window period for HTLV. The risk of missing recent infection with individual sample testing is low after 3 months |

**HTLV- Persons currently or formerly sharing a home with a Confirmed Case:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept</th>
</tr>
</thead>
</table>

**Huntington Disease:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept If the diagnosis can be confirmed</th>
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</thead>
</table>

| Additional Information | Huntington's disease (HD) is a neurodegenerative genetic disorder that affects muscle coordination and leads to cognitive decline and psychiatric problems. It typically becomes noticeable in mid-adult life. HD is the most common genetic cause of abnormal involuntary writhing movements called chorea, which is why the disease used to be called Huntington's chorea. |
### Hyperthyroidism:

See Thyroid Disease

### Hypothyroidism:

See Thyroid Disease

### Immune Thrombocytopenia Pupura (Idiopathic Thrombocytopenia Pupura (ITP)):

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) Symptomatic</td>
</tr>
<tr>
<td></td>
<td>b) Chronic</td>
</tr>
<tr>
<td></td>
<td>c) Recovered but less the 5 years from recovery</td>
</tr>
</tbody>
</table>

See if relevant

If treated with immunoglobulin or plasma exchange:

Transfusion

If treated with immunosuppressive therapy:

Immunosuppression

### Additional Information

Idiopathic thrombocytopenic purpura (ITP), also known as primary immune thrombocytopenic purpura and autoimmune thrombocytopenic purpura, is defined as isolated low platelet count (thrombocytopenia) with normal bone marrow and the absence of other causes of thrombocytopenia.

ITP is an autoimmune condition with antibodies detectable against several platelet surface antigens. The cause of ITP is unknown, but viral infections might make the immune system malfunction and start producing the ‘rogue’ antibodies. There are two broad categories of ITP: one that usually goes away by itself with time (usually in childhood), and the other that lingers beyond six months (more often in adults). ITP is more common among children than adults, most often occurring around two to four years of age, affecting boys and girls equally. Among adults, young women are more likely to develop ITP than any other group, for reasons unknown.

ITP symptoms can include any of the following:

Abnormally heavy periods in women

Bleeding into the skin, often around the shins, causing a skin rash that looks like pinpoint red spots (petechial rash)

Easy bruising

Nosebleed or bleeding in the mouth

Caution in acceptance is due to diagnosis being dependant on the exclusion of other causes of a low platelet count – including leukaemia, myelodysplastic syndromes and pre-neoplastic states i.e. there is a high potential for misdiagnosis. These recommendations are that of United Kingdom Tissue Donor Selection Guidelines.

### Immunisation – Live:

Includes Live attenuated bacteria or viruses

Action **Must not donate if less than four weeks** from vaccination (note for smallpox vaccination the exclusion period is 8 weeks)
Additional TGA criteria
See

BCG
Smallpox Immunisation

Additional Information
Live immunisations use living viruses or living bacteria that will stimulate the immune system but do not normally cause a severe illness. They may however cause severe illness in people who are already unwell and have a weakened immune system. By four weeks, any infection caused by the immunisation should have been controlled and so should not be passed on through donated material.

The following live vaccines are currently in use in Australia and New Zealand:

<table>
<thead>
<tr>
<th>Live attenuated parenteral vaccines</th>
<th>Live attenuated oral vaccines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral</td>
<td>Bacterial</td>
</tr>
<tr>
<td>Japanese encephalitis (Imojev)</td>
<td>BCG</td>
</tr>
<tr>
<td>Measles-mumps rubella (MMR)</td>
<td>Oral rotavirus vaccine</td>
</tr>
<tr>
<td>Measles-mumps rubella-varicella (MMRV)</td>
<td>Oral typhoid vaccine</td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
</tr>
<tr>
<td>Yellow fever</td>
<td></td>
</tr>
<tr>
<td>Zoster</td>
<td></td>
</tr>
</tbody>
</table>

Immunisation – Non-Live:
Action
Accept non-live immunisations.

Additional Information
“Non-live” immunisations do not use material that can cause infection. The means there is no risk to people receiving blood or tissues from a recently immunised donor.

NOTE: Assays for HBsAg may be positive following recent immunisation. Full screening for Hepatitis B may be required.
Immunosuppression:

**Action**

Accept only if NAT HIV, HBV and HCV testing is performed if on long-term corticosteroids equivalent to >30 mg/day Prednisolone (see Additional information) or lower doses in combination with immunosuppressant drugs such as Azathioprine or Mycophenolate.

Accept if on the equivalent of >30 mg/day Prednisolone for not more than two weeks within the 6 months before death (For potential eye donors with a history of malignancy who are on chemotherapy, or autoimmune disease who are on immunosuppressive therapy this is a likely scenario)

**See if relevant**

Autoimmune Disorders  
Steroid Therapy  
Tissue and Organ Recipients

**Additional Information**

A dose greater than 30 mg/day prednisolone may be immunosuppressive and theoretically could have an impact on serological tests for antibodies to markers of transmissible disease. Assays which directly detect the virus are not affected adversely by immunosuppression and are appropriate in this situation.

Other corticosteroids equivalent to 30 mg Prednisolone:

- Betamethasone (4.5 mg)
- Cortisone acetate (150 mg)
- Deflazacort (36 mg)
- Dexamethasone (4.5 mg)
- Hydrocortisone (120 mg)
- Methylprednisolone (24 mg)
- Triamcinolone (24 mg)

Infection – Acute:

**Action**

See if there is a specific entry for the disease you are concerned about. Consider if the infection was systemic (eg. septicaemia, viraemia), or localised and unlikely to have affected the cornea or eyes.

Accept if caused by bacterial infection and the corneas are to be stored by organ culture.

Accept if the clinician caring for the potential donor thinks that therapy given for an infection has successfully cleared it.

Accept if the infection was not considered systemic (e.g. not septicaemia, not viraemia), but localised and not likely to affect the eyes.

NB. For some disease states the infective agent can persist in the body for quite some time after the signs and symptoms of infection have ceased or when the infection is considered to be resolved.

Check deferral times for disease after the infection has resolved (e.g. Ebola is 12 months deferral after resolution of the infection)
See if relevant  
Congo Fever  
Crimean Fever  
Dengue Fever  
Ebola Fever  
Herpes- Genital  
Herpes Oral  
Lassa Fever  
Marburg Fever  
MRSA  
Steroid Therapy  
West Nile Virus  

Additional Information  
Potential donors who have been cared for in an ICU may have a local chest infection as a result of ventilation – acceptable  
Donors who have bacterial pneumonia are acceptable as eye donors but would not be acceptable for other tissues  
Donors who have had a positive screening test for MRSA (carriers) are acceptable. Donors with active MRSA infection at the time of death should be referred to the Medical Director for opinion.

Infection – Chronic:  
Action  
See if there is a specific entry for the disease you are concerned about. Consider if the infection was systemic, or localised and unlikely to have affected the cornea or eyes.  
Accept  
1. Acne – Secondary infection of the lid margin (blepharitis) on its own should not preclude eye donation, but donations must not be taken if there is also ocular surface disease.  
2. Chronic superficial fungal infections  
3. Typhoid and Paratyphoid – if more than 7 days from completion of antibiotic course and last symptoms  
4. If caused by bacterial infection and the corneas are to be stored by organ culture  

See if relevant  
Acne  
Steroid Therapy  

Additional Information  
Typhoid and paratyphoid are gastrointestinal infections which rarely have a chronic carrier state. It is usually caught while travelling overseas and passed by the faecal-oral route and is not transfusion transmitted.

Infection – General:  
Action  
See if there is a specific entry for the disease  
See if relevant  
Decide if the infection is of short duration with no long lasting carrier state, e.g. flu: Infection – Acute  
Or if lasting a long time (more than a few weeks) or possibly with long lasting carriage of infecting organism e.g. malaria, typhoid. Infection - Chronic
### Infection – Tropical:

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if Filariasis (River Blindness, Onchocerciasis)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leishmaniasis, accept for corneas only not for sclera</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>See if relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congo Fever</td>
</tr>
<tr>
<td>Crimean Fever</td>
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<tr>
<td>Dengue Fever</td>
</tr>
<tr>
<td>Ebola Fever</td>
</tr>
<tr>
<td>Lassa Fever</td>
</tr>
<tr>
<td>Leishmaniasis</td>
</tr>
<tr>
<td>Marburg Fever</td>
</tr>
<tr>
<td>Malaria</td>
</tr>
<tr>
<td>Onchocerciasis / River Blindness</td>
</tr>
<tr>
<td>South American Trypanosomiasis</td>
</tr>
<tr>
<td>Yellow Fever</td>
</tr>
</tbody>
</table>

### Additional Information

Leishmaniasis is a disease caused by protozoan parasites that belong to the genus Leishmania and is transmitted by the bite of certain species of sand fly. Most forms of the disease are transmissible only from non-human animals (zoonosis), but some can be spread between humans. Cutaneous leishmaniasis is the most common form, which causes a sore at the bite site, which heals in a few months to a year, leaving an unpleasant-looking scar. As corneas are avascular there is not considered to be a risk of transmitting protozoal infections of this type.

Onchocerciasis (River Blindness) is second in the world only to trachoma as an infectious cause of blindness. It is a form of subcutaneous filariasis is caused by Loa loa (the eye worm).

### Infectious Diseases – Contact with:

<table>
<thead>
<tr>
<th>Action</th>
<th>Is there a specific entry for the disease with which there has been contact?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Must not donate if:</td>
</tr>
<tr>
<td></td>
<td>Within the incubation period for the condition or, if this is not known, less than 4 weeks from last contact.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>See if relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis</td>
</tr>
<tr>
<td>Meningitis</td>
</tr>
<tr>
<td>Sexually Transmitted Disease</td>
</tr>
<tr>
<td>Tuberculosis</td>
</tr>
</tbody>
</table>
Inflammatory Bowel Disease:
Includes
Crohn’s Disease
Ulcerative Colitis
Irritable Bowel Syndrome
Action
Accept if no ocular involvement (see below)
Additional Information
The cause of these conditions is not fully understood and may include infection. Lesions caused by the disease can increase the risk of bacteria entering the blood stream. Therefore it may be relevant to only accept eyes if the corneas are to be preserved by organ culture.
There is a chance that other organs and tissues may not be accepted for donation.

Inflammatory Eye Disease:
Active
Must not donate if active
See if relevant
Autoimmune Disorders

Influenza Immunisation:
See
Immunisation – Non-live

Inherited Diseases:
Action
Is there a specific entry for the condition? If not: refer to Medical Director
See
Congenital Disorders

Inoculation Injury:
Includes
Bite (Human)
Needle-stick injury
Action
Must not donate less than six months from receiving injury or four months if NAT HCV is performed.
Additional Information
NB: The TGA criteria mandate that it does not matter whether or not the inoculation injury involved a person with a communicable disease.
The six month exclusion period for these increased risks (mucosal splash with blood, needle stick injury, tattoo, body piercing) is mandated by the TGA.
The following are all considered to have similar risk of acquiring a blood borne transmissible infection: Human bites, mucosal splash with blood, needle stick injury, tattoo, body piercing.

Irritable Bowel Syndrome:
Action
Accept
Additional Information
Irritable bowel syndrome (IBS, or spastic colon) is a symptom-based diagnosis characterized by chronic abdominal pain, discomfort, bloating, and alteration of bowel habits. As a functional gastrointestinal disorder, IBS has no known organic cause.

Japanese Encephalitis:
Action
Accept for corneas (not sclera) after clinical opinion that the infection has resolved.
See
Arthropod Borne Encephalitis (Arbovirus infection)
Japanese encephalitis is a disease caused by the mosquito-borne Japanese encephalitis virus from the family Flaviviridae.

Domestic pigs and wild birds (herons) are reservoirs of the virus; transmission to humans may cause severe symptoms although the disease is asymptomatic in the vast majority of infections. The disease is most prevalent in Southeast Asia and the Far East.

Signs which develop during the acute encephalitic stage include neck rigidity, cachexia, hemiparesis, convulsions and a raised body temperature between 38–41 °C and eventually coma.

### Japanese Encephalitis Immunisation:

See Immunisation – Live

### Jaundice:

**Action**

Accept:

a) If the cause of the jaundice was non-viral (this includes but is not limited to gall stones and drug reactions), accept.

b) If due to Gilbert’s Syndrome, accept

Must not donate if:

a) History of jaundice (and reason unknown)

b) If the cause of the jaundice was viral see the specific entry for that condition

**See if relevant**

Gall Bladder Disease
Gilbert’s Syndrome
Hepatitis A
Hepatitis B
Hepatitis C
Hepatitis E

### Additional Information

Many things can cause jaundice. The concern is with infectious causes.

**Kala-Azar:**

See Leishmaniasis

**Keratoconjunctivitis Sicca:**

**Action**

Do not donate in severe cases.

Need to determine the severity of the condition to arrive at an estimation of how much the sicca may have affected the cornea.

Accept in less severe cases, or those where the history is not clear.

Accept for donation but with the knowledge that the corneas may have some pathology and therefore be less likely to be suitable for donation. These pathologies, if present, will be detected post-donation by the eye bank.
Keratoconjunctivitis sicca (KCS), also called keratitis sicca, xerophthalmia or dry eye syndrome is an eye disease caused by eye dryness, which, in turn, is caused by either decreased tear production or increased tear film evaporation.

Typical symptoms of keratoconjunctivitis sicca are dryness, burning and a sandy-gritty eye irritation that gets worse as the day goes on. Usually both eyes are affected.

