



Flooding – Frequently Asked Health Questions

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I think floods may be coming soon to my local area – what should I do?

If available for your neighbourhood, sign up for free flood warning messages from the Environment Agency to receive phone, text or email messages about when flooding is expected.

Listen out for flood warnings on radio and television and follow any advice from the emergency services. You can also phone the Environment Agency Floodline on 0345 988 1188 or 0845 988 1188.

Know what the levels of flood warning mean:

- Flood Alert: Flooding is possible. Be prepared
- Flood Warning: Flooding is expected. Immediate action required
- Severe Flood Warning: Severe flooding. Danger to life

Make a personal Flood Plan for what you will do if there is a flood. Advice on how to make a plan and a self-complete template is available from the [Environment Agency website](#).

Pack a “flood kit” in case you need to leave your home. Be sure to include:

- Medicines and medical devices, hearing aid batteries, glasses and contact lenses,
- Phone numbers, insurance documents, bank cards and money,
- Clothing, toothbrush and personal items. If you have a baby, pack nappies, clothing and baby food

What is the most dangerous thing about a flood?

The effects of flooding on health are extensive and significant, ranging from death from drowning and injuries from accident, to infectious diseases and mental health problems (short and long term).

Accidents happen in fast flowing floodwater. Avoid walking or driving in or near floodwater. Driving in floodwater significantly increases risk of drowning. Do not let children play in floodwater. There could be hidden dangers like sharp objects, raised manhole covers and pollution. Walking or even driving through floodwater is risky - six inches of fast flowing water can knock you over and two feet of water will float your car.

The other main health hazard in floods come from the stress and strain of the event and clean-up. Take time to look after your and your family’s mental health and wellbeing. Do not overexert yourself and be careful not to hurt yourself when preparing your home and moving important things to a higher place.

Know how to turn off your gas, electricity and water before floodwater enters your home and do not touch sources of electricity if you are standing in water.

Ensure good ventilation if using portable indoor heating appliances to dry out indoor spaces. Do not use petrol or diesel generators or other similar fuel-driven equipment indoors: the exhaust gases contain carbon monoxide, which can kill.

What's the best health advice – isn't there a risk from bugs in the water?

Infection problems arising from floods in this country are rare. Usually any harmful bugs in floodwater become very diluted and present a low risk, but there are a few precautions to be aware of when dealing with flooding which should prevent unnecessary additional health problems:

- Wherever possible, try to avoid coming into direct contact with floodwater. If you have to go into the water, wear waterproof gloves and rubber boots and remember to be careful of potentially concealed hazards.
- Wash your hands – this is the most important way to get rid of harmful bugs. Use warm, clean water and soap, then rinse and dry your hands after going to the toilet, before eating or preparing food, after being in contact with floodwater, sewage or with items that have been in the water. Use cold water to wash if warm is not available. If there is no clean water, use disposable soapy, wet wipes or sanitising gel to carefully clean all parts of your hands and dry them.
- Keep open cuts or sores clean and use waterproof plasters to prevent them being exposed to floodwater.
- Keep children out of the water
- Do not eat any food that has been in contact with floodwater or sewage.

Why doesn't PHE recommend testing floodwaters routinely?

During flooding, sewage systems may become inundated by flood water. Consequently floodwater is likely to be contaminated by disease producing bacteria and viruses, however infection problems arising from floods in this country are rare. Microbiological testing of the floodwater is therefore likely to find disease causing micro-organisms so for this reason we do not recommend routinely carrying out microbiological testing on floodwater

What if I start to feel unwell?

If you feel unwell this does not necessarily mean that you are suffering from any infection. If you are concerned, then call '111'. A textphone service is also available if you are deaf or hard of hearing. The [textphone number](#) is 18001 111. Alternatively, you may wish to visit your family doctor.

Avoid contact with floodwater and wash your hands regularly. Swallowing floodwater or mud can cause diarrhoea, fever or abdominal pain. Mention the flood if you see your GP within 10 days for abdominal complaints.

Remember that flooding is stressful. It is normal to feel anxious, upset and experience difficulty sleeping. Take care of yourself and your family and check on elderly and vulnerable friends and neighbours. Contact friends and family for support as it can take a long time for life to return to normal.

