

# fit4life

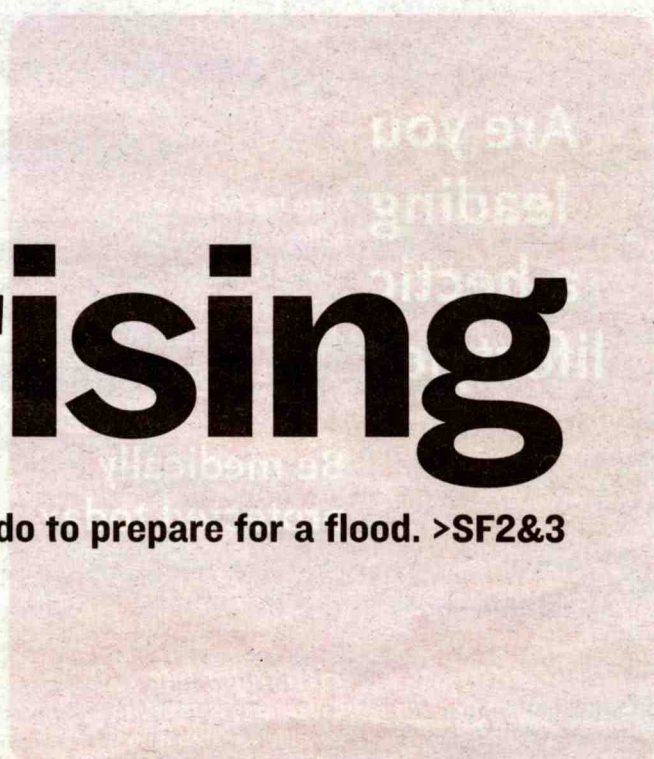
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thestar.com.my/health



Precautions when returning to your home

# Waters rising

What we can do to prepare for a flood. >SF2&3



# In case of flood

In view of the recent floods in some states in Malaysia, here's a look at what the World Health Organization and the US Centers for Disease Control and Prevention have to say on risk assessment and preventive measures when floods occur.

## A general overview

**M**ANY of us in Malaysia have had to deal with floods. It's become almost like a part of life in Malaysia – flash floods in certain areas of the Klang Valley after a heavy downpour, the monsoon months that affect the east coast, and so on.

But the current situation in the southern states of Peninsular Malaysia has taken some of us by surprise. Scenes of submerged cars and houses have undeniably left an impact on many of us. Those affected will feel the impact for quite some time.

Why has this happened, especially in the south? Climate change has been cited as one reason. But there are other factors such as drainage, development density and so on. Ultimately, the lesson to be learnt is that nothing can be taken for granted. It could happen almost anywhere in the country.

The impact on the economy is undeniable. The damage to property and infrastructure, the disruption to daily living, relief efforts to help support those who're affected, these are the tangible effects that we see. But there are other, "intangible" effects, both physical and psychological, and these also need to be addressed.

### Impact on health

In general, there is often an increased risk of infections when a flood occurs. However, this is only significant when water sources are compromised and/or if there is population displacement, ie, people

being moved from their homes to designated flood relief centres.

Of immediate concern is the physical threat to lives from drowning, heart attacks and injuries. The number of deaths associated with flooding is closely related to the life-threatening characteristic of floods (rapidly rising waters, deep flood waters, objects carried by the rapidly flowing water) and the behaviour of victims.

Injuries such as sprains/strains, lacerations, contusions and so on are also likely to occur in the aftermath of a flood disaster as residents return to their homes to clean up damage and debris. Tetanus is not common after injury from flooding, and mass tetanus vaccination programmes are not indicated.

However, 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 is useful in treating wounded people who have not been actively vaccinated and those whose wounds are highly contaminated, as well as those with tetanus.

Then there are the developments in the days or early weeks following the flooding. They include infectious diseases (gastrointestinal diseases, dermatitis, conjunctivitis, leptospirosis and so on) and cases of vector-borne diseases (dengue, malaria). Of concern would also be the possibility of poisoning caused by the rupture of underground

pipelines, dislocation of storage tanks, overflow of toxic waste sites, or release of chemicals stored at ground level.