Having dry eyes for a while can lead to tiny abrasions across the epithelium of the cornea. In advanced cases, the epithelium undergoes pathologic changes to squamous metaplasia and loss of goblet cells. Some severe cases result in thickening of the corneal surface, corneal erosion, punctate keratopathy, epithelial defects, corneal ulceration, corneal neovascularization, corneal scarring, corneal thinning, and even corneal perforation.

Causes include idiopathic, congenital alacrima, xerophthalmia, lacrimal gland ablation, and sensory denervation. In rare cases, it may be a symptom of collagen vascular diseases, including rheumatoid arthritis, Wegener’s granulomatosis, and systemic lupus erythematosus. Sjögren’s syndrome and autoimmune diseases associated with Sjögren’s syndrome are also conditions associated with aqueous tear deficiency.

In addition, certain drugs such as isotretinoin, sedatives, diuretics, tricyclic antidepressants, antihypertensives, oral contraceptives, antihistamines, nasal decongestants, beta-blockers, phenothiazines, atropine, and pain relieving opiates such as morphine can cause or worsen this condition.

Kidney Disease:

Includes
- Acute Nephritis
- Chronic Nephritis
- Chronic Renal Failure

Action
- Accept if not immunosuppressed
- If immunosuppressed see entry “Immunosuppression”

See if relevant
- Immunosuppression

Kidney Recipient:

See
- Tissue and Organ Recipients
- Immunosuppression

Klinefelter’s Syndrome:

Action
- Accept

See
- Congenital Disorders

Additional Information

Klinefelter syndrome or Klinefelter’s syndrome, is the set of symptoms resulting from additional X genetic material in males. Also known as 47,XXY or XXY, is a genetic disorder in which there is at least one extra X chromosome to a standard human male karyotype, for a total of 47 chromosomes rather than the 46 found in genetically normal humans.

This chromosome constitution (karyotype) exists in roughly between 1:500 to 1:1000 live male births. It is the most common sex chromosome aneuploidy in males and the second most common condition caused by the presence of extra chromosomes.
### Laser Treatment (Surgery):

**Action**
- Accept if applied to other parts of the body (e.g. for skin lesions, cosmetic purposes).
- Accept if laser on eyes was:
  - a) for retinal surgery
  - b) for cataract surgery or related
- Accept only for posterior keratoplasty purposes:
  - c) if laser treatment was refractive surgery to the cornea (and now healed)

If laser treatment was related to malignancy, see Malignancy

**See if relevant**
- Refractive Surgery

**Additional Information**
- Laser treatment (other than refractive laser surgery to the cornea) does not affect the cornea. This will include laser treatment used in diabetic retinopathy, macular degeneration and that used in cataract surgery.
- Laser treatment for refractive errors involves only the anterior segment of the cornea and will not affect the posterior segment. Corneas that have undergone refractive surgery should not be used for penetrating keratoplasty or anterior keratoplasty due to concerns about structural integrity of the cornea. However, these corneas may be suitable for posterior keratoplasty although there needs to be an awareness of the refractive procedure to avoid any concerns or complications during the donor cornea cutting process.

### Lassa Fever:

**Action**
- Must not donate is less than 12 months following recovery.

**Additional Information**
- Lassa fever or Lassa hemorrhagic fever (LHF) is an acute viral hemorrhagic fever caused by the Lassa virus and first described in 1969 in the town of Lassa, in Borno State, Nigeria. The Lassa Fever is a member of the Arenaviridae virus family and is similar to Ebola.
- The virus is probably transmitted by contact with the faeces or urine of animals accessing grain stores in residences (particularly rodents). Further human-to-human transmission is thought to be via infected faeces or urine. Given its high rate of incidence, lassa fever has become a major problem in the African region killing about 5,000 people per annum (15-20% fatal).

### Legionnaire’s Disease:

**See**
- Infection – Acute

**Additional Information**
- Legionnaires Disease is a potentially fatal pneumonia caused most commonly by Legionella pneumophila, a gram negative, aerobic bacteria that is carried by amoeba that thrive in stagnant water.

### Leishmaniasis:

**Includes**
- Kala-azar

**Action**
- Accept for corneas not for sclera
Leishmaniasis is a disease caused by protozoan parasites that belong to the genus Leishmania and is transmitted by the bite of certain species of sand fly. Most forms of the disease are transmissible only from non-human animals (zoonosis), but some can be spread between humans. Cutaneous leishmaniasis is the most common form, which causes a sore at the bite site, which heals in a few months to a year, leaving an unpleasant-looking scar.

As corneas are avascular there is not considered to be a risk of transmitting protozoal infections of this type.

**Leptospirosis:**

*See Infection – Acute*

**Additional Information**

Leptospirosis (also known as Weil's syndrome, canicola fever, canefield fever, nanukayami fever, 7-day fever, Rat Catcher's Yellows, Fort Bragg fever, black jaundice, and Pretibial fever, is caused by infection with bacteria of the genus Leptospira and affects humans as well as other animals. It is among the world's most common diseases transmitted to people from animals. The infection is commonly transmitted to humans by allowing water that has been contaminated by animal urine to come in contact with unhealed breaks in the skin, the eyes, or with the mucous membranes. The disease is not known to be spread from person to person.

Symptoms of leptospirosis include high fever, severe headache, chills, muscle aches, and vomiting, and may include jaundice, red eyes, abdominal pain, diarrhoea, and rash. Initial presentation may resemble pneumonia. The symptoms in humans appear after a 4–14 day incubation period. More severe manifestations include meningitis, extreme fatigue, hearing loss, respiratory distress, azotaemia, and renal interstitial tubular necrosis, which results in renal failure and occasionally liver failure.

Occupations at risk include veterinarians, slaughterhouse workers, farmers, sewer maintenance workers, waste disposal facility workers, land surveyors and people working on derelict buildings. Slaughterhouse workers may contract the disease through contact with infected blood or body fluids. Rowers, kayakers and canoeists are also sometimes known to contract the disease.

**Lesbian:**

*Action Accept*
Leukaemia:

Includes (but not limited to)
- Acute lymphoblastic leukaemia (ALL).
- Chronic lymphocytic leukaemia (CLL).
- Acute myeloid leukaemia (AML).
- Chronic myeloid leukaemia (CML).
- Hairy cell leukaemia (HCL).
- Adult T-cell leukaemia is caused by human T-lymphotropic virus (HTLV).

Action

Must not donate

See

Malignancy

Additional Information

Leukaemia is a type of cancer of the blood or bone marrow characterised by an abnormal increase of immature white blood cells called "blasts". Leukaemia is a broad term covering a spectrum of diseases.

The following list is not comprehensive:

- Acute lymphoblastic leukaemia (ALL) is the most common type of leukaemia in young children.
- Chronic lymphocytic leukaemia (CLL) most often affects adults over the age of 55. It sometimes occurs in younger adults, but it almost never affects children.
- Acute myeloid leukaemia (AML) occurs more commonly in adults than in children.
- Chronic myeloid leukaemia (CML) occurs mainly in adults.
- Hairy cell leukaemia (HCL) is sometimes considered a subset of chronic lymphocytic leukaemia, but does not fit neatly into this pattern. About 80% of affected people are adult men. No cases in children have been reported.
- T-cell prolymphocytic leukaemia (T-PLL) is a very rare and aggressive leukaemia.
- Large granular lymphocytic leukaemia may involve either T-cells or NK cells, it is a rare and indolent (not aggressive) leukaemia.
- Adult T-cell leukaemia is caused by human T-lymphotropic virus (HTLV), a virus similar to HIV. Human T cell lymphotropic virus types I and II (HTLV-I/II) are endemic in certain areas of the world.

The eye/corneal donation contraindication appears to be for two reasons:

a) Wide dissemination of the malignancy throughout the body, spread through the blood and lymphatic system
b) Viruses have also been linked to some forms of leukaemia. Experiments on mice and other mammals have demonstrated the relevance of retroviruses in leukaemia, and human retroviruses have also been identified. The first human retrovirus identified was human T-lymphotropic virus, or HTLV-1, which is known to cause adult T-cell leukaemia. Virus aetiology relates to the virus damaging the cell or creating DNA mutations, either of which can trigger leukaemia by activating oncogenes or deactivating tumour suppressor genes, and thereby disrupting the regulation of cell death, differentiation or division.

Listeriosis (Listeria infection):

See

Infection – Acute
Additional Information

Listeriosis is a bacterial infection most commonly caused by Listeria monocytogenes. It primarily causes infections of the central nervous system (meningitis, meningoencephalitis, brain abscess, cerebritis) and bacteraemia in those who are immunocompromised, pregnant women, and those at the extremes of age (newborns and the elderly). It can also result in gastroenteritis in healthy persons who have ingested a large inoculum of the organism. Listeria is ubiquitous in the environment and is primarily transmitted via the oral route after ingestion of contaminated food products, after which the organism penetrates the intestinal tract to cause systemic infections.

Lyme Disease:
See Borreliosis

Lyssavirus:
See Australian Bat Lyssavirus

Lymphogranuloma Venereum:
Action Must not donate
See Chlamydia
Additional Information
Lymphogranuloma venereum (also known as Climatic bubo, Durand–Nicolas–Favre disease, Poradenitis inguinale, and Strumous bubo) is a sexually transmitted disease caused by Chlamydia trachomatis.

Lymphoma:
Includes Hodgkin’s Disease
Action Must not donate
Additional Information
Lymphoma is a type of haematological neoplasm that occurs when B or T lymphocytes, divide faster than normal cells or live longer than they are supposed to. Lymphoma may develop in the lymph nodes, spleen, bone marrow, blood or other organs which eventually presents as a solid tumour. Lymphomas are closely related to lymphoid leukaemias.

Macular Degeneration:
See Age-related Macular Degeneration

Malaria:
Action Accept for corneas not for sclera
Additional Information
As corneas are avascular there is not considered to be a risk of transmitting protozoal infections. Cases of malaria transmission (by transfusion) have occurred many years after the donor was last at risk of becoming infected with malaria. This is mainly a problem in people who have had repeated episodes of infection with malaria, although this is uncommon. This means that it is safer to test for malaria antibodies rather than wait a specific length of time.

If malaria is confirmed in the donor, (as distinct risk) caution should perhaps be exercised for cornea donation.
Malignancy:

Action
Accept for all cornea and sclera – except the below exclusions

Must not donate if:

a) Haematological malignancy
b) Malignant tumour of anterior segment
c) Disseminated melanoma
d) Retinoblastoma

Any malignancy is an exclusion for kerato-limbal allograft use.

See if relevant
Basal Cell Carcinoma
Immunosuppression
Malignant Melanoma

Additional Information
Many malignancies spread by invading surrounding tissues – thus the exclusion for malignancies of the eye.

Tissue from donors with any malignancy (disseminated or not) is not suitable for kerato-limbal procedures. This is based on the kerato-limbal region being considered vascularised.

Transmission of malignant melanoma from a donor with disseminated melanoma has been reported following a kerato-limbal allograft procedure. Risk assessment following this transmission resulted in disseminated melanoma being an exclusion criteria for any form of transplantation. This does not exclude donors with diagnosed localised (non-disseminated) malignant melanomas that have been resected. Cornea and sclera are suitable for use from donors with non-melanoma malignancies as long as they are not local to the anterior segment.

Viruses that can be spread by blood and tissues can also cause some malignancies – thus the exclusion of haematological malignancies.

NB: Some (UK, EEBA) exclude the use of sclera when any malignancy is present

Malignant (Disseminated) Melanoma:

Action
Must not donate. Ocular Tissue from donors with any history of disseminated melanoma may not be released for any surgical use.

See
Malignancy

Additional Information
Transmission of malignant melanoma from a donor with disseminated melanoma has been reported following a kerato-limbal allograft procedure. Risk assessment following this transmission resulted in disseminated melanoma being an exclusion criteria for any form of transplantation. This does not exclude donors with diagnosed localised (non-disseminated) malignant melanomas that have been resected. Cornea and sclera are suitable for use from donors with non-melanoma malignancies as long as they are not local to the anterior segment.

Marburg Fever:

Action
See Viral Haemorrhagic Fever.

See
Ebola
Infection - Tropical
Infection - Acute
Additional Information

Marburg virus disease (MVD) is the name for the human disease caused by any of the two marburgviruses Marburg virus (MARV) and Ravn virus (RAVV). MVD is a viral haemorrhagic fever (VHF), and the clinical symptoms are indistinguishable from Ebola virus disease (EVD).

The natural maintenance hosts of marburg viruses remain to be identified unequivocally. However, the isolation of both MARV and RAVV from bats and the association of several MVD outbreaks with bat-infested mines or caves strongly suggests that bats are involved in marburg virus transmission to humans. Avoidance of contact with bats and abstaining from visits to caves is highly recommended.

Marfan’s Syndrome:

Action Must not donate

Additional Information

Marfan’s syndrome is a genetic disorder of the connective tissue. People with Marfan tend to be unusually tall, with long limbs and long, thin fingers.

Marfan syndrome can also seriously affect the eyes and vision. Nearsightedness and astigmatism are common, but farsightedness can also result. Subluxation (dislocation) of the crystalline lens in one or both eyes (ectopia lentis) (in 80% of patients) also occurs. Sometimes eye problems appear only after the weakening of connective tissue has caused detachment of the retina. Early onset glaucoma can be another related problem.

Measles:

See Infection – Acute
Infectious Diseases – Contact with

Additional Information

Measles is an infection of the respiratory system caused by a paramyxovirus of the genus Morbillivirus. It is spread through respiration (contact with fluids from an infected person’s nose and mouth, either directly or through aerosol transmission), and is highly contagious—90% of people without immunity sharing living space with an infected person will catch it.