Did many people fall ill after the summer 2007 floods?

Throughout the summer 2007 floods, PHE kept a close watch on the health of communities affected by flooding to track any changes in the rates of reported infectious disease. From data collected from GPs, hospital laboratories, NHS Direct calls, and local Health Protection Teams, PHE found no evidence of increased outbreaks of illness due to the floods. This was in line with previous experience from floods in developed countries, including the UK.

How do I check if my local health services are affected (eg GPs, outpatient appointments)?

If you can, use the usual local telephone numbers for your health services. Dial '111' if you have non-urgent health concerns. A [textphone service](#) is also available if you are deaf or hard of hearing. The textphone number is 18001 111.

Make sure your family take their medicines and attend scheduled medical appointments.

Should I take any precautions regarding my children?

Do not allow children to play in floodwater areas.

Do wash children's hands frequently – particularly after playing outdoors and always before meals.

Do seek medical advice, as under normal circumstances, if infants are unwell with diarrhoea, fever or abdominal pain.

Do wash floodwater-contaminated toys with hot water and detergent before allowing them to be used. For soft toys, put them in a hot (60°C) machine wash, along with any other affected fabric items. Wash clothes used for cleaning on a separate cycle from your other clothes.

Is food safe to eat?

The Food Standards Agency advises people not to eat any food that has been touched or covered by floodwater or sewage. Do not eat any produce grown on an allotment or garden that has been flooded.

If you have a catering business and have been affected by flooding, ask for advice from the environmental health service at your local authority.

How do I prepare food safely?

Clean and disinfect work surfaces, plates, pans, cutlery, plastic/ceramic chopping boards etc. before using them with food. If you have a working dishwasher and mains water supply, this is a more efficient way to clean and sanitise smaller items. Discard wooden chopping boards and wooden spoons if contaminated by floodwater

Thoroughly clean the inside of your fridge and food cupboards if they have been touched by floodwater.

If your power has been cut off and your fridge has not been working for a few hours, throw away the food inside. If your freezer has not been working, throw away any meat, fish or dairy products, or food containing these, if they have started to get soft or are contaminated by floodwater. Throw away any food that you would eat frozen, such as ice cream.

What do I do with flood-damaged food?

Put flood-damaged food in black plastic refuse sacks, seal and put out when your next refuse collection is due.

Remember to check with insurers before disposal because food may be insured. Do not be tempted to try to salvage damaged food - including tins as they may be damaged or contaminated.

How should I clean up my home safely?

PHE in partnership with the Environment Agency has published the following public guidance for flooding. www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317140405287

Protective clothing: wear rubber boots, an apron and waterproof gloves during the clean-up. If you are scrubbing, hosing or pressure-washing, you may cause a lot of splashing and it is a good idea to wear a standard face mask, such as those sold by DIY stores. Goggles offer added protection and they can be reused after thorough washing. Remember to wash your hands thoroughly after each clean-up session.

Electricity: Do not turn on electrics if they may have got wet. Only turn them on when they have been checked by a qualified technician.

Children and pets: Keep children and pets out of the affected area until clean-up has been completed.

Insurance: If insured, call your insurance company as soon as possible and follow its advice. Take photographs before you start cleaning and ask your insurer before discarding items that cannot be cleaned (eg mattresses and carpets).

What should I do if my domestic property is flooded?

During flooding, sewage systems may become inundated by flood water. Consequently floodwater is likely to be contaminated by disease causing bacteria and viruses, however infection problems arising from floods in this country are rare especially during cooler weather. Wherever possible, try to avoid direct contact with floodwater but if you have to, there are a few precautions and good hygiene practices which should prevent unnecessary additional health problems.

- **Washing your hands** is the most important way to get rid of harmful micro-organisms after contact with floodwater, or with items that have been in the water. Use warm, clean water and soap, then rinse and dry your hands. Use cold water to wash if warm is not available. If there is no clean water, use disposable soapy, wet wipes or sanitising gel to carefully clean all parts of your hands and dry them. Always clean your hands after going to the toilet and before eating or preparing food.