In the longer term, it is now recognised that some of those affected could develop post-traumatic stress disorder, including anxiety and depression, psychosocial disturbances and suicide. Aside from the trauma caused by the flooding itself, many mental health problems stem from disruption of social networks; loss of property, jobs and family members and friends. They may continue for months or even years after the event itself.

In particular, the effects of flooding can be particularly devastating to already vulnerable populations such as children, the elderly, the disabled, and those with a low income who, because of social, political and economic constraints, experience special health care needs. Consequently, these groups may suffer more from flooding and may need special consideration during the response and recovery periods.

### Public health preventive measures

Early warning of a risk of flooding,



In general, there is often an increased risk of infections when a flood occurs.

and an appropriate response by the population, have been shown to be effective in reducing casualties.

Planning for floods enables communities to respond effectively to possible threats to health. Local and central authorities can organise and effectively coordinate relief activities. This should include initiatives to ensure water quality, food safety, sanitation and hygiene; precautions during clean-up activities; immunisation when appropriate; protective measures against potential vector-borne diseases and chemical hazards; and measures to ensure mental health and well-being, such as stress reduction and counseling for

both the victims and those who respond to the emergency.

Both during and after floods, it is very important to carry out monitoring and surveillance of flood-related diseases, to map potential risks, to estimate the vulnerability of communities, to make an inventory of existing resources, and to implement national/regional coordination mechanisms, so as to ensure an appropriate response to any unforeseen development in the future.

Source: The World Health Organization (WHO) at [www.euro.who.int/document/mediacentre/fs0502e.pdf](http://www.euro.who.int/document/mediacentre/fs0502e.pdf)

## Precautions when returning to your home

ELECTRICAL power and natural gas or propane tanks should be shut off to avoid fire, electrocution, or explosions. Try to return to your home during the daytime so that you do not have to use any lights. Use battery-powered flashlights and lanterns, rather than candles, gas lanterns, or torches.

If you smell gas or suspect a leak, turn off the main gas valve, open all windows, and leave the house immediately. Notify the police or fire departments, and do not turn on the lights or do anything that could cause a spark. Do not return to the house until you are told it is safe to do so.

Your electrical system may also be damaged. If you see frayed wiring or sparks, or if there is an odour of something burning but no visible fire, you should immediately shut off the electrical system at the circuit breaker.

Avoid any downed power lines, particularly those in water. Avoid wading in standing water, which also may contain glass or metal fragments.

All electrical equipment and appliances must be completely dry before returning them to service. It

is advisable to have a certified electrician check these items if there is any question.

### Clean-up

Walls, hard-surfaced floors, and many other household surfaces should be cleaned with soap and water and disinfected with a solution of one cup of bleach to 221 (5 gallons) of water.

Be particularly careful to thoroughly disinfect surfaces that may come in contact with food, such as counter tops, pantry shelves, refrigerators, etc. Areas where small children play should also be carefully cleaned.

Wash all linens and clothing in hot water, or dry clean them. For items that cannot be washed or dry cleaned, such as mattresses and upholstered furniture, air dry them in the sun and then spray them thoroughly with a disinfectant.

Steam clean all carpeting. If there has been a backflow of sewage into the house, wear rubber boots and waterproof gloves during cleanup. Remove and discard contaminated household materials that cannot be disinfect-

ed, such as wall-coverings, cloth and rugs.

### Chemical hazards

Use extreme caution when returning to your area after a flood. Be aware of potential chemical hazards you may encounter during flood recovery.

Flood waters may have buried or moved hazardous chemical containers of solvents or other industrial chemicals from their normal storage places.

If you see any propane tanks, do not attempt to move them yourself. These represent a very real danger of fire or explosion, and if any are found, the police or fire departments should be contacted immediately.

Car batteries, even those in flood water, may still contain an electrical charge and should be removed with extreme caution by using insulated gloves. Avoid coming in contact with any acid that may have spilled from a damaged car battery.

Source: The US Centers for Disease Control and Prevention at (CDC) [www.bt.cdc.gov/disasters/floods/](http://www.bt.cdc.gov/disasters/floods/)

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leading  
a hectic  
lifestyle?