Complications with measles are relatively common, ranging from mild and less serious complications such as diarrhea to more serious ones such as pneumonia, otitis media, acute encephalitis (and very rarely SSPE – subacute sclerosing panencephalitis), and corneal ulceration (leading to corneal scarring). Complications are usually more severe in adults who catch the virus.

Measles Immunisation:

Measles Mumps Rubella (MMR) Immunisation:
Measles Rubella Immunisation:

See Immunisation – Live

Meniere’s Disease:

Action Accept

Additional Information

Ménière’s disease is a disorder of the inner ear that can affect hearing and balance to a varying degree. It is characterised by episodes of vertigo, low-pitched tinnitus, and hearing loss.

Ménière’s disease is idiopathic, but it is believed to be linked to endolymphatic hydrops, an excess of fluid in the inner ear.

Meningitis:

Action Accept:

a) if caused by bacterial infection and the corneas are to be preserved by organ culture;
b) if caused by non-infectious disorders.
Meningitis is inflammation of the protective membranes covering the brain and spinal cord, known collectively as the meninges. The inflammation may be caused by infection with viruses, bacteria, or other microorganisms.

**Bacterial**

The types of bacteria that cause bacterial meningitis vary according to the infected individual's age group.

**Viral**

Viruses that cause meningitis include enteroviruses, herpes simplex virus type 2 (and less commonly type 1), varicella zoster virus, mumps virus, HIV, and LCMV.

**Fungal**

There are a number of risk factors for fungal meningitis, including the use of immunosuppressants (such as after organ transplantation), HIV/AIDS, and the loss of immunity associated with aging.

**Parasitic**

A parasitic cause is often assumed when there is a predominance of eosinophils in the CSF. The most common parasites implicated are Angiostrongylus cantonensis, Gnathostoma spinigerum, Schistosoma, as well as the conditions cysticercosis, toxocariasis, baylisascariasis, paragonimiasis, and a number of rarer infections and noninfective conditions.

**Non-infectious**

Meningitis may occur as the result of several non-infectious causes: spread of cancer to the meninges (malignant or neoplastic meningitis) and certain drugs (mainly non-steroidal anti-inflammatory drugs, antibiotics and intravenous immunoglobulins). It may also be caused by several inflammatory conditions, such as sarcoidosis (which is then called neurosarcoidosis), connective tissue disorders such as systemic lupus erythematosus, and certain forms of vasculitis.

### Meningococcal Meningitis Immunisation:

See **Immunisation Non-live**

### Mental Health Problems:

**Action**

Accept If being treated or identified for depression, or bipolar disorder (manic-depression).

If the donor has had a new mental health problem within the last 12 months, or their condition has rapidly deteriorated in the last 12 months, further investigation of possible underlying causes and differential diagnoses are appropriate.
**Additional Information**

Many people have mental health problems that can be controlled with regular medication. There is no reason why they cannot donate whether on medication or not provided a firm diagnosis has been made and their condition has not deteriorated in the last 12 months. It is important to exclude other central nervous system disease including prion disease and rabies, which could present as new or deteriorating mental health problems.

Note for Schizophrenia.

Schizophrenia is a mental disorder characterized by a breakdown of thought processes and by a deficit of typical emotional responses. Common symptoms are delusions and disorganized thinking including auditory hallucinations, paranoia, bizarre delusions, disorganized speech, and it is accompanied by significant social or occupational dysfunction. Diagnosis is based on observed behaviour and the patient’s reported experiences. Further investigation as to the mental history of the potential donor and the exclusion of differential diagnoses of an insidious nature are warranted.

**Middle East Respiratory Syndrome coronavirus (MERS-CoV):**

**Action** Must not donate if:

- a) Less than 21 days from leaving Saudi Arabia, the United Arab Emirates (UAE), Qatar, Oman, Jordan, Kuwait, Lebanon or Yemen
- b) Less than 21 days from last contact with a person with MERS
- c) Less than 3 months since recovery form MERS or possible MERS

Accept if more than 21 days has passed since return from a MERS endemic area, or from last contact with a person affected by MERS and the donor has remained well

**Additional Information**

Authorities currently recommend Infection control for managing suspected, probable and confirmed cases to be consistent with those recommended for SARS-CoV and pandemic influenza. In the absence of recognised donation advice (as of February 2015) to deferral periods above are the same as those for SARS.

As of 10 November 2015, the World Health Organization (WHO) global case count for MERS was 1,618 laboratory-confirmed cases, including at least 579 deaths (case fatality rate 36%) since the first cases were reported in September 2012.

All cases of MERS world-wide have had a history of residence in or travel to the Middle East (mainly Saudi Arabia, and United Arab Emirates (UAE), Qatar, Oman, Jordan, Kuwait, Lebanon and Yemen) or contact with travellers returning from these areas, or can be linked to an initial imported case. There have been no cases in Australia or NZ.

Camels are suspected to be the primary source of infection for humans, but the exact routes of direct or indirect exposure are not fully understood, and further studies (particularly case control studies) are needed. There is no evidence of ongoing community transmission in any country and only occasional instances of household transmission. Transmission in health care settings has been a feature of the outbreak.

Sporadic infections have typically presented with, or later developed severe acute lower respiratory disease and this has predominantly occurred in adult males with certain underlying medical conditions.

Mild or asymptomatic secondary infections have occurred in people of all ages, and have most frequently been associated with healthcare settings.
### Motor Neuron(e) Disease:

**Includes**
- Amyotrophic lateral sclerosis / Lou Gehrig’s disease
- Progressive muscular atrophy
- Primary lateral sclerosis
- Progressive bulbar palsy

**Action**
- **Must not donate**

**Additional Information**

The motor neuron diseases (MND) are a group of neurological disorders that selectively affect motor neurons, the cells that control voluntary muscle activity including speaking, walking, swallowing, and general movement of the body. They are generally progressive in nature, and cause increasingly debilitating disability and, eventually, death.

The cause of non-familial forms is unknown.

### MRSA (Methicillin Resistant Staphylococcus Aureus):

**See if relevant**
- Infection – General

**Additional Information**

Staphylococcus aureus is a widely occurring skin commensal organism. The carrier status or exposure of the donor is not relevant to donation.

(MRSA) is a bacterium responsible for several difficult-to-treat infections in humans. The evolution of antibiotic resistance does not cause the organism to be more intrinsically virulent than strains of Staphylococcus aureus that have no antibiotic resistance, but resistance does make MRSA infection more difficult to treat with standard types of antibiotics and thus more dangerous.

### Multiple Resistant Organisms (MRO), Multiple Drug Resistance (MDR):

**See if relevant**
- Infection – General
- MRSA
- **Extended Spectrum Beta Lactamase**

**Additional Information**

Multiple resistant organisms (MRO), Multiple drug resistance (MDR), multi-drug resistance or multiresistance is a condition enabling disease-causing microorganisms (bacteria, viruses, fungi or parasites) to resist distinct antimicrobials, first and foremost antibiotics, but also antifungal drugs, antiviral medications, antiparasitic drugs, chemicals of a wide variety of structure and function targeted at eradicating the organism.

The most common types are (usually bacteria):
- Vancomycin-Resistant Enterococci (VRE)
- Methicillin-Resistant Staphylococcus aureus (MRSA)

Extended-spectrum β-lactamase (ESBLs) producing Gram-negative bacteria

Klebsiella pneumoniae carbapenemase (KPC) producing Gram-negatives

MultiDrug-Resistant gram negative rods (MDR GNR)MDRGN bacteria such as Enterobacter species, E.coli,Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa

Generally antibiotic resistance does not cause the organism to be more intrinsically virulent, but resistance does make infection more difficult to treat with standard types of antibiotics and thus more dangerous.
<table>
<thead>
<tr>
<th>Multiple Sclerosis:</th>
<th>Action</th>
<th>Must not donate</th>
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<tr>
<td></td>
<td>Additional Information</td>
<td>Multiple sclerosis (MS), also known as disseminated sclerosis or encephalomyelitis disseminata, is an inflammatory disease in which the insulating covers of nerve cells in the brain and spinal cord are damaged. This damage disrupts the ability of parts of the nervous system to communicate, resulting in a wide range of signs and symptoms, including physical, mental, and sometimes psychiatric problems. While the cause is not clear, the underlying mechanism is thought to be either destruction by the immune system or failure of the myelin-producing cells. Proposed causes for this include genetics and environmental factors such as infections. Thus the contraindication to donation.</td>
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<table>
<thead>
<tr>
<th>Mumps:</th>
<th>See</th>
<th>Infection – Acute</th>
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<tbody>
<tr>
<td></td>
<td>Infectious diseases – contact with</td>
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<tr>
<th>Mumps Immunisation:</th>
<th>See</th>
<th>Immunisation-Live</th>
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<tr>
<th>Murray Valley encephalitis virus:</th>
<th>Action</th>
<th>Must not donate if within 12 months of last infection or recurrence</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>See</td>
<td>Arthropod Borne Encephalitis (Arbovirus infection)</td>
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</table>

| Additional Information | Murray Valley encephalitis virus (MVEV) is a zoonotic flavivirus endemic to northern Australia and Papua New Guinea. It is the causal agent of Murray Valley encephalitis (previously known as Australian encephalitis) and in humans can cause permanent neurological disease or death. MVEV is a mosquito-borne virus that is maintained in a bird-mosquito-bird cycle. Water birds from the Ciconiiformes order, including herons and cormorants, provide the natural reservoir for MVEV. |

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<tr>
<th>Muscular Dystrophy:</th>
<th>Action</th>
<th>Accept if the eyes are unaffected</th>
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<tbody>
<tr>
<td></td>
<td>Additional Information</td>
<td>Muscular Dystrophy (MD) is a group of muscle diseases that weaken the musculoskeletal system and hamper locomotion. They include Duchenne, Becker, limb-girdle, congenital, facioscapulohumeral, myotonic, oculopharyngeal, distal, and Emery-Dreifuss muscular dystrophies. Most are caused by a mutation of a gene located on the X chromosome and therefore predominantly affect males. Different muscular dystrophies follow various inheritance patterns. Most types of MD are multi-system disorders with manifestations in body systems including the heart, gastrointestinal system, nervous system, endocrine glands, eyes and brain. Any concern regarding eyes relates to pathology to the eye (or cornea) itself rather than any transmissible disease process. For example, droopy eyelids, possible ptosis or poor eyelid movement could create corneal problems.</td>
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<table>
<thead>
<tr>
<th>Myasthenia Gravis:</th>
<th>Action</th>
<th>Accept if the eyes are unaffected</th>
</tr>
</thead>
</table>

Addition Information

Myasthenia gravis is an autoimmune neuromuscular disease leading to fluctuating muscle weakness and fatigue. It is associated with various autoimmune diseases, including Thyroid diseases (including Hashimoto's thyroiditis and Graves' disease), Diabetes mellitus type 1, Rheumatoid arthritis, Lupus, and Demyelinating CNS disease.

The hallmark of myasthenia gravis is fatigability. Muscles become progressively weaker during periods of activity and improve after periods of rest. Muscles that control eye and eyelid movement, facial expressions, chewing, talking, and swallowing are especially susceptible.

Indeed, in most cases, the first noticeable symptom is weakness of the eye muscles with possible ptosis.

Myelodysplastic Syndrome:

Action Must not donate

Additional Information The myelodysplastic syndromes (MDS, formerly known as preleukaemia) are a diverse collection of haematological medical conditions that involve dysplasia of the myeloid class of blood cells. There is some risk for developing acute myelogenous leukaemia that is notoriously resistant to treatment.

There is currently no definitive cause.

Myeloproliferative Disease (Syndrome):

Includes Chronic myelogenous leukemia (CML)

Essential thrombocytemia (ET)

Polycythemia vera (PV)

Primary myelofibrosis (PMF)

Action Must not donate

Additional Information The myeloproliferative diseases (MPDs) or myeloproliferative neoplasms (MPNs) are a group of diseases of the bone marrow in which excess cells are produced. They are related to, and may evolve into, myelodysplastic syndrome and acute myeloid leukaemia.

Myocarditis:

Action Accept:

- a) If infection resolved.
- b) If the cause is bacterial and the corneas are to be stored by organ culture.

Additional Information Myocarditis or inflammatory cardiomyopathy is inflammation of myocardium. A large number of causes of myocarditis have been identified, but often a cause cannot be found. In developed countries, viruses are common culprits. Worldwide, however, the most common cause is Chagas' disease, endemic to Central and South America.

Myxoedema:

See Thyroid Disease
**Needle-Stick Injury:**
See Inoculation Injury

**Nephritis:**
See Kidney Disease

**Neurofibromatosis:**
**Action**
If related to malignancy see Malignancy

**Additional Information**
Neurofibromatosis refers to a number of inherited conditions that are clinically and genetically distinct and carry a high risk of tumour formation, particularly in the brain. It is an autosomal dominant disorder.

**Neurosurgery:**
**Action**
Accept if the reason for surgery itself is not an exclusion
Must not donate if human derived Dura mater was used during surgery

**Nonsteroidal Anti-Inflammatory Drugs (NSAID):**
**Action**
Assess the reason for treatment and see relevant entry.

**Ocular Surgery:**
**Action**
Accept if the procedure is unlikely to prejudice quality and outcome of transplant

**See**
Eye Disease
Laser Treatment
Malignancy

**Onchocerciasis (River Blindness):**
**Action**
Must not donate

**Additional Information**
Onchocerciasis (River Blindness) is second in the world only to trachoma as an infectious cause of blindness. It is a form of subcutaneous filariasis is caused by Loa loa (the eye worm). It is not the nematode, but its endosymbiotic bacteria, Wolbachia pipientis, that causes the severe inflammatory response that leaves many blind. The parasite is transmitted to humans through the bite of a black fly of the genus Simulium. The larval nematodes spread throughout the body. When the worms die, their Wolbachia symbionts are released, triggering a host immune system response that can cause severe itching, and can destroy optical tissue in the eye.