- **Wear protective clothing** such as waterproof gloves, and rubber boots if you have to go into the water. Consider wearing goggles if you scrub, hose or pressure wash areas of your property. Remember to be careful of potentially concealed hazards under the water. Waterproof gloves are recommended when cleaning material where flooding has occurred.
- **Keep open cuts or sores clean** and use waterproof plasters as well as protective clothing during clean-up to prevent exposure to floodwater
- **Do not to eat any food that has been touched or covered by floodwater or sewage.** The Food Standards Agency advises people not to eat any produce grown on an allotment or garden that has been flooded.
- **Keep children away from floodwater** - Do not allow children to play in floodwater. Children should wash their hands frequently – particularly after playing outdoors and always before meals. Seek medical advice, as under normal circumstances, if infants are unwell with diarrhoea, fever or abdominal pain.
- **If you feel unwell** this does not necessarily mean that you are suffering from any infection. If you are concerned, then call '111'. Swallowing floodwater has the potential to cause diarrhoea, fever or abdominal pain. Mention the flood if you see your GP within 10 days of flooding.
- **Once flood water recedes, clean your home safely** by washing all surfaces with hot soapy water and household cleaning agent and wear protective clothing. Any solid wastes can be removed using clean absorbent material, such as paper towels, which should be disposed of through normal domestic refuse disposal.

How and what to clean

- Clean and disinfect work surfaces, plates, pans, cutlery, chopping boards etc. before using them with food. If you have a working dishwasher, this is a more efficient way to clean and sanitise smaller items. Discard wooden chopping boards and wooden spoons if contaminated by floodwater
- Thoroughly clean all other hard surfaces, including walls, hard-surfaced floors and furniture with hot soapy water, using an ordinary household detergent, until they look clean. Allow to dry thoroughly - this will also help to destroy germs left behind.
- Other soft furnishings that have been contaminated and cannot be put in a washing machine will have to be cleaned professionally or, if this is not possible, may have to be disposed of.
- Do not mix detergents with chlorine based bleaches as this may release hazardous fumes.
- Remember to take regular breaks in the fresh air.
- Remove and discard all soft furnishings and fittings that are damaged beyond repair or mouldy.
- Remove dirty water and silt from the property including the space under the ground floor if you have wooden floors. This space may need pumping out.
- If you need to store water, try not to use the same containers used to empty floodwater and mud from your home.
- Heating, dehumidifiers and good ventilation can help dry out your home. Mould should disappear as your home dries out but if it persists, contact a specialist cleaner.

Clothing and bedding: Do wash floodwater-contaminated toys with hot water and detergent before allowing them to be used. For soft toys, put them in a hot (60°C) machine wash, along with any other affected fabric items. Wash clothes used for cleaning on a separate cycle from your other clothes.

If you suspect problems with your drainage system, it is recommended that a launderette be used for washing large quantities of clothes and linens until your waste-water system has been checked.

Living in your flood-damaged home: It is recommended that you only fully re-occupy your home once the above cleaning has been carried out. Stay with friends or family, or ask your local authority to help you find alternative accommodation if your home has been damaged by floodwater. Only return to your home when essential repairs and cleaning have been completed.

If you have gas or oil central heating and it has been checked by an engineer, turn it on. Keep the thermostat between 20-22 degrees centigrade for steady drying

If you are drying your property naturally, keep doors and windows open as much as possible. If using dehumidifiers, close external doors and windows.

Ensure that if you have air bricks to any under floor spaces that these are unblocked to give cross ventilation to these areas. As floorboards and walls continue to dry out, any loose material and dust resulting from this should be vacuumed up on a regular basis.

Mould: You may notice mould growing on damp walls. This should disappear as your home dries out. Heating, dehumidifiers and good ventilation can help dry out your home. Mould should disappear as your home dries out but if it persists, contact a specialist cleaner.

Rats and other pests: Rats can move into homes due to flooding of their nests, but they are generally wary of humans. If normal waste collection services are disrupted for any reason, the build-up of waste may attract rats and other pests. Store your rubbish in hard bins or if this is not possible, try to keep rubbish bags in a place away from your home. If you handle rubbish bags that you think rats may have contaminated with urine or droppings, wash your hands thoroughly with soap and water.

Avoid approaching or cornering rats. If you are bitten by a rat then seek medical advice, and be sure to mention the exposure to rats.