More Malaysians will suffer from "lifestyle" related illnesses such as heart attack, diabetes and cancer in the years to come.\*

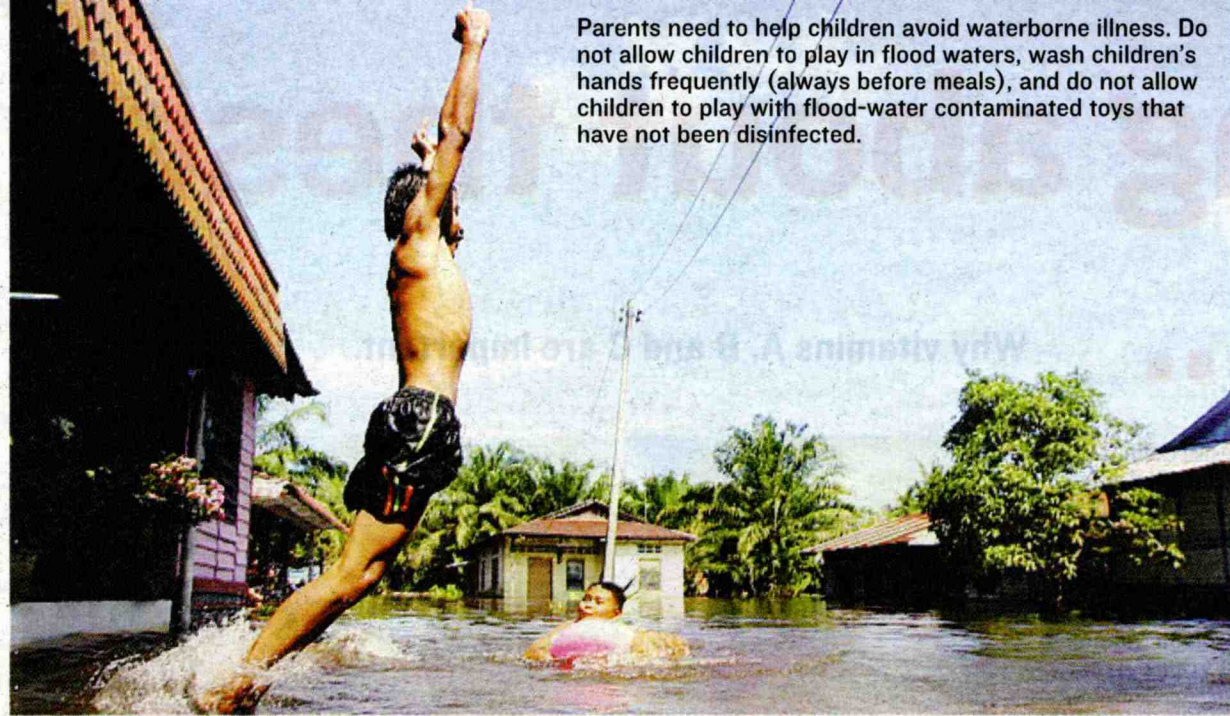
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\* Source: Ministry of Health supplement, The Star 28 July 2006

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Parents need to help children avoid waterborne illness. Do not allow children to play in flood waters, wash children's hands frequently (always before meals), and do not allow children to play with flood-water contaminated toys that have not been disinfected.

# Keep food and water safe

FOOD may not be safe to eat during and after an emergency. Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water.

1. Identify and throw away food that may not be safe to eat.
2. Throw away food that may have come in contact with flood or storm water.
3. Throw away food that has an unusual odour, colour, or texture.
4. Throw away perishable foods (including meat, poultry, fish, eggs and leftovers) that have been above 4°C for two hours or more.
5. Thawed food that contains ice crystals or is 4°C or below can be refrozen or cooked.
6. Throw away canned foods that are bulging, opened, or damaged.
7. Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home canned foods should be discarded if they have come into contact with floodwater because they cannot be disinfected.
8. If cans have come in contact with floodwater or storm water, remove the labels, wash the cans, and dip them in a solution of 1 cup of bleach in 22 litres of water. Relabel the cans with a marker.
9. Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula.