**Orf:**
See Contagious Pustular Dermatitis

**Organ Recipient:**
See Tissue and Organ Recipients

**Osteoarthritis:**
**Action**
Accept

**Osteogenesis Imperfecta:**
**Action**
Should not donate
### Additional Information

**Osteogenesis Imperfecta (OI)**, also known as brittle bone disease or Lobstein syndrome, is a congenital bone disorder characterised by brittle bones that are prone to fracture. It is a result of defective connective tissue due to defects in the genes relating to production of Collagen I or other connective tissue proteins. Pathology includes bones that fracture easily, loose joints, poor muscle tone and thin, discoloured sclera. Corneas may be compromised.

<table>
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<tr>
<th>Osteomalacia:</th>
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<tr>
<td><strong>Action</strong></td>
<td>Accept</td>
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<tr>
<td><strong>Additional Information</strong></td>
<td>Osteomalacia is the softening of the bones caused by defective bone mineralization secondary to inadequate amounts of available phosphorus and calcium, or because of overactive resorption of calcium from the bone as a result of hyperparathyroidism - Such a donor would not be acceptable for bone donation.</td>
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<tr>
<th>Osteomyelitis:</th>
<th></th>
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<tbody>
<tr>
<td><strong>Action</strong></td>
<td>Accept</td>
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<tr>
<td><strong>Additional Information</strong></td>
<td>Osteomyelitis is infection and inflammation of the bone or bone marrow. Sometimes it is difficult to be certain that all infection has been eliminated, and for bone donation an exclusion period of 2 years after completing treatment and cure is often applied. For eye donation one needs to consider the potential for systemic infection effecting the eyes – and if concerned then the corneas should be stored by organ culture.</td>
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<tr>
<th>Osteoporosis:</th>
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<tbody>
<tr>
<td><strong>Action</strong></td>
<td>Accept</td>
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<tr>
<td><strong>Additional Information</strong></td>
<td>Bone banks would not accept for structural bone but they may accept for non-weight bearing bone.</td>
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<tr>
<th>Ovarian Cyst:</th>
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<tr>
<td><strong>Action</strong></td>
<td>Accept</td>
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<tr>
<th>Paget’s Disease of Bone:</th>
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<tr>
<td><strong>Includes</strong></td>
<td>Osteitis Deformans</td>
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<tr>
<td><strong>Action</strong></td>
<td>Accept</td>
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<tr>
<th>Paratyphoid:</th>
<th></th>
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<tbody>
<tr>
<td><strong>Action</strong></td>
<td>Accept:</td>
</tr>
<tr>
<td>a)</td>
<td>if corneas are to be stored by organ culture, or</td>
</tr>
<tr>
<td>b)</td>
<td>if more than seven days from completion of antibiotic course and last symptoms</td>
</tr>
<tr>
<td><strong>Additional Information</strong></td>
<td>Paratyphoid fevers are a group of enteric illnesses caused by serotypic strains of the Salmonella genus of bacteria, S. Paratyphi. It is transmitted by the faecal-oral route (usually contaminated water or food) and do not have a chronic carrier state. The paratyphoid bears similarities with typhoid fever, and the two are referred to by the common name enteric fever. The course of paratyphoid is more benign.</td>
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<th>Parkinson’s Disease:</th>
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<tr>
<td><strong>Action</strong></td>
<td>Must not donate</td>
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</table>
Parkinson's disease (PD also known as idiopathic or primary parkinsonism, hypokinetic rigid syndrome/HRS, or paralysis agitans) is a degenerative disorder of the central nervous system. The motor symptoms of Parkinson's disease result from the death of dopamine-generating cells in the substantia nigra, a region of the midbrain; the cause of this cell death is unknown.

Parkinson's disease in most people is idiopathic. However, a small proportion of cases can be attributed to known genetic factors. Genetic and pathological studies have revealed that various dysfunctional cellular processes, inflammation, and stress can all contribute to cell damage. In addition, abnormal clumps called Lewy bodies, which contain the protein alpha-synuclein, are found in many brain cells of individuals with Parkinson's disease. A proportion of patients with Parkinson's disease develop dementia. When dementia occurs in Parkinson's disease, the underlying cause may be dementia with Lewy bodies or Alzheimer's disease, or both.

Other environmental risk factors include pesticide exposure, head injuries, and living in the country or farming. Smoking appears to confer some protective effect.

A theory of an infectious aetiology is also gaining some traction. Encephalitis lethargica, a pandemic of which swept the world in the 1920s, caused Parkinson's-like symptoms in many sufferers. There is strong evidence that it was a virus that ultimately caused neurological symptoms appearing many years after the initial infection. The theory remains controversial.

Parkinson's disease is a contraindication because of its unknown cause, association with Lewy bodies as in forms of Alzheimer’s disease and CJD, and its potential for co-existence with, but disguising, more insidious progressive neurological disorders.

However there is no direct evidence that Parkinson's disease can be transmitted from human-to-human.

### Peptic Ulcer:
See Gastric Ulcer

### Pericarditis:

**Action**

Accept:

a) if caused by bacterial infection and the corneas are to be preserved by organ culture, or

b) if a non-infectious cause

**See also**

Infection-Acute

### Additional Information

Pericarditis is an inflammation of the pericardium.

**Infective causes** include viral, bacterial, or fungal infection. Recent data suggest that the common viral forms are cytomegalovirus, herpesvirus, and HIV. Pneumococcus or tuberculous pericarditis are the most common bacterial forms. Fungal pericarditis is usually due to histoplasmosis, or in immunocompromised hosts Aspergillus, Candida, and Coccidioides. The most common worldwide cause of pericarditis is infectious pericarditis with Tuberculosis.

Non-infectious causes include: Idiopathic, immunologic conditions including systemic lupus erythematosus or rheumatic fever, myocardial infarction (Dressler's syndrome), trauma, uremic pericarditis, malignancy, side effect of some medications, e.g. isoniazid, cyclosporine, hydralazine, warfarin, heparin, tetracyclines. It can also follow after CABG surgery.
**Additional Information**

Peritonitis is an inflammation of the peritoneum, the thin tissue that lines the inner wall of the abdomen and covers most of the abdominal organs. Peritonitis may be localised or generalised, and may result from infection or from a non-infectious process. As a complication sepsis may develop, so blood cultures are often performed to monitor for this complication.

Perforation of part of the gastrointestinal tract is the most common cause of peritonitis. Disruption of the peritoneum may also cause infection simply by letting micro-organisms into the peritoneal cavity. Examples include trauma, surgical wound, and continuous ambulatory peritoneal dialysis.

Leakage of sterile body fluids into the peritoneum, such as blood, gastric juice, bile, urine or pancreatic juice (pancreatitis) can cause peritonitis. However, while these body fluids are sterile at first, they can become infected once they leak out of their organ, leading to infectious peritonitis.

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**Permanent Makeup:**

See Body Piercing

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**Pituitary Extract – Human:**

**Includes**
Adrenocorticotrophic hormone, Follicle Stimulating Hormone, Gonadotrophin, Growth Hormone, Luteinising Hormone, Thyroid Stimulating Hormone

**Action**
Must not donate if has ever received Human Pituitary Extract

See if relevant
Growth Hormone
Prion Associated Diseases

**Additional Information**

Human Pituitary Extracts have been contaminated with abnormal prions and have caused the transmission of CJD.

Between 1967 and 1985 cadaver derived pituitary hormones were officially supplied to 1,976 Australians as treatment for infertility and short stature. In addition, 187 people are known to have been treated with human pituitary derived hormones in Australia as part of special projects associated with metabolic growth problems, and between 1972 and 1978 on some IVF programs. A number of people also received treatment outside these programs, as early as 1963. A total of 2,163 people were treated with human pituitary derived hormones in Australia during this time. Their use in Australia ceased in May 1985 after overseas reports of deaths from CJD in people who received treatment with human growth hormone.

In Australia the first case of CJD in a pituitary hormone recipient was reported in 1988, a second case in 1990, a third and fourth cases in 1993 and a fifth case in 1995. All five individuals died between 1988 and 1991. Three of the five cases had confirmed CJD. There have been no further cases reported to date.

New Zealanders received hormone made in the United States from 1963 to 1985. Six people possibly contracted CJD out of 159 people treated.

Donors that have been given only synthetic pituitary hormones or gonadotrophin made from urine may be accepted.

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**Plague (Yersinia Pestis):**

**Action**
Must not donate unless 3 months after recovery

Must not donate unless more than 2 weeks after last contact with an infected individual
Additional Information

Plague is a deadly infectious disease that is caused by the enterobacteria Yersinia pestis. Primarily carried by rodents (most notably rats) and spread to humans via fleas. Until June 2007, plague was one of the three epidemic diseases specifically reportable to the World Health Organization (the other two being cholera and yellow fever).

Depending on lung infection, or sanitary conditions, plague also can be spread in the air, by direct contact, or by contaminated undercooked food or materials. The symptoms of plague depend on the concentrated areas of infection in each person: such as bubonic plague in lymph nodes, septicaemic plague in blood vessels, pneumonic plague in lungs, and so on. It is treatable if detected early.

**Plasma Dilution:**

**Action**

Must not donate:

- a) if there is **significant blood loss** together with intra-venous infusions that it is estimated have resulted in more than 50% plasma dilution **AND**,
- b) if pre-transfusion/infusion sample is not available for testing

Use the FULL available algorithms.

**See**

FDA Appendices 1-4 for procedure:

http://www.fda.gov/biologicsbloodvaccines/guidancecomplianceregulatoryinformation/guidances/tissue/ucm073964.htm#APPENDIX1

UK Appendix 4 for procedure:

http://www.transfusionguidelines.org.uk/Index.aspx?Publication=CTD&Section=17&pageid=256

Please note that both FDA and UK standards define the criteria for plasma dilution to be following significant blood loss. Plasma dilution is not possible in the absence of significant blood loss.

**Platelet Disorder:**

**Action**

See: Is there an entry for the condition?

Accept if not covered by a specific entry

**See if relevant**

Haematological Disease
Immune Thrombocytopenia
Thrombocytosis

**Pleurisy:**

**See if relevant**

Infection – General
Malignancy

**Pneumococcal Immunisation:**

**Includes**

Prevenar 13
Pneumovax 23

**See**

Immunisation Non-live

**Pneumonia:**

**See**

Infection – Acute
Poisoning:

**Action**  Must not donate if there is evidence that the individual (donor/or mother of cord blood donor) has ingested or been otherwise exposed to toxic substances that could be transmitted in donated material in dosages that could endanger the health of recipients.

If the individual is being monitored following exposure and the levels of the agent in question are within safe limits, accept.

See if Relevant Addiction and Drug Abuse

Poliomyelitis:

**Action**  Must not donate unless longer than 2 weeks after recovery

Must not donate unless more than 6 weeks after last contact with an infected individual

**Additional Information**  Poliomyelitis, often called polio or infantile paralysis, is an acute, viral, highly contagious infectious disease spread from person to person, primarily via the faecal-oral and oral-oral (oropharyngeal) routes.

Although approximately 90% of polio infections cause no symptoms at all, affected individuals can exhibit a range of symptoms if the virus enters the blood stream. In about 1% of cases, the virus enters the central nervous system, preferentially infecting and destroying motor neurons, leading to muscle weakness and acute flaccid paralysis.

**Polio (Poliomyelitis) Immunisation:**

See  For Oral immunisation – Immunisation - Live

For injected immunisation – Immunisation - Non-live

**Polycythaemia:**

**Action**  Must not donate if primary polycythaemia (rubra versa)

Accept if secondary polycythaemia (but only secondary to a non-malignant condition)
Additional Information

Polycythemia is a disease state in which the proportion of blood volume that is occupied by red blood cells increases.

Primary Polycythemia:

Primary polycythemias are due to factors intrinsic to red cell precursors. Polycythemia vera (PCV), polycythemia rubra vera (PRV), or erythremia, occurs when excess red blood cells are produced as a result of an abnormality of the bone marrow. Often, excess white blood cells and platelets are also produced. Polycythemia vera is classified as a myeloproliferative disease.

Secondary Polycythemia:

Secondary polycythemia is caused by either natural or artificial increases in the production of erythropoietin, hence an increased production of erythrocytes.

Conditions which may result in a physiologically appropriate polycythemia include:

- Altitude related
- Hypoxic disease-associated - for example in cyanotic heart disease where blood oxygen levels are reduced significantly.
- Iatrogenic - Secondary polycythemia can be induced directly by phlebotomy (blood letting) to withdraw some blood, concentrate the erythrocytes, and return them to the body.
- Genetic - Heritable causes of secondary polycythemia also exist but are uncommon.

Conditions where the secondary polycythemia is not as a result of physiologic adaptation and occurs irrespective of body needs include:

- Neoplasms - Renal-cell carcinoma or liver tumors, von Hippel-Lindau disease, and endocrine abnormalities including pheochromocytoma and adrenal adenoma with Cushing’s syndrome.
- People whose testosterone levels are high because of the use of anabolic steroids, including athletes who abuse steroids.