If you have to pick up a dead rat, wear gloves and dispose of the rats in a plastic bag. Wash your hands thoroughly with soap and water afterwards.

What are the chemical hazards involved in floods and cleaning up?

Carbon monoxide (CO) poisoning: Remember that petrol or diesel generators and other fuel driven outdoor equipment should never be brought indoors. The exhaust gases contain carbon monoxide which can quickly build up to poisonous levels without good ventilation.

CO is produced when fossil fuels such as gas, coal, coke and oil and other fuels such as wood and charcoal burn without enough air. Incorrectly installed, poorly maintained or poorly ventilated cooking and heating devices are the main sources. Exposure to high indoor levels can be fatal, while exposure to lower levels can result in symptoms that resemble flu, viral

infections or food poisoning. Headache, tiredness, difficulty in thinking clearly and feeling sick are the most common symptoms. Drowsiness, dizziness, shortness of breath and chest pains may also be experienced. Prolonged exposure to low levels of CO over a long period of time can cause serious harm to health, often leading to lasting neurological damage in victims.

It is important to have all cooking and heating appliances which use fossil fuels (and wood) installed and serviced regularly by a suitably qualified, reputable and registered engineer. Rooms in which these appliances are used must be adequately ventilated. Chimneys and flues should be kept clear and swept from top to bottom at least once a year by a qualified sweep.

Car batteries: Older batteries may leak acid, so it is advisable to use rubber gloves when handling them.

Household chemicals: Be aware of potential chemical hazards during floods. Floodwater may have displaced containers of hazardous chemicals from their normal storage places. Wear rubber gloves to handle any of this packaging.

Oil in floodwater: Oil films may be seen floating on the floodwaters both inside buildings and surrounding areas. It is recommended that these films should not be disturbed and exposure to them should be avoided. Floodwaters should be allowed to subside and on contact with the ground the petrol allowed to evaporate. As is normal practice people are reminded not to smoke or have fire sources such as matches in the vicinity of petrol films.

Any remaining oil contamination in accessible areas can be removed by using a detergent solution and washing the surface down after initial cleaning has been carried out. In inaccessible areas such as under floorboards it may present an odour problem but is not necessarily a health hazard. Further advice should be sought from Environmental Health if the odour persists or if you are particularly concerned about it for other reasons.

Enclosed areas: Avoid enclosed areas that may be chemically contaminated, such as garages and cellars where concentrations may build up. Before entering, ensure such confined areas have good ventilation, with doors and windows open, and do not allow children and animals to enter.

Gas systems: Do not turn on gas or electrics if they may have got wet. Only turn them on when they have been checked by a qualified technician.

Who is responsible for the safety of my mains water supply?

People whose water comes through a mains supply should follow the advice of their local water company regarding the safety of their water supply. In most flooding circumstances, the mains water supply remains safe.

Water companies have a duty to take all necessary steps to protect public health. If a water treatment works becomes flooded, for example, alternative supplies will be made available, such as by bottled water or bowser, but in the meantime consumers may be advised to boil water before drinking or temporarily stop using water for domestic purposes.

My mains water tastes funny - what should I do?

If you notice a change in water quality, such as the water becoming discoloured or there is a change in taste or smell, or if you are unsure, ring your local water company. Whilst waiting for an answer, and if water is urgently required, boil all water intended for drinking or use bottled water.

How do I use tap water that may be contaminated?

The quality of tap water is the responsibility of your local water company. Usually, in a flood the water supply and distribution network are unaffected and so it is safe to drink the water. If for any reason it is not safe to drink, the water company will inform you.

If there is evidence or concern that the tap water may be contaminated, boil and cool it before using it to wash food that won't be cooked, such as fruit or salad. It is safe to use unboiled tap water in the preparation of food which is to be cooked. It is also safe to use unboiled tap water for cooking if it will be boiled during the cooking process.

I've been advised to boil my mains water – what do I need to know?

There are three kinds of water notices for different circumstances: Boil tap water before use; Do not drink your tap water; Do not use your tap water.

If you have been advised to boil your water before use, this will be for drinking and food preparation. All water for these purposes should be brought to a boil and then allowed to cool before using. Remember that boiling water can carry a risk of scalding accidents. It is advisable to use a kettle rather than pots and pans. If you must use open containers such as pots and pans, then special care should be taken when young children or vulnerable people are involved. Keep panhandles turned inwards when boiling water in pans so that children cannot reach them.