## Water

Water may not be safe to drink, clean with, or bathe in after an emergency such as a hurricane or flood. During and after a disaster, water can become contaminated with microorganisms, such as bacteria, sewage, agricultural or industrial waste, chemicals, and other substances that can cause illness or death. You can do the following to help you make sure that water is safe to use:

1. Listen to and follow public announcements. Local authorities will tell you if tap water is safe to drink or to use for cooking or bathing. If the water is not safe to use, follow local instructions to use bottled water or to boil or disinfect water for cooking, cleaning, or bathing.
2. Use only bottled, boiled, or treated water for drinking, cooking or preparing food, washing dishes, cleaning, brushing your teeth, washing your hands, making ice, and bathing until your water supply is tested and found safe. If your water supply is limited, you can use alcohol-based hand sanitiser for washing your hands.
3. If you use bottled water, be sure it came from a safe source. If you do not know that the water came from a safe source, you should boil or treat it before you use it.
4. Boiling water, when practical, is the preferred way to kill harmful bacteria and parasites. Bringing water to a rolling boil for a minute will kill most organisms. Boiling will not remove chemical contaminants. If you suspect or are informed that water is contaminated with chemicals, seek another source of water, such as bottled water.
5. If you can't boil water, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach (5.25% sodium hypochlorite). If you use chlorine tablets or iodine tablets, follow the directions that come with the tablets. If you use household chlorine bleach, add 1/8 teaspoon (about 0.75ml) of bleach per 4.5 litre of water if the water is clear.
- For cloudy water, add 1/4 teaspoon (about 1.5ml) of bleach per 4.5 litre. Mix the solution thoroughly and let it stand for about 30 minutes before using it. Treating water with chlorine tablets, iodine tablets, or liquid bleach will not kill many parasitic organisms. Boiling is the best way to kill these organisms.
6. Do not rely on water disinfection methods or devices that have not been recommended or approved by local health authorities. Contact your local health department for advice about water treatment products that are being advertised.
7. Use water storage tanks and other types of containers with caution. For example, previously used cans or bottles may be contaminated with microbes or chemicals. Water containers should be thoroughly cleaned, then rinsed with a bleach solution before use.
8. Clean surfaces thoroughly with soap and water, then rinse. For litre-sized containers, add approximately one teaspoon (4.9ml) household bleach (5.25%) with one cup (240ml) water to make a bleach solution. Cover the container and agitate the bleach solution thoroughly, allowing it to contact all inside surfaces. Cover and let stand for 30 minutes, then rinse with potable water.
9. Flooded, private water wells will need to be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department for specific advice.

## Practice basic hygiene

Wash your hands with soap and bottled water or water that has been boiled or disinfected. Wash your hands before preparing food or eating, after toilet use, after participating in clean-up activities, and after handling articles contaminated with floodwater or sewage. Use an alcohol-based hand sanitiser to wash your hands if you have a limited supply of clean water.

Source: The US Centers for Disease Control and Prevention at (CDC) [www.bt.cdc.gov/disasters/floods/](http://www.bt.cdc.gov/disasters/floods/)

# Preparing for a flood

HERE are some basic steps to take to prepare for heavy rains/storms:

1. Contact the local authorities to find out if your home is located in a flash-flood-prone area or landslide-prone area.
2. Learn about your community's emergency plans, warning signals, evacuation routes, and locations of emergency shelters.
3. Plan and practise a flood evacuation route with your family. Ask an out-of-state relative or friend to be the "family contact" in case your family is separated during a flood. Make sure everyone in your family knows the name, address, and phone number of this contact person.
4. Post emergency phone numbers at every phone.
5. Inform local authorities about any special needs, ie, elderly or bedridden people, or anyone with a disability.
6. Identify potential home hazards and know how to secure or protect them before the flood strikes. Be prepared to turn off electrical power when there is standing water, fallen power lines, or before you evacuate. Turn off gas and water supplies before you evacuate. Secure structurally unstable building materials.
7. Buy a fire extinguisher and make sure your family knows where it is and how to use it.
8. Have a licensed electrician raise electric components (switches, sockets, circuit breakers and wiring) at least 12" above your home's projected flood elevation.
9. For drains, toilets, and other sewer connections, install backflow valves or plugs to prevent floodwaters from entering.