Prion Associated Diseases:

Includes Sporadic, Familial and Variant Creutzfeldt-Jakob Disease (CJD), Gerstmann-Straussler-Scheinker Disease and Fatal Familial Insomnia

Action Must not donate:

1. Diagnosed with any form of CJD, or other prion associated disorder
2. Identified at increased risk of developing a prion associated disorder
   Includes:
   a) Individuals at familial risk of prion-associated diseases (have had two or more blood relatives develop a prion-associated disease or had been informed they are at risk following genetic counselling)
   b) Recipients of dura mater grafts
   c) Recipients of human pituitary derived extracts
Additional TGA criteria

Must not donate:

a) Individuals who have lived in or visited England, Scotland, Wales, Northern Ireland or the Isle of Man for a cumulative period of six months or more, between 1st January 1980 and 31st December 1996 inclusive

b) Individuals who have received a transfusion or injection of blood or blood components while in England, Scotland, Wales, Northern Ireland or the Isle of Man at any time since 1st January 1980 onwards

This is the “UK exclusion rule” for risk of variant CJD

See if relevant

Pituitary Extract

Tissue and Organ Recipients

Transfusion

Prisons & Psychiatric Institutions:

Action Must not donate if donor has been held in prison or psychiatric institution during the previous 6 months (4 months HCV NAT).

Accept if held in custody for a period of 72 hours or less. Similarly for short-term psychiatric episodes

Additional TGA criteria The TGA mandates 12 months exclusion period

Additional Information The purpose behind the deferral period is that incarceration increases the likelihood of “at risk behaviours” for acquiring infectious diseases that can be transmitted by blood, cells or tissues. Risk behaviour is unlikely to have occurred while held in police custody under police powers of arrest.

Proctitis:

Action Accept:

a) if related to inflammatory bowel disease and there is no evidence of ocular involvement and the corneas are to be preserved by organ culture

b) If due to other causes

Must not donate if due to sexually transmitted disease.

Additional Information Proctitis is an inflammation of the anus and the lining of the rectum, affecting only the last 6 inches of the rectum.

Proctitis has many possible causes. It often occurs idiopathically. Other causes include

1. damage by irradiation (for example in radiation therapy for cervical cancer and prostate cancer)

2. as a sexually transmitted infection (usually through anal intercourse), as in lymphogranuloma venereum, herpes proctitis, gonorrhoea, syphilis and chlamydia.

3. Due to ulcerative colitis and Crohn’s disease (inflammatory bowel disease)

Progressive Multifocal Leukoencephalopathy:

Action Must not donate
Progressive multifocal leukoencephalopathy (PML), also known as progressive multifocal leukoencephalitis, is a rare and usually fatal viral disease characterized by progressive damage (pathy) or inflammation of the white matter (leuko-) of the brain (-encephalo-) at multiple locations (multifocal).

It occurs almost exclusively in people with severe immune deficiency, such as transplant patients on immunosuppressive medications, those receiving certain kinds of drug therapy for multiple sclerosis and Hodgkin's Lymphoma, or those with AIDS.

The cause of PML is a type of polyomavirus called the JC virus (JCV), after the initials of the patient from whose tissue the virus was first successfully cultured. Recent publications indicate 39% to 58% of the general population are seropositive for antibodies to JCV, indicating current or previous infection with virus.

The reason for the exclusion is the differential diagnosis of a prion disease and also the populations in which it most frequently occurs.

Psoriasis:

Action: Accept If no ocular surface disease

See: Autoimmune Disorders

Additional Information:

Etretinate was approved by the FDA in 1986 to treat severe psoriasis. It was subsequently removed from the market in the late 1990s due to the high risk of birth defects. It has an extremely long half-life and tissue other than eyes must not be donated.

Acitretin and Isotretinoin can cause birth defects but have a lower half-life than Etretinate. Tissues other than eyes should not be donated if less than 24 months from last dose of Acitretin and 4 weeks from last dose of Isotretinoin.

Psoriasis is primarily a skin condition caused by an autoimmune process. About one in ten people with psoriasis may develop joint problems (psoriatic arthropathy). Sometimes the disease is treated with powerful drugs to suppress the underlying autoimmune response. This may alter the body’s defense mechanisms to infection. If concerned the corneas should be preserved by organ culture.

Psychiatric Problems:

See: Mental Health Problems

Prisons & Psychiatric Institutions

Pyelonephritis:

Action: Accept:

a) if the corneas are to be preserved by organ culture and there are concerns about developing systemic infection

b) if no concerns about systemic infection

See: Infection – General

Additional Information:

Pyelonephritis is an ascending urinary tract infection that has reached the pyelum or pelvis of the kidney. Severe cases of pyelonephritis can lead to pyonephrosis (pus accumulation around the kidney), urosepsis (a systemic inflammatory response of the body to infection), kidney failure and even death.
**Pyruvate Kinase Deficiency:**

**Action**

Accept

**Additional Information**

Pyruvate kinase deficiency, also called erythrocyte pyruvate kinase deficiency, is an inherited metabolic disorder of the enzyme pyruvate kinase which affects the survival of red blood cells and causes them to deform into echinocytes on peripheral blood smears. It is the second most common cause of enzyme-deficient haemolytic anaemia, following G6PD deficiency.

Most affected individuals do not require treatment.

**Q Fever:**

**Action**

Must not donate

**Additional Information**

Q fever is a disease caused by infection with Coxiella burnetii, a bacterium that affects humans and other animals. This organism is uncommon, but may be found in cattle, sheep, goats and other domestic mammals, including cats and dogs. The infection results from inhalation of a spore-like small cell variant, and from contact with the milk, urine, faeces, vaginal mucus, or semen of infected animals.

It was first described by Edward Holbrook Derrick in abattoir workers in Brisbane, Queensland, Australia. The "Q" stands for "query" and was applied at a time when the causative agent was unknown; it was chosen over suggestions of "abattoir fever" and "Queensland rickettsial fever", to avoid directing negative connotations at either the cattle industry or the state of Queensland. The pathogen of Q fever was discovered in 1937, when Frank Macfarlane Burnet and Mavis Freeman isolated the bacterium from one of Derrick's patients.

The pathogenic agent is to be found everywhere worldwide except New Zealand. The bacterium is extremely sustainable and virulent: a single organism is able to cause an infection. The United States investigated Q fever as a potential biological warfare agent in the 1950s, with eventual standardization as agent OU.

"At risk" occupations include, but are not limited to:

- veterinary personnel
- stockyard workers
- farmers
- shearers
- animal transporters
- laboratory workers handling potentially infected veterinary samples or visiting abattoirs
- people who cull and process kangaroos
- hide (tannery) workers

Treatment of the acute Q fever with antibiotics is very effective but the chronic form is more difficult to treat and can require up to four years of treatment. The chronic form can manifest itself as an endocarditis and is usually fatal if untreated.

**Rabies:**

**Action**

Must not donate

**Immunisation Post-exposure:**

Must not donate until at least 12 months post exposure and fully cleared by treating physician.

Accept immunisation pre-exposure

**See**

Immunisation - Non-live

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Rabies is a viral disease that causes acute encephalitis in warm-blooded animals. The disease is zoonotic and almost invariably fatal if postexposure prophylaxis is not administered prior to the onset of severe symptoms. Rabies causes about 55,000 human deaths annually worldwide. 95% of human deaths due to rabies occur in Asia and Africa. Roughly 97% of human rabies cases result from dog bites. The British Isles, New Zealand and Australia are virtually the only areas worldwide where rabies is not found.

**It is the most common form of disease transmission by organ, tissue or eye donors.**

Early stage symptoms of malaise, headache and fever can be confused with the flu (and therefore often overlooked). The incubation period of the disease is usually a few months in humans, depending on the distance the virus must travel to reach the central nervous system - it is extremely important to consider foreign travel and any history of bites or scratches from animals so as to identify a risk of rabies as distinct from flu-like symptoms. Failure to do this in the past has been the key factor in the transmission of the disease from donor to recipient.

**Radiation Therapy:**

**Action**  
Accept if the eyes were not included in the field of irradiation

If related to malignancy, see Malignancy

**See if relevant**

Basal Cell Carcinoma

Malignancy

**Raynaud’s Syndrome:**

**Action**  
Consider if part of a multisystem disorder and See if there is an Entry

**See if relevant**

Systemic Lupus Erythematosus

**Additional Information**

Terminology is important:

Raynaud’s syndrome (secondary Raynaud’s), is where Raynaud’s phenomenon (see below), is caused by a known instigating factor, most commonly connective tissue disorders such as systemic lupus erythematosus.

*Raynaud’s phenomenon* is excessively reduced blood flow in response to cold or emotional stress, causing discoloration of the fingers, toes, and occasionally other areas. Raynaud’s phenomenon includes Raynaud’s disease (also known as primary Raynaud’s phenomenon) where the cause is unknown, and Raynaud’s syndrome (secondary Raynaud’s) discussed above.

**Refractive Error (Vision):**

**Action**  
Accept

**See if relevant**

Glasses

Laser Treatment

Refractive Surgery
A refractive error, or refraction error, is an error in the focusing of light by the eye and a frequent reason for reduced visual acuity.

Types of refractive error:

**Myopia:**
When the optics are too powerful for the length of the eyeball one has myopia or nearsightedness. This can arise from a cornea with too much curvature (refractive myopia) or an eyeball that is too long (axial myopia). Myopia can easily be corrected with a concave lens which causes the divergence of light rays before they reach the retina.

**Hyperopia:**
When the optics are too weak for the length of the eyeball, one has hyperopia or farsightedness. This can arise from a cornea with not enough curvature (refractive hyperopia) or an eyeball that is too short (axial hyperopia). This can be corrected with convex lenses which cause light rays to converge prior to hitting the retina.

**Astigmatism:**
People with a simple astigmatic refractive error see contours of a particular orientation as blurred, but see contours with orientations at right angles as clear. When one has a cylindrical error, one has astigmatism. This is caused by a deviation in the shape of the cornea, a shape other than spherical. This defect can be corrected with refracting light more in one area of the eye than the other. Cylindrical lenses serve this purpose.

**Presbyopia:** When the flexibility of the lens declines typically due to age. Individual would experience difficulty in reading etc. This causes the individual to need visual assistance such as bifocal lenses.

Only Astigmatism involves the cornea but the degree of corneal shape deviation is usually not great enough to affect suitability for transplantation.

**Refractive Surgery:**

**Action**

Must not donate if:

- a) Radial keratotomy (Russian operation)
- b) Intra-stromal rings (Intac surgery)

Accept for only endothelial keratoplasty (posterior corneal transplantation) laser eye surgery for refractive error:

- a) Photorefractive keratectomy (PRK)
- b) Laser-Assisted Sub-Epithelial Keratectomy (or Laser Epithelial Keratomileusis) (LASEK or LASIK)
Additional Information

Radial keratotomy (RK)

Is a refractive surgical procedure to correct myopia that was developed in 1974, by Svyatoslav Fyodorov, a Russian ophthalmologist. It has been largely supplanted by newer operations, such as photorefractive keratectomy and LASIK. In RK, incisions are made with a diamond knife. Incisions are made quite deep (up to 90% of corneal thickness). Thus these corneas are not even suitable for endothelial keratoplasty.

Intrastromal corneal rings (or intracorneal rings)

Are small crescent or semi-circular shaped ring segments between the layers of the corneal stroma to correct vision. Considering their placement in the cornea they make the cornea unsuitable for transplant purposes.

Laser surgery

Involves only the anterior segment of the cornea and will not affect the posterior segment. Corneas that have undergone refractive surgery should not be used for penetrating keratoplasty or anterior keratoplasty due to concerns about structural integrity of the cornea. However, these corneas should be suitable for posterior keratoplasty although there needs to be an awareness of the refractive procedure to avoid any concerns or complications during the donor cornea cutting process.

Renal Disease:

See Kidney Disease

Respiratory Disease:

Includes

- Asthma
- Chronic Obstructive Airways Disease
- Cystic Fibrosis

See if relevant

- Infection – General
- Steroid Therapy

Retinitis Pigmentosa:

Action Accept

Additional Information

Retinitis pigmentosa (RP) is an inherited, degenerative eye disease that causes severe vision impairment and often blindness. RP is caused by abnormalities of the photoreceptors (rods and cones) or the retinal pigment epithelium (RPE) of the retina leading to progressive sight loss. It does not affect the cornea or sclera of the eye and thus donation is acceptable.

Reyes Syndrome:

Action Must not donate

If more than 3 months after recovery accept
Additional Information
Reye's syndrome is a potentially fatal disease that has numerous detrimental effects to many organs, especially the brain and liver, as well as causing hypoglycaemia. The classic features are a rash, vomiting, and liver damage. The disease causes fatty liver with minimal inflammation and severe encephalopathy.

The exact cause is unknown and, while it has been associated with aspirin consumption by children with viral illness, it also occurs in the absence of aspirin use.

**Rheumatic Fever:**
Action Accept
Additional Information Rheumatic fever is an inflammatory disease that occurs following a Streptococcus pyogenes infection, such as streptococcal pharyngitis. Believed to be caused by antibody cross-reactivity that can involve the heart, joints, skin, and brain, the illness typically develops two to three weeks after a streptococcal infection.

The illness is so named because of its similarity in presentation to rheumatism.

**Rheumatoid Arthritis:**
Action Accept if no ocular involvement
Additional Information Rheumatoid arthritis (RA) is an autoimmune disease that results in a chronic, systemic inflammatory disorder that may affect many tissues and organs, but principally attacks flexible (synovial) joints.