Water from a bowser should be safe to drink but it requires boiling before use because the containers used to transfer water from bowser to home may not be clean.

Water from the hot tap is not suitable for drinking, whether in flood circumstances or not.

What if my water comes from a private supply?

If your water is a private supply such as a well or spring, then check that it has not been affected by the floodwater. If a private well or spring has been covered by floodwater, if the water changes colour, taste or smell, or you believe the supply has been affected by the flood then ring your local council for advice. Whilst waiting for an answer assume the water is unsafe to drink unless boiled or source an alternative supply.

Continue to boil the water until the supply has been tested and shown to be safe. Boiling water kills pathogenic bacteria, viruses and parasites that may be present in water, but not harmful chemicals.

Bring the water to the boil and then allow it to cool before drinking. Don't store large quantities of boiled water in open containers, such as bins, as they may become contaminated over time.

How do I clean bowls and buckets for water containers which have been in the floodwater?

Use an appropriately diluted bleach solution or sterilising tablets, following manufacturer's instructions, to clean containers. Use water storage tanks and other types of containers with caution. This applies particularly to pans and utensils used in cooking or food preparation.

Ensure the water taps are cleaned with hot water and detergent before using them for the first time after a flood. Allow the taps to run for a few minutes when you start using the mains water again, as this should clear the pipes.

How should I use the bowser and bottled water supplied to replace mains water?

Only bowser water which has been boiled or bottled water should be used for drinking (note below regarding bottle-fed infants), brushing teeth, washing food, cooking and making ice.

If there is no gas or electricity available to householders to boil water bottled water should be used in all circumstances.

How do I flush the toilet with no mains water?

With restrictions in drinking water supply there may be insufficient water for flushing toilets. It is therefore important that all water used for washing, bathing, and from cooking (i.e. water from boiled vegetables) or washing up is saved in buckets to be used for flushing. It is not necessary to flush the toilet after urination. Other sources of water, for example, from garden water butts can also be used for flushing.

What if the toilet can't be flushed at all because of blockage?

The following options may be available to householders whose toilets cannot be used:

It may be possible and practicable to use the facilities of unaffected family, friends, neighbours, public toilets, rest centres, local shops, supermarkets and hotels. Chemical toilets ("portaloos") may be provided in your area.

Portable bag in bag products (e.g. "Brief relief", "wag bag") designed for solid and urine waste may be provided in your area. Once used according to manufacturers' instructions, the waste bag should be placed inside another bag, such as a bin liner, and disposed of in the usual way.

If I don't have mains water how should I bottle feed my baby?

If your drinking water supply is either interrupted or contaminated by the flooding and you need to prepare formula feed for a baby, it is important to be careful with the water you use. Here are some tips from the Food Standards Agency on preparing formula safely.

Ideally use water from a bowser (a water tank provided by water companies), or bottled water, brought to a 'rolling' boil and left covered to cool for no more than half an hour, then follow the

manufacturer's instructions on making up the feed. The use of unboiled bowser water should be avoided.

Use cooled boiled water or bottled water for cooling the feed once it has been made up. Ready-to-feed liquid formula could be used instead.

If there is no electricity or gas to allow boiling and you don't have ready-to-feed liquid formula available, bottled water (table, spring or mineral water) can be used without boiling to prepare baby feeds, but the prepared feed should then be used immediately.

Any bottled water supplied by your water company will comply with all drinking water standards and will be safe to use in preparing baby feed. If you buy your own bottled water, be aware that some natural mineral water may have a high sodium content. Look at the label for sodium or 'Na' and check its level is not higher than 200mg a litre. If it is, then try to use a different water. If no other water is available, then use this water for as short a time as possible. It is important to keep babies hydrated.

How do I bathe my child without mains water?

If the water company has advised that the domestic supply is unsafe for drinking, then it is inadvisable to use this for bathing infants. In this situation, boiled bowser water, or bottled water, are safe alternatives. A safe alternative to bathing is to use baby wipes for hand cleansing and washing infants.

Can I use water for my contact lenses?

Avoid putting contact lenses into water, boiled or otherwise treated.

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