## If you are under a flood watch or warning:

1. Gather the emergency supplies you previously stocked in your home and stay tuned to local radio or television station for updates.
2. Turn off all utilities at the main power switch and close the gas valve if evacuation appears necessary.
3. Have your immunisation records handy or be aware of your last tetanus shot, in case you should receive a puncture wound or a wound becomes contaminated during or after the flood.
4. Fill bathtubs, sinks and plastic soda bottles with clean water. Sanitise the sinks and tubs first by using bleach. Rinse and fill with clean water.
5. Bring outdoor possessions, such as lawn furniture, grills and trash cans inside or tie them down securely.

## Emergency supplies you will need

You should stock your home with supplies that may be needed during the emergency period. At a minimum, these supplies should include:

1. Several clean containers for water, large enough for a three to five day supply of water (about 22 litres for each person).
2. A three to five day supply of non-perishable food and a non-electric can opener.
3. A first aid kit and manual and prescription medicines and special medical needs.
4. A battery-powered radio, flashlights, and extra batteries.
5. Sleeping bags or extra blankets.
6. Water-purifying supplies, such as chlorine or iodine tablets or unscented, ordinary household chlorine bleach.
7. Baby food and/or prepared formula, diapers, and other baby supplies.
8. Disposable cleaning cloths, such as "baby wipes" for the whole family to use in case bathing facilities are not available.
9. Personal hygiene supplies, such as soap, toothpaste, sanitary napkins, etc.
10. An emergency kit for your car with food, flares, booster cables, maps, tools, a first aid kit, fire extinguisher, sleeping bags, etc.
11. Rubber boots, sturdy shoes, and waterproof gloves.
12. Insect repellent containing DEET or Picaridin, screens, or long-sleeved and long-legged clothing for protection from mosquitoes which may gather in pooled water remaining after the flood.

## Preparing to evacuate

Expect the need to evacuate and prepare for it. When a flood watch is issued, you should:

1. Fill your vehicle's gas tank and make sure the emergency kit for your car is ready.
2. If no vehicle is available, make arrangements with friends or family for transportation.
3. Fill your clean water containers.
4. Review your emergency plans and supplies, checking to see if any items are missing.
5. Tune in the radio or television for weather updates.
6. Put livestock and family pets in a safe area. Due to food and sanitation requirements, emergency shelters cannot accept animals.

## If you are ordered to evacuate

You should never ignore an evacua-

tion order. Authorities will direct you to leave if you are in a low-lying area, or within the greatest potential path of the rising waters. If a flood warning is issued for your area or you are directed by authorities to evacuate the area:

1. Take only essential items with you.
2. If you have time, turn off the gas, electricity, and water.
3. Disconnect appliances to prevent electrical shock when power is restored.
4. Follow the designated evacuation routes and expect heavy traffic.
5. Do not attempt to drive or walk across flooded roads.

## If you are ordered not to evacuate

To get through the storm in the safest possible manner:

1. Monitor the radio or television for weather updates.
2. Prepare to evacuate to a shelter or to a neighbour's home if your home is damaged, or if you are instructed to do so by emergency personnel.
3. It is critical for you to remember to practise basic hygiene during the emergency period. Always wash your hands with soap and water that has been boiled or disinfected: before preparing or eating food; after toilet use; after participating in flood cleanup activities; and after handling articles contaminated with flood water or sewage.

Flood waters may contain faecal material from overflowing sewage systems, and agricultural and industrial by-products. Although skin contact with flood water does not, by itself, pose a serious health risk, there is some risk of disease from eating or drinking anything contaminated with flood water. If you have any open cuts or sores that will be exposed to flood water, keep them as clean as possible by washing well with soap to control infection. If a wound develops redness, swelling, or drainage, seek immediate medical attention. In addition, parents need to help children avoid waterborne illness. Do not allow children to play in flood water areas, wash children's hands frequently (always before meals), and do not allow children to play with flood-water contaminated toys that have not been disinfected. You can disinfect toys using a solution of one cup of bleach in 22 litres of water.

Source: The US Centers for Disease Control and Prevention at (CDC) [www.bt.cdc.gov/disasters/floods/](http://www.bt.cdc.gov/disasters/floods/)