The eye can be affected in the form of episcleritis which when severe can very rarely progress to perforating scleromalacia. Rather more common is the indirect effect of keratoconjunctivitis sicca, which is a dryness of eyes and mouth caused by lymphocyte infiltration of lacrimal and salivary glands. When severe, dryness of the cornea can lead to keratitis or ulceration of the cornea.

**River Blindness:**
See Onchocerciasis

**Ross River Fever:**
See Infection – Acute
Arthropod Borne Encephalitis (Arbovirus)
Additional Information Ross River Fever is a mosquito-borne infectious disease caused by infection with the Ross River virus. The illness is typically characterised by an influenza-like illness and polyarthritis. The virus is endemic to Australia, Papua New Guinea, Fiji, Samoa, the Cook Islands, New Caledonia and several other islands in the South Pacific.

The virus is not contagious and is spread only by mosquitoes. The main reservoir hosts are kangaroos and wallabies, although horses, possums and possibly birds and flying foxes play a role.

Symptoms of the disease may vary widely in severity, but major indicators are arthralgia, arthritis, fever, and rash. The incubation period is 7–9 days.

**Rubella – Acute Infection:**
Action Must not donate until the infection is considered to have completely resolved
See Infection – Acute
Rubella - Congenital
Rubella, also known as German measles, is a disease caused by the rubella virus. The disease is often mild and attacks often pass unnoticed. The disease can last one to three days.

Infection of the mother by Rubella virus during pregnancy can be serious; if the mother is infected within the first 20 weeks of pregnancy, the child may be born with congenital rubella syndrome (CRS), which entails a range of serious incurable illnesses. Spontaneous abortion occurs in up to 20% of cases.

Acquired (i.e. not congenital) rubella is transmitted via airborne droplet emission from the upper respiratory tract of active cases. The virus may also be present in the urine, faeces and on the skin. There is no carrier state: the reservoir exists entirely in active human cases. The disease has an incubation period of 2 to 3 weeks.

**Rubella – Contact with:**
See Infection – Contact with

**Rubella – Congenital:**

**Action** Must not donate

**Additional Information** Infection of the mother by Rubella virus during pregnancy can be serious; if the mother is infected within the first 20 weeks of pregnancy, the child may be born with congenital rubella syndrome (CRS), which entails a range of serious incurable illnesses. Spontaneous abortion occurs in up to 20% of cases.

The classic triad for congenital rubella syndrome is:

- Sensorineural deafness (58% of patients)
- Eye abnormalities—especially retinopathy, cataract and microphthalmia (43% of patients)
- Congenital heart disease—especially patent ductus arteriosus (50% of patients)

For organs and tissues other than eyes, and if there is no other contraindication, donation is acceptable.

**Rubella Immunisation:**

See Immunisation – Live

**Salpingitis:**

See if relevant Sexually transmitted diseases

See Infection – General

**Additional Information** Salpingitis is an infection and inflammation in the fallopian tubes. It is often used synonymously with pelvic inflammatory disease (PID), although PID lacks an accurate definition and can refer to several diseases of the female upper genital tract, such as endometritis, oophoritis, myometritis, parametritis and infection in the pelvic peritoneum

**Sanfilippo Syndrome:**

**Action** Do not donate

**See** Congenital disorders
Additional Information
Sanfilippo syndrome, or Mucopolysaccharidosis III (MPS-III) is a rare autosomal recessive lysosomal storage disease. It is caused by a deficiency in one of the enzymes needed to break down the glycosaminoglycan heparan sulfate (which is found in the extra-cellular matrix and on cell surface glycoproteins).

Sanfilippo syndrome does not demonstrate corneal clouding grossly, but may have slit lamp evidence of clouding (which would be difficult to discern in a donated cornea). Hunter syndrome (another mucopolysaccharidoses) is similar in this respect. Other mucopolysaccharidoses (Hurler, Scheiee, Morquio and Maroteaux-Lamy Syndromes) all demonstrate progressive corneal clouding.

Sarcoidosis:
Action
Accept if no ocular involvement

Additional Information
Sarcoidosis, also called sarcoi, Besnier-Boeck disease or Besnier-Boeck-Schaumann disease, is a syndrome involving abnormal collections of chronic inflammatory cells (granulomas) that can form as nodules in multiple organs.

Manifestations in the eye include uveitis, uveoparotitis, and retinal inflammation, which may result in loss of visual acuity or blindness. The combination of anterior uveitis, parotitis, VII cranial nerve paralysis and fever is called uveoparotid fever, and is associated with Heerfordt-Waldenstrom syndrome. Scleral nodule development associated with sarcoidosis has been observed.

The exact cause of is not known. The current working hypothesis is, in genetically susceptible individuals, sarcoidosis is caused through alteration to the immune response after exposure to an environmental, occupational, or infectious agent.

SARS (Severe Acute Respiratory Syndrome):
Action
Must not donate if:
   a) Less than 21 days from leaving as country to which the Department of Foreign Affairs and Trade or the Department of Health has advised deferring travel because there is, or is thought to be, ongoing transmission of SARS
   b) Less than 21 days from last contact with a person with SARS
   c) Less than 3 months since recovery form SARS or possible SARS

Accept if more than 21 days has passed since return from a SARS endemic area, or from last contact with a person affected by SARS and the donor has remained well.

Additional Information
Severe acute respiratory syndrome (SARS) is a viral respiratory disease of zoonotic origin caused by the SARS coronavirus (SARS-CoV).
Antibiotics are ineffective, as SARS is a viral disease. Treatment of SARS is largely supportive with antipyretics, supplemental oxygen and mechanical ventilation as needed.
It is still regarded as a relatively rare disease.
See: http://www.smartraveller.gov.au/zw-cg/view/Advice/Index

Schistosomiasis:
See
Infections - Acute
Schistosomiasis (also known as bilharzia, bilharziosis or snail fever) is a collective name of parasitic diseases caused by several species of trematodes belonging to the genus Schistosoma. Snails serve as the intermediary agent between mammalian hosts.

Although it has a low mortality rate, schistosomiasis often is a chronic illness that can damage internal organs and, in children, impair growth and cognitive development.

Schistosomiasis is readily treated using a single oral dose of the drug praziquantel annually.

**Scleritis:**

**Action** Must not donate

**See** Inflammatory Eye Disease

**Additional Information** Scleritis is a serious inflammatory disease of the sclera. The disease is often contracted through association with other diseases of the body, such as Wegener’s granulomatosis or rheumatoid arthritis; it can also be attained through disorders of menstruation. For this reason, scleritis occurs frequently among young women. There are three types of scleritis: diffuse scleritis (the most common), nodular scleritis, and necrotizing scleritis (the most severe). Scleritis may be the first symptom of onset of connective tissue disease.

In severe cases the cornea may be damaged. Secondary keratitis or uveitis may also occur.

**Sexually Transmitted Diseases - Infection:**

**Action** See:

Is there a specific entry for the disease?

**Must not donate if less than 12 months from completing treatment**

**See if relevant**

Chlamydia

Genital Warts

Gonorrhoea

Herpes – Genital

Syphilis

**Sexually Transmitted Disease – Sexual Partner:**

**Action** See if there is a specific entry for the disease with which there has been contact

**Must not donate if:**

a) Donor required treatment and is less than 12 months since completing that treatment

b) Donor did not require treatment and it is less than 12 months from the last sexual contact with the infected partner.

Accept if the donor did not require treatment and it is more than 12 months since the infected partner has completed treatment.
Sex Worker:
Action: Must not donate if engaged in sex work within the past 6 months (3 months with NAT)
Additional TGA criteria: 12 month deferral is mandated by the TGA for a donor whose sexual practices put them at increased risk of acquiring infectious diseases that can be transmitted by blood, cells or tissues.
Additional Information: In this context sex is defined as vaginal, oral or anal sex with or without a condom/protective. If received injectable drugs of addiction for sex, see ‘Addiction and Drug Abuse’ entry as a 12-month deferral may apply.

Shingles:
See if relevant: Herpes – Ocular
See: Herpes Zoster

Sicca:
See: Keratoconjunctivitis Sicca

Sickle-Cell Disease:
Action: Accept
Additional Information: Sickle-cell disease (SCD), or sickle-cell anaemia (SCA) or drepanocytosis, is a hereditary blood disorder, characterized by red blood cells that assume an abnormal, rigid, sickle shape.

Sideroblastic Anaemia:
Action: Must not donate
See if relevant: Myelodysplastic Syndrome
Additional Information: Sideroblastic anaemia or sideroachrestic anaemia is a disease in which the bone marrow produces ringed sideroblasts rather than healthy erythrocytes. It may be caused either by a genetic disorder or indirectly as part of myelodysplastic syndrome, which can evolve into haematological malignancies (especially acute myelogenous leukaemia).

Skin Cancer:
See: Malignancy
**Skin Disease:**

<table>
<thead>
<tr>
<th>Action</th>
<th>See if relevant</th>
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<tbody>
<tr>
<td>Accept</td>
<td>Acne</td>
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<td>Dermatitis</td>
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<td>Infection – General</td>
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<td>Malignancy</td>
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<td>Psoriasis</td>
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**Sjögren's syndrome:**

<table>
<thead>
<tr>
<th>Action</th>
<th>See</th>
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<tbody>
<tr>
<td>Determine the extent of any sicca symptoms and see Keratoconjunctivitis sicca.</td>
<td>Autoimmune Disorders</td>
</tr>
<tr>
<td>Keratoconjunctivitis sicca</td>
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</tbody>
</table>

**Additional Information**

Sjögren's syndrome is a systemic autoimmune disease in which immune cells attack and destroy the exocrine glands that produce tears and saliva. It is named after Swedish ophthalmologist Henrik Sjögren (1899–1986), who first described it. 90% of Sjogren’s patients are women.

The hallmark symptom of Sjögren's syndrome is a generalized dryness, typically including xerostomia (dry mouth) and keratoconjunctivitis sicca (dry eyes), part of what are known as sicca symptoms. Sicca syndrome also incorporates vaginal dryness, chronic bronchitis and lacks signs of arthritis. Sjögren's syndrome may cause skin, nose, and vaginal dryness, and may affect other organs of the body, including the kidneys, blood vessels, lungs, liver, pancreas, peripheral nervous system (distal axonal sensorimotor neuropathy) and brain.

Objective evidence of eye involvement relies on Schirmer's test and the Rose bengal score (or similar).

Sjögren's can damage vital organs of the body with symptoms that may plateau or worsen, or go into remission as with other autoimmune diseases. Some people may experience only the mild symptoms of dry eyes and mouth, while others have symptoms of severe disease.

**Sleeping Sickness:**

See African Trypanosomiasis

**Smallpox Immunisation:**

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate if:</th>
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<tr>
<td></td>
<td>a) The inoculation site has not fully healed</td>
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<td></td>
<td>b) Any secondarily infected site has not healed</td>
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<tr>
<td></td>
<td>c) Less than 8 weeks from inoculation or from the appearance of any secondarily infected site.</td>
</tr>
</tbody>
</table>
Additional Information

Smallpox immunisation is with live virus. By eight weeks, the infection caused by the inoculation should have been controlled. If the wound has not healed it is possible that there still may be infection present.

Close contacts of vaccines (household or direct bodily contact) may become secondarily infected from direct skin contact with an infected inoculation site or from virus on clothing, bedding, dressings etc. If infection occurs, a new skin rash, blister or sore appears at the site of contact, which could be anywhere on the body. The rash represents a secondary vaccination site and presents exactly the same potential risk to patients and staff as that of a person who has been intentionally immunised.

South American Trypanosomiasis (and risk of):

<table>
<thead>
<tr>
<th>Action</th>
<th>Accept for corneas not for sclera</th>
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<tbody>
<tr>
<td>See</td>
<td>Chagas’ Disease</td>
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Spectacles:

<table>
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<th>See</th>
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Spherocytosis:

<table>
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<tr>
<th>See</th>
<th>Hereditary Spherocytosis</th>
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</table>

Squamous Cell Carcinoma:

<table>
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<tr>
<th>See</th>
<th>Malignancy</th>
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</table>

Steroid Therapy:

<table>
<thead>
<tr>
<th>Action</th>
<th>See if there is an entry for the underlying condition. Accept if not on an immunosuppressive dose and the underlying condition being treated is acceptable. See Immunosuppression</th>
</tr>
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</table>

<table>
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<tr>
<th>See if relevant</th>
<th>Autoimmune Disorders</th>
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<tbody>
<tr>
<td></td>
<td>Immunosuppression</td>
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<tr>
<td></td>
<td>Skin Disease</td>
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<tr>
<td></td>
<td>Tissue and Organ Recipients</td>
</tr>
</tbody>
</table>

Additional Information

Steroid therapy in high doses causes immunosuppression. At these doses there is a theoretical issue of whether immunosuppressive doses can mask the results of mandatory serological testing. If possible NAT testing in these instances may be warranted.

Subacute sclerosing panencephalitis (SSPE):

<table>
<thead>
<tr>
<th>Action</th>
<th>Must not donate.</th>
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<tbody>
<tr>
<td>See</td>
<td>Measles</td>
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</table>
Additional Information

Also known as Dawson Disease, Dawson encephalitis, and measles encephalitis is a rare and chronic form of progressive brain inflammation caused by a persistent infection with measles virus (which can be a result of a mutation of the virus itself). The condition primarily affects children and young adults. It has been estimated that about 1 in 10,000 people infected with measles will eventually develop SSPE. No cure for SSPE exists and the condition is often fatal.

Characterized by a history of primary measles infection usually before the age of 2 years, followed by several asymptomatic years (6–15 on average), and then gradual, progressive psychoneurological deterioration, consisting of personality change, seizures, myoclonus, ataxia, photosensitivity, ocular abnormalities, spasticity, and coma.

