



This fact sheet outlines important information about floods and flooding in Australia with hints and tips for keeping your practice and patients as safe as possible in the event of a flood.

Facts about floods

- Floods impact both individuals and communities and have social, economic and environmental consequences.
- Floods are the most expensive type of natural disaster with direct costs estimated over the period 1967–2005 averaging at \$377 million per year.
- The future is likely to see an increase in flood risk due to climate change, population growth and urbanisation. However, flood risk can be managed.
- Flash flooding is the most dangerous form of flooding and results from short, heavy bursts of rain that can cause flooding in minutes, often without warning.¹

Health risk factors and mitigation strategies

1. Communicable disease

Floods can increase the transmission of communicable diseases.

1.1 Water-borne diseases

Examples: hepatitis A, gastroenteritis, leptospirosis, melioidosis.

Mitigation

The risk of water facility contamination can be minimised if the risk is well recognised and disaster response addresses the provision of clean water as a priority.

Ensure your practice has access to clean drinking water in the event that public water supplies are contaminated. Await instructions from the relevant authority before resuming consumption of the water supply.

To prevent skin contact with flood water and mud affected areas (eg when re-entering inundated properties), wear protective clothing, such as shoes or boots and use gloves when cleaning.

1.2 Vector-borne diseases

Examples: mosquito-borne diseases, such as Barmah Forest Virus, Ross River virus, Dengue fever.

Flooding may cause an increase in vector-borne diseases through the expansion in the number and range of vector habitats. Standing water caused by heavy rainfall or overflow of rivers can act as breeding sites for mosquitoes. This increases the risk to the disaster-affected population and emergency workers of contracting infections, such as Barmah Forest and Ross River viruses. Flooding may initially flush out mosquito breeding, but this often returns when the waters recede.

Mitigation

Tips to reduce the risk of mosquito bites:

- Use insect repellents and wear protective, light coloured clothing.
- Avoid being outside during times of heavy infestation of mosquitoes, eg early evenings in the warmer months.
- Screen living and sleeping areas.
- Check the practice location regularly for potential mosquito breeding areas, eg any uncovered water containers, small wading pools and old tyres should be emptied regularly.

Vaccinations

Tetanus boosters may be indicated for previously vaccinated people who sustain open wounds or for other injured people depending on their tetanus immunisation history. Passive vaccination with tetanus immune globulin (Hypertet) is useful in treating wounded people who have not been vaccinated. It is also useful for those whose wounds are highly contaminated, as well as those with tetanus.

The vaccination of high risk groups (such as persons involved in the management of drinking water, waste water or sewerage) with hepatitis A might be considered. In case of an outbreak of hepatitis A consider immunisation of contacts. The use of immunoglobulins is not recommended.

Health education

- Promote good hand hygiene practice in your practice.
- Promote safe food preparation techniques.

2. Physical health impacts

Floods can be associated with many physical health issues and risks. Your practice might see an increase in presentations of:

- lacerations
- broken limbs due to falls etc
- electric shock
- exposure including hypothermia and sunburn

- dehydration
- water inhalation and ingestion
- risk of snake and insect bites
- increased incidence of chest infections
- increased incidence of skin infections, eg dermatitis, cellulitis
- exacerbation of existing medical conditions, eg diabetes, asthma, angina
- injuries related to moving heavy items such as furniture eg back pain.

3. Mental health effects

Natural disasters, such as floods and bushfires, can elicit acute grief and stress responses consequential to the event or can exacerbate pre-existing mental health conditions.

Experiencing and surviving natural disasters can also place people at a higher risk of developing mental health issues which can range from mild to more severe such as post-traumatic stress disorder (PTSD).

Exposure to stressful events has also been related to increased levels of alcohol use which can impact on physical and mental health.

Access the RACGP facts sheet on emergencies and mental health here: <https://www.racgp.org.au/your-practice/business/tools/disaster/emergencies/>

4. Risk to infrastructure

Floods can compromise or completely disrupt key utilities, such as water and power supplies:

- Power cuts related to floods may disrupt water treatment and supply plants, thereby increasing the risk of water-borne diseases as described above.
- Power cuts may also jeopardise proper functioning of health facilities, including cold chain.

Some risk mitigation strategies might include:

- Relocating essential files and equipment to alternate location, if possible.
- Arranging for heat sensitive medicines to be stored appropriately in another location, eg local pharmacy, hospital or other practice with alternate power supply.
- Advising people reliant on CPAP or oxygen concentrators to evacuate early or source an alternative reliable power source.

Resources

Victorian Government, *Chief Health Officer advice to doctors in flood affected areas*

<https://www2.health.vic.gov.au/Api/downloadmedia/%7B75262ABC-B342-4702-9F1E-1C69DE819249%7D>

World Health Organisation, *Floods and health: Fact sheet for health professionals*

http://www.euro.who.int/__data/assets/pdf_file/0016/252601/Floods-and-health-Fact-sheets-for-health-professionals.pdf?ua=1

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1. Office of the Queensland Chief Scientist n.d. What are the consequences of floods? Accessed 13 January from <http://www.chiefscientist.qld.gov.au/publications/understanding-floods/flood-consequences?highlight=WyJmbG9vZGluZyJd>