



SURVIVOR FAMILY

TSUNAMI!

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What Is a Tsunami?

A tsunami is a massive wave or series of waves that can be anywhere from ten to a thousand feet high. Tsunamis hit the coastline with deadly force, causing damage to property, the natural environment, and great loss of life.

Tsunamis don't occur spontaneously. They're triggered by earthquakes, landslides, underwater volcanic activities, meteor impacts and other causes. Most tsunamis are caused by earthquakes and most large-scale earthquakes are followed by dangerous tsunamis, especially if they occur underwater.

Another word for tsunami is tidal wave, which is a misnomer because tsunamis are not related to the moon or its tides. They are also called seismic sea waves, another misnomer because non-seismic activity such as a landslide can also trigger a tsunami.

How Tsunamis Occur

A tsunami is caused by a massive displacement of water. If you fill a bowl with water and drop a rock into the bowl, you'll get a simple demonstration of how a tsunami works. The water is displaced and flows over the edges of the bowl.

The same thing happens when there is an earthquake or other disturbance in the ocean, but instead of the water flowing over the edge of the bowl, it comes crashing to the shore.

Tsunamis are most commonly caused by earthquakes. During an underwater earthquake, a tectonic plate slides under an adjacent plate. The ensuing earthquake causes an uplift of sea water and the result is a tsunami. The displaced water moves toward the coast, getting bigger as it flows along.

In this scenario, tsunamis can go multiple directions at once. Usually the largest wave or series of waves hits the nearest shore, while its other half reaches other shores hours later. This is what happened in the massive Chilean tsunami of 1960. The main wave crashed on the shores of Chile and hours later, smaller but still dangerous waves crashed on the shores of Japan, New Zealand and elsewhere.

A tsunami travels at amazing speed. As it moves across the ocean, its speed and size builds up energy which makes it more powerful when it hits the shore. It's not uncommon for a tsunami to be over 30 feet tall. Waves can be higher than tall buildings and they can smash entire coastal towns.

The World's Deadliest Tsunamis

From the earliest times of recorded history, there have been large-scale tsunamis that wiped out entire cities and left hundreds of thousands dead.

The earliest reported tsunami was a series of deadly waves that left an estimated 100,000 dead on the Greek islands of Crete and Santorini. In 1755, tsunamis swept across coastal Europe and killed around 100,000 people in as far away countries as Morocco, Portugal, Ireland and the United Kingdom.

The biggest tsunami ever recorded was at Lituya Bay on the coast of Alaska in 1958. Now referred to as a 'megatsunami,' it was 1,740 feet at its crest. Only around 30 people died.

In 1960, the 9.5-magnitude Valdivia earthquake sent massive waves to the coasts of Chile, Hawaii, Japan, the Philippines, New Zealand and the Aleutian Islands of Alaska. The death count is unknown but estimates go as high as 6,000 people.

The deadliest tsunami in recorded history was from an earthquake in the Indian Ocean in 2004 that left 350,000 dead or missing in Sumatra, India, Sri Lanka and Thailand.

In 2011, a 9.0 magnitude earthquake off the coast of Tohoku in Northern Japan sent a deadly wave to the mainland. In addition to sweeping away whole towns and killing an estimated 19,000 people, it also set off the second-biggest nuclear meltdown in history. Japanese Prime Minister Naoto Kan called the triple disaster of the earthquake, tsunami and meltdown 'the toughest and most difficult crisis for Japan since World War II.'

Are You Living in a Tsunami Zone?

The part of the world where most tsunamis occur is what's known as the Ring of Fire. This is the coastline that surrounds the Pacific Ocean. It includes the east coast of Australia, New Zealand, coastal Southeastern Asia, all Pacific islands, the Philippines, all of Japan, the east coast of the Asian mainland, Alaska, the west coast of North America, and the west coast of South America. Historically, Chile, Japan and Alaska are particularly prone to tsunamis.

But actually, any shoreline is a potential tsunami zone. Although 90 percent of the world's tsunamis have occurred along the Ring of Fire, a tsunami can strike anywhere. Low coastal areas, steep bays, lagoons, deltas and estuaries are also vulnerable. Tsunamis can travel upstream through rivers and lakes far into the mainland.

There is a misconception that certain coastal areas are safe because of physical barriers. The tsunami that struck Tohoku, Japan, was particularly destructive in part because of the shoreline's somewhat saw-tooth shape. It has been said that there is no tsunami risk in Tokyo because of the shape of the bay.