SSPE is a rare condition, although there is still relatively high incidence in Asia and the Middle East. However, the number of reported cases is declining since the introduction of the measles vaccine—eradication of the measles virus prevents the SSPE mutation and therefore the progression of the disease or even the initial infection itself.

Syphilis:

**Action**

**Must not donate**

Accept if fully treated in the past and tests exclude recent infection.

**Additional Information**

Syphilis is a sexually transmitted infection caused by the spirochete bacterium Treponema pallidum subspecies pallidum. The primary route of transmission is through sexual contact. It is transmissible by kissing near a lesion, as well as oral, vaginal, and anal sex. It is highly infectious with approximately 30 to 60% of those exposed to primary or secondary syphilis contracting the disease.

The interpretation of syphilis testing is often difficult and may require an experienced microbiologist to help make a decision on safety. Blood tests are divided into nontreponemal and treponemal tests. Clinically, nontreponemal tests are used initially, and include venereal disease research laboratory (VDRL) and rapid plasma reagin (RPR) tests. However, false positives on the nontreponemal tests can frequently occur (especially with some viral infections such as varicella and measles, as well as with lymphoma, tuberculosis, malaria, endocarditis, connective tissue disease, and pregnancy). In these cases confirmation is required with a treponemal test, such as treponemal pallidum particle agglutination (TPHA) or fluorescent treponemal antibody absorption test (FTA-Abs). Treponemal antibody tests usually become positive two to five weeks after the initial infection.

**Syphilis – Sexual Contact:**

See Sexually Transmitted Diseases

**Systemic Lupus Erythematosus:**

**Action**

Accept

See Autoimmune Disorders
**Additional Information**

Systemic lupus erythematous often abbreviated to SLE or lupus, is a systemic autoimmune disease (or autoimmune connective tissue disease) that can affect any part of the body. It may manifest as a systemic disease (SLE) which is the more common form, or in a purely cutaneous form also known as incomplete lupus erythematous, more often referred to a just “Lupus”. Sequelae arising from SLE are more serious and can be life-threatening.

There is no one specific cause of SLE. There are, however, a number of environmental triggers and a number of genetic susceptibilities. Research has failed to find a connection between infectious agents (viruses and bacteria), with no pathogen that can be consistently linked to the disease.

Whilst SLE has widespread systemic manifestations and pathologies it does not affect the cornea.

**Tattoo:**

See Body Piercing

**Temporal Arteritis:**

See Autoimmune Disorders

**Additional Information**

Temporal arteritis is inflammation and damage to blood vessels that supply the head area, particularly the large or medium arteries that branch from the neck and supply the temporal area.

If the inflammation affects the arteries in your neck, upper body and arms, it is called giant cell arteritis.

The cause is unknown, but is believed to be partly due to a faulty immune response. The disorder has been associated with severe infections and the use of high doses of antibiotics.

**Tetanus Immunisation:**

See Immunisation – Non-live

**Thalassaemia:**

**Action**

Accept

**Additional Information**

Thalassaemia are forms of inherited autosomal recessive blood disorders that originated in the Mediterranean region. In thalassaemia, the disease is caused by the weakening and destruction of red blood cells. People with thalassaemia make less haemoglobin and fewer circulating red blood cells than normal, which results in mild or severe anaemia.

Thalassemia major occurs when a child inherits two mutated genes, one from each parent. Children born with thalassemia major usually develop the symptoms of severe anaemia within the first year of life.

**Thrombocytosis:**

**Action**

Accept if reactionary/secondary thrombocytosis

Must not donate if essential / primary thrombocytosis (considered a myeloproliferative disorder)

See also Haematological Disease

Polycytemia
Thrombocytosis (or thrombocythaemia) is the presence of high platelet counts in the blood, and can be either primary (also termed essential and caused by a myeloproliferative disease) or reactive (also termed secondary). Although often symptomless (particularly when it is a secondary reaction), it can predispose to thrombosis in some patients.

Essential (primary) thrombocytosis is a form of myeloproliferative disorder such as chronic myelogenous leukemia, polycythemia vera, myelofibrosis.

Reactive (secondary) thrombocytosis is usually due to an inflammation such as a reaction to surgery or some other inflammatory disorders including autoimmune disorders.

**Thyroid Disease:**

**Action**

Accept

**Discretionary**

If related to malignancy see Malignancy

**Additional Information**

**Hypothyroidism**

Is a state in which the thyroid gland does not produce enough of the thyroid hormones thyroxine (T4) and triiodothyronine (T3). Iodine deficiency is the most common cause of hypothyroidism worldwide. In iodine-replete areas of the world, hypothyroidism is most commonly caused by Hashimoto's thyroiditis (an autoimmune disorder). Some drugs such as lithium and amiodarone can also cause disfunction.

**Hyperthyroidism**

Often referred to as an overactive thyroid, is a condition in which the thyroid gland produces and secretes excessive amounts of the free thyroid hormones triiodothyronine (T3) and/or thyroxine (T4). The major causes in humans are Graves' disease (an autoimmune disease (usually, the most common aetiology) and Toxic thyroid adenoma (the most common aetiology in Switzerland, 53%, thought to be atypical due to a low level of dietary iodine in this country).

Often iodine-131 radioisotope therapy is given orally (either by pill or liquid) on a one-time basis, to severely restrict, or altogether destroy the function of a hyperactive thyroid gland.

Caution for donation if it is less than six months from treatment with radioactive iodine as it has a long half-life and is not readily cleared from the tissues.

**Tick-Borne Encephalitis:**

**See**

Infection – Acute

**Additional Information**

Tick-borne encephalitis (TBE) is a viral infectious disease involving the central nervous system caused by tick-borne encephalitis virus, a member of the genus Flavivirus in the family Flaviviridae. It is transmitted by the bite of several species of infected ticks and most often manifests as meningitis, encephalitis, or meningoencephalitis. Long-lasting or permanent neuropsychiatric sequelae are observed in 10-20% of infected patients. Russia and Europe report about 5,000-7,000 human cases annually.
### Tissue and Organ Recipients:

**Action**

Accept recipient of solid human organs or tissue in Australia and New Zealand but note issues regarding immunosuppression

See - Immunosuppression

**Must not donate if:**

- a) ever a recipient of human dura mater
- b) ever a recipient of *viable* xenotransplant (cells or tissue)
- c) ever a recipient of human pituitary derived hormone

**Additional TGA criteria**

Must not donate if:

- a) a solid organ recipient within the last 12 months
- b) a solid organ recipient in England, Scotland, Wales, Northern Ireland or the Isle of Man

See

- Neurosurgery
- Immunosuppression
- Pituitary Extract
- Transfusion
- Xenotransplantation

**Additional Information**

The TGA exclusion criteria for solid organ and tissue recipients relate to the TGA requirement - “A deceased donor who, within 12 months prior to asystole, has been a recipient of allogeneic organ(s), cells, or tissue that are not in accordance with the requirements of this Order (TGO 88)”.

Tissues are acceptable if transplanted in Australia as they will either be implanted more than 12 months prior to donation or they will be in accordance with the TGO 88.

The TGA exclusions for England, Scotland, Wales, Northern Ireland and Isle of Man are related to the risk of vCJD.

There is evidence that human pituitary hormones and human dura mater have transmitted cCJD.

Exclusions

- NB: Immunosuppression at the levels encountered with organ recipients is theoretically capable of suppressing antibody responses to the extent that serological antibody tests would be invalidated. In these cases, NAT testing may be indicated to overcome this restriction.

### Tissue Products / Tissue grafts (Animal derived):

**Action**

Accept if the product has been approved by the regulator for human use (TGA in Australia, MedSafe in NZ)

Must not donate if the product was not regulator approved, or was a “viable” non-human animal cell or tissue
“Viable” in this sense means any non-human animal cell or tissue that is still considered in its natural living state and has not been treated in any way to inactivate its normal living functions. For example this would include the administration of animal blood or blood components and living organ, cell or tissue xenografts. The exclusionary purpose is to prevent the possible transmission of pathogenic zoonoses.

Animal derived products or non-viable derived products are specifically not excluded. This includes animal derived insulin and, for example, non-viable animal heart valves. Other likely products (in Australia) are those used in the context of haemostatic control. These products (such as Duragen, FloSeal, and Spongostan) are commonly used in neurosurgical procedures but also in AAA surgery and dental applications. All are TGA-approved products and therefore have met the criteria for TSE in that they are derived from TSE-free countries.

Duragen
- dural regeneration matrix that is bovine derived (achilles tendon)

FloSeal Hemostatic matrix
- bovine derived matrix + human derived thrombin component

Spongostan
- Porcine derived gelatin product

Toxoplasmosis:

Toxoplasmosis is a parasitic disease caused by the protozoan Toxoplasma gondii. The parasite infects most warm-blooded animals, including humans, but the primary host is the cat family. In humans, contamination of hands with cat faecal material is a significant risk factor.

It is a common parasitic infection with, for example, the Centers for Disease Control placing the seroprevalence in the US population at more than 10%.

Usually it does not cause symptoms as the body’s immune system easily overcomes the parasite. During the first few weeks after exposure, the infection typically causes a mild, flu-like illness or no illness.

However, those with weakened immune systems, such as those with AIDS and pregnant women, may become seriously ill. The parasite can cause encephalitis (inflammation of the brain) and neurologic diseases, and can affect the heart, liver, inner ears, and eyes (chorioretinitis). Recent research has also linked toxoplasmosis with attention deficit hyperactivity disorder, obsessive compulsive disorder, and schizophrenia. Numerous studies found a positive correlation between latent toxoplasmosis and suicidal behaviour in humans.

Corneas are avascular and therefore there is considered to be no risk of transmitting a protozoal infection.

Transfusion:

Includes Treatment with Blood Components, Products and Derivatives
**Action**

Must not donate if a recipient of allogeneic blood, blood components or human derived clotting factors outside of Australia or New Zealand within the past **six months** (or 4 months if NAT HCV is performed).

**Additional TGA criteria**

The TGA considers any transfusion that is not in accordance with the requirements of Therapeutic Goods Order No. 88 - Standards for donor selection, testing and minimising infectious disease transmission via therapeutic goods that are human blood and blood components, human tissues and human cellular therapy products – must not donate if within a six or four month period. In practice all transfusions conducted **within Australia** will now be in accordance with TGO 85 and therefore acceptable. All other transfusions are only acceptable after a 6 month (4 month with HCV NAT) exclusionary period.

There is additional exclusion of - must not donate **if ever received treatment** with blood, blood components, products and derivatives in England, Scotland, Wales, Northern Ireland or the Isle of Man.

**See if relevant**

Immunoglobulin Therapy

Immunosuppression

Malaria

Prion Associated Diseases

South American Trypanosomiasis Risk

Plasma Dilution

**Additional Information**

For New Zealand, the blood supply (and blood products) of both New Zealand and Australia are considered “safe” and therefore acceptable. (the TGA however only considers Australian transfusion to be “safe”). Elsewhere the six or four month rule will apply.

Treatment with blood, blood components, products and derivatives at in England, Scotland, Wales, Northern Ireland or the Isle of Man is an exclusion for Australia due to TGA mandatory assessment of vCJD risk.

Note the rules for plasma dilution testing of donor samples.

**Transgender Individuals:**

**Action**

Assessment of donor suitability should be according to the gender assigned

**See if relevant**

Bi-sexual and Homosexual individuals

**Additional Information**

A careful and sympathetic consideration of sexual risk factors needs to be undertaken. Men who have sex with other men have a higher chance of having an undiagnosed infection which could be passed to anyone receiving their blood, tissues or cells.

**Trauma:**

**See**

Accident
Travel:

**Action**
For those reporting any travel overseas in the past 12 months:

1. Consider if there is any relation between the signs and symptoms of any reported illness while travelling or upon return (even if resolved), and the risk profile of travel to particular geographical areas (the links below provide a good up to date resource).
2. Consider risk of exposure/contact with any significant current epidemiological situations (eg. Ebola, SARS, Dengue Fever).

Accept if no relationship (as above) and the donor is not otherwise medically contraindicated. If a relationship to a particular disease is possible, cross-check the entry for that disease and act upon the advice.

**Additional TGA criteria**
The “UK exclusion rule for risk of vCJD applies”.

**Must not donate:**

- **a)** Individuals who donors who have lived in or visited **England, Scotland, Wales, Northern Ireland or the Isle of Man** for a cumulative period of six months or more, between 1st January 1980 and 31st December 1996 inclusive.

- **b)** individuals who have received a transfusion or injection of blood or blood components while in England, Scotland, Wales, Northern Ireland or the Isle of Man at any time since 1st January 1980 onward.

**See if relevant:**

United Kingdom’s Geographical Disease Risk Index

United Kingdom’s Geographical Disease Risk Index


The Centers for Disease Control and Prevention (CDC) also have valuable current information on disease outbreaks by geography [http://www.cdc.gov/](http://www.cdc.gov/)

The Australian Travel Advisory


Malaria

South American Trypanosomiasis

Infection – Tropical

Prion Disease

**Trisomy 21 (Down’s Syndrome):**

**Action**

**Must not donate**

**See**

Down’s Syndrome

**Trypanosoma Cruzi Infection:**

**See**

Chagas’ Disease

**Tuberculosis:**

**Action**

**Must not donate if:**

- **a)** Infected
- **b)** Less than 24 months from confirmation of cure
- **c)** Under follow up

**See if relevant**

BCG
Additional Information

Tuberculosis, MTB, or TB is a common, and in many cases lethal, infectious disease caused by various strains of mycobacteria, usually Mycobacterium tuberculosis. Tuberculosis typically attacks the lungs, but can also affect other parts of the body. It is spread through the air when people who have an active TB infection cough, sneeze, or otherwise transmit respiratory fluids through the air. Most infections are asymptomatic and latent, but about one in ten latent infections eventually progresses to active disease which, if left untreated, kills more than 50% of those so infected. One third of the world’s population is thought to have been infected with M. tuberculosis.

The most important risk factor globally is HIV; 13% of all TB cases are infected by the virus.

Progression from TB infection to overt TB disease occurs when the bacilli overcome the immune system defenses and begin to multiply. In primary TB disease (some 1–5% of cases), this occurs soon after the initial infection. However, in the majority of cases, a latent infection occurs with no obvious symptoms. These dormant bacilli produce active tuberculosis in 5–10% of these latent cases, often many years after infection.

### Turner’s Syndrome:

**Advisory**
Do not donate

**Additional Information**

Turner syndrome or Ullrich–Turner syndrome (also known as "Gonadal dysgenesis" encompasses several conditions in human females, of which monosomy X (absence of an entire sex chromosome, the Barr body) is most common.

Visual impairments sclera, cornea, glaucoma, etc. have been noted with this syndrome, although eye problems do not appear to be as common as in Down’s Syndrome.

### Typhoid:

**Action**
Must not donate

Accept if past infection that has completely resolved

**Additional Information**

Typhoid is a common worldwide bacterial disease transmitted by the ingestion of food or water contaminated with the faeces of an infected person, which contain the bacterium Salmonella enterica enterica, serovar Typhi.

It is primarily a gastrointestinal infection that has early manifestations of high fever and bradycardia, frequently progressing to delirium and diarrhoea. Late and often fatal manifestations include dehydration, intestinal haemorrhage or perforation, encephalitis, metastatic abscesses, cholecystitis, endocarditis and osteitis.

**Typhoid Immunisation (Injected):**

See Immunisation Non-live

**Typhoid Immunisation (Oral):**

See Immunisation Live

### Ulcerative Colitis:

**Action**
Accept if eyes uninvolved

**See**
Inflammatory Bowel Disease
Ulcerative colitis is a form of colitis, a disease of the colon that includes characteristic ulcers or open sores. The main symptom of active disease is usually constant diarrhoea mixed with blood, of gradual onset. It has similarities to Crohn’s disease.

Ulcerative colitis is treated as an autoimmune disease, with anti-inflammatory drugs, immunosuppression, and biological therapy targeting specific components of the immune response.

NB: Patients may present with ophthalmic comorbidities such as iritis, uveitis and episcleritis.

There is a chance that other organs and tissues may not be accepted for donation.

### Vasculitis:

**Action**

Consider what the underlying cause may be

- **a)** Infectious
- **b)** Autoimmune

**Accept for corneas only not sclera if underlying cause is not contraindicated.**

**See**

Autoimmune disorders

Temporal arteritis

**Additional Information**

Vasculitis is a group of disorders that destroy blood vessels by inflammation.

The underlying cause may be infectious. For example, the cause of syphilitic aortitis is infectious. However, the causes of many forms of vasculitis are poorly understood. There is usually an immune component, but the trigger is often not identified.

### Viral Haemorrhagic Fever:

**Action**

**Affected individual must not donate if ever infected**

Contact or travel to endemic region must not donate if:

- **a)** Was present in an area during an active outbreak
- **b)** Under investigation for viral haemorrhagic fever
- **c)** Has been in contact with an individual who was present in an area during an active outbreak
- **d)** Was in contact with an individual infected with or was under investigation for viral haemorrhagic fever
- **e)** Less than six months after return to ANZ from an endemic area when there was no active outbreak.

**See if relevant**

The Geographical Disease Risk Index for countries with a current endemic Viral Haemorrhagic Fever risk

**Additional Information**

These infections have very high death rates and there is evidence that the virus may persist for some time after recovery. The 2014-16 outbreak of Ebola in West Africa had increased understanding about the persistence of the virus in affected individuals and the number of asymptomatic individuals who may be able to transmit the virus to others.

There is no routine screening test for EBOV currently available. There is an option to test donors serologically for the presence of anti-EBOV (antibodies) two months after the exposure event if a test becomes available. A reactive test would result in permanent deferral, a negative test would allow donation to proceed.
**Vitiligo:**

**Action**
Accept

**See**
Autoimmune Disorders

Vitiligo is a condition that causes depigmentation of parts of the skin. It occurs when melanocytes, the cells responsible for skin pigmentation, die or are unable to function. The cause of vitiligo is unknown, but research suggests that it may arise from autoimmune or genetic causes.

**Von Recklinghausen’s Disease:**

**See**
Neurofibromatosis

**West Nile Virus:**

**Definition**

The Centers for Disease Control and Prevention (CDC) also have valuable current information on disease outbreaks by geography [http://www.cdc.gov/](http://www.cdc.gov/).

**Action**
Accept 4 months after their return from an affected area. This may be reduced to 4 weeks if they have had no symptoms or evidence of infection. For donors under four weeks from return, accept if a validated NAT of WNV is negative.

**Must not donate if:**

a) It is less than 6 months from a donor’s return from a WNV outbreak area and the donor has been diagnosed with WNV
b) It is less than 6 months from a donor’s return from a WNV outbreak area and the donor has either had a history of symptoms suggestive of WNV while there or within 28 days of their return
c) In other cases it is less than 4 weeks from a donor’s return from a WNV outbreak area.

**Additional Information**

West Nile virus (WNV) is a mosquito-borne zoonotic arbovirus belonging to the genus Flavivirus in the family Flaviviridae (similar to Dengue Fever).

Approximately 80% of West Nile virus infections in humans are subclinical, which cause no symptoms. In the cases where symptoms do occur—termed West Nile fever in cases without neurological disease—the time from infection to the appearance of symptoms (incubation period) is typically between 2 and 15 days. Symptoms may include fever, headaches, fatigue, muscle pain or aches, malaise, nausea, anorexia, vomiting, myalgias and rash. Less than 1% of the cases are severe and result in neurological disease when the central nervous system is affected. People of advanced age, the very young, or those with immunosuppression, either medically induced, such as those taking immunosuppressive drugs, or due to a pre-existing medical condition such as HIV infection, are most susceptible to developing West Nile meningitis, West Nile meningoencephalitis and West Nile poliomyelitis.

The problem can vary both in relation to geography and the time of the year so it is not possible to state areas from which donors need to be deferred.

**Whooping Cough:**

**See**
Infection – Acute

Infectious Diseases – Contact with
Additional Information

Pertussis — commonly called whooping cough is a highly contagious bacterial disease caused by Bordetella pertussis.

Symptoms are initially mild, and then develop into severe coughing fits, which produce the namesake high-pitched "whoop" sound in infected babies and children when they inhale air after coughing.

Common complications of the disease include pneumonia, encephalopathy, earache, or seizures.

Most healthy older children and adults will have a full recovery from pertussis, however those with comorbid conditions can have a higher risk of morbidity and mortality. Infection in newborns is particularly severe.

Wilson's Disease:

Action
Accept

Additional Information
Wilson's disease or hepatolenticular degeneration is an autosomal recessive genetic disorder in which copper accumulates in tissues; this manifests as neurological or psychiatric symptoms and liver disease. It is treated with medication that reduces copper absorption or removes the excess copper from the body, but occasionally a liver transplant is required.

Xenotransplantation:

Action
Must not donate if:

The donor has been a recipient of viable non-human animal cells or tissue.

See also
Tissue Products / Tissue grafts (Animal derived)

Additional Information
Any procedure that involves the transplantation, implantation or infusion into a human recipient of either

- Live cells, tissues, or organs from a non-human animal.
- Human body fluids, cells, tissues or organs that have had ex vivo contact with live, non-human animals cells, tissues and organs.

Biological products, drugs, or medical devices sourced from non-living cells, tissues or organs from non-human animals (including but not limited to porcine heart valves and porcine insulin) are not considered xenotransplantation products.

Advisory
Sexual partners of xenotransplant recipients, current and former, should not donate. Particularly when the recipient is immunosuppressed there is a risk of passing on infections that would not normally affect humans.

Yaws:

Action
Must not donate

Additional Information
Yaws (also frambesia tropica, thymosis, polypapilloma tropicum, pian or parangi, "Bouba", "Frambösie", and "Pian") is a tropical infection of the skin, bones and joints caused by the spirochete bacterium Treponema pallidum pertenue.

The disease is transmitted by skin-to-skin contact with an infective lesion, with the bacterium entering through a pre-existing cut, bite or scratch. Within ninety days (but usually less than a month) of infection a painless but distinctive "mother yaw" appears, which is a painless nodule which enlarges and becomes warty in appearance. Sometimes nearby "daughter yaws" also appear simultaneously. This primary stage resolves completely within six months. The secondary stage occurs months to years later, and is characterised by widespread skin lesions of varying appearance which frequently ulcerate (and are then highly infectious), but heal after six months or more. About ten percent of people then go on to develop tertiary disease within five to ten years (during which further secondary lesions may come and go), characterised by widespread bone, joint and soft tissue destruction, which may include extensive destruction of the bone and cartilage of the nose.
Yellow Fever:
See Infection – Acute

Additional Information
Yellow fever, known historically as Yellow Jack, is an acute viral haemorrhagic disease. It was the first illness shown to be transmissible via filtered human serum and transmitted by mosquitoes, by Walter Reed around 1900.

The yellow fever virus is transmitted by the bite of female mosquitoes (the yellow fever mosquito, Aedes aegypti, and other species) and is found in tropical and subtropical areas in South America and Africa, but not in Asia. The only known hosts of the virus are primates and several species of mosquito.

Yellow fever presents in most cases in humans with fever, chills, anorexia, nausea, muscle pain (with prominent backache) and headache, which generally subsides after several days. In some patients, a toxic phase follows, in which liver damage with jaundice (inspiring the name of the disease) can occur and lead to death. Because of the increased bleeding tendency (bleeding diathesis), yellow fever belongs to the group of haemorrhagic fevers.

Zieve’s syndrome:
Action Accept

Additional Information
Zieve’s syndrome is an acute metabolic condition that can occur during withdrawal from prolonged alcohol abuse. It is defined by haemolytic anaemia, hyperlipoproteinemia (excessive blood lipoprotein), jaundice, and abdominal pain. The underlying cause is liver delipidization.

Zika Fever (Virus):
Action Must not donate if donor is actively infected.
Defer for six months after resolution of active infection

See Arbovirus
Infection – Acute
Additional Information

Zika virus (ZIKV) is a member of the Flaviviridae virus family and the flavivirus genus. In humans, it causes a disease known as "zika", "Zika disease" or "Zika fever". It is related to dengue, yellow fever, West Nile and Japanese encephalitis, viruses that are also members of the virus family Flaviviridae. As of 2016, the illness cannot be prevented by medications or vaccines.

It is transmitted by mosquitoes and has been isolated from a number of species in the genus Aedes. Importantly most of the morbidity caused by this virus is the spread from a pregnant woman to her foetus. This can result in microcephaly, severe brain malformations, and other birth defects (see below the connection in Brazil). Zika infections in adults may result rarely in Guillain–Barré syndrome.

Zika can be transmitted from a man or a woman to their sexual partners. As of April 2016 sexual transmission of Zika has been documented in six countries – Argentina, Chile, France, Italy, New Zealand and the United States – during the 2015 outbreak.

It appears that the Virus may persist for some time after the acute infection (detected in semen up to 10 weeks after acute infection) but ZIKV has not been identified in ocular tissue in primate animal models.

The virus was first isolated in 1947 from a rhesus monkey in the Zika Forest of Uganda, Africa and was isolated for the first time from humans in 1968 in Nigeria. From 1951 through 1981, evidence of human infection was reported from other African countries such as Uganda, Tanzania, Egypt, Central African Republic, Sierra Leone and Gabon, as well as in parts of Asia including India, Malaysia, the Philippines, Thailand, Vietnam and Indonesia.

Zika virus could be considered an emerging pathogen, as it spread outside Africa and Asia for the first time in 2007 (Micronesia). It had a large outbreak in Brazil in April 2015. In December 2015, the Pan American Health Organization (PAHO) / World Health Organization (WHO) noted that transmission of Zika virus infection had occurred within nine member states: Brazil, Chile (specifically Easter Island), Colombia, El Salvador, Guatemala, Mexico, Paraguay, Suriname, and Venezuela. PAHO/WHO made recommendations for surveillance, case management, and prevention. More recently locally acquired cases have been noted in Florida. The CDC provides up to date details of current spread [http://www.cdc.gov/zika/geo/](http://www.cdc.gov/zika/geo/).

Thus far, it has been a relatively mild disease with limited scope, but its true potential as a virus and as an agent of disease is currently unknown. However, Brazilian authorities have confirmed the previously suspected connection between zika infection by pregnant women and newborn microcephaly, with a full 1,248 reported cases of microcephaly in Brazil during 2015, with 7 fatalities.

Common symptoms of infection with the virus include mild headaches, maculopapular rash, fever, malaise, conjunctivitis, and arthralgia. *Eye banks should be screening for symptomatic infection in their donors.*

Zollinger–Ellison syndrome:

**See** Malignancy

**Additional Information** Zollinger–Ellison Syndrome (ZES) is caused by a non–beta islet cell, gastrin-secreting tumour of the pancreas that stimulates the acid-secreting cells of the stomach to maximal activity, with consequent gastrointestinal mucosal ulceration.