However, this is wishful thinking. There are plenty of examples throughout recorded history where tsunamis have navigated narrow passages and maintained enough force to wreak havoc. Furthermore, an earthquake could occur within the bay, sending massive waves to all of its shoreline.

A tsunami can strike anywhere and anyone who lives in or near a coastal area should be prepared.

You are in particular danger if:

- Your home, workplace, or school is located near the coast.
- The elevation in an area is at sea level or below.
- The land around the area is flat.
- There are no natural barriers such as sea walls, levees or dunes to break the wave's force or natural barriers have been temporarily removed for a development project.
- Tsunamis have struck your area or there have been tsunami warnings in the past.

If you are anywhere near a shoreline, you need to take tsunami preparedness seriously.

Preparing for a Tsunami

The recent tsunamis in Sumatra and Japan have turned the world's attention to their destructive power. Before these disasters made their appearance on many people's television sets, they were unaware that ocean waves could cause such a death toll. Because of these events, people are starting to take more precautions.

Tsunamis can be deadly and destructive, but if you're well-prepared, you will survive.

Survival Supplies and Safety Packs

The first step in preparing for a tsunami is to put together a survival pack. In the event of a tsunami, you will grab this pack as you leave the house. It contains supplies you'll need in case you can't come back immediately.

It's best to have two packs – a small emergency pack for each household member and large family pack with more supplies. If you should have to leave suddenly and don't have time to gather the large pack, everyone can at least get their small personal pack. Tsunamis strike quickly and you may have only minutes to leave home. You may also have to leave suddenly during the night.

Your small pack should include water, non-perishable food, climate appropriate clothing, and a simple first-aid kit. You should have enough food, water, clothes and first-aid supplies to live for a few days in case you have no access to these supplies elsewhere.

Ideas on how much water you should take vary. The official U.S. government recommendation is one gallon per person per day. This includes water not only for drinking, but also for basic hygiene.

Since your small kit needs to be light and easy to grab in a hurry, pack [Potable Aqua Water Treatment Tablets](#) or drops. These are packaged in a small container and easily packed in your emergency packs. If you place one bottle in each bag in case a bag is lost or unavailable.

The best non-perishable foods to pack are food bars such as granola bars, nuts and whole grains. These provide the most energy, protein and fat in the smallest package possible. For your small pack, avoid anything that requires preparation because you won't have cooking supplies.

In addition to water, food, clothing, and a more sophisticated first-aid kit, large packs should include:

- Bedding. Wool and fleece are the best materials. However, they are bulky. You can purchase lightweight emergency blankets. Some are orange colored. [Orange emergency bedding](#) is good because it's easy for rescuers to see. You may also want a foil type emergency [Mylar blankets](#) which can serve dual purpose as a ground cloth or blanket.
- Hygiene items such as toothbrushes, toilet paper, baby wipes, and [disposable earloop face masks](#) are easily packed. Pack what you need to be comfortable but don't overdo it or you'll add unnecessary weight.
- Tools. The most essential tools are flashlights, batteries, a whistle, and a small pocket knife. You can pack more but again, don't add too much weight to your packs. In order to purify water, you'll need a quart-size container with a lid.

- Documents. Make copies of your driver's license, birth certificate or similar identification documents. Don't pack up the file cabinet, but do keep some type of identifying documents to tie you to your address and identity. The same for your kids which means their birth certificate. Place these in a plastic "zipper" style bag. Some people use a plastic container with a screw style lid. This waterproof bag is large enough to pack important documents and a mobile phone.
- Money. Consider packing some amount of paper money. Don't pack so much that you'll dread losing it if you can't get to your emergency bag and don't be quick to offer it once the initial stages of the disaster pass.

The best case scenario is that you will leave the tsunami damaged area and get settled in a community shelter quickly, but you should have everything you need in case you need to make it on your own for a few days.

All packs should be kept in obvious, easy-to-access places. Everyone in your household should know exactly where they are.

Escape Routes and Evacuation Plans

You should have an escape plan for your home, your workplace, your school, and anywhere else where you spend a great deal of time. The plan should include an easy escape route from the building and an easily accessible route once outside to higher ground.

Your escape plan should not rely on cars or other types of transportation. Motorized transportation that relies on roads greatly limits your mobility. Instead, your route should be planned **completely on foot.**

In addition to the easiest and most ideal route, plan multiple alternate routes in case an earthquake or floodwaters have damaged infrastructure. You should have alternate routes both inside buildings and outside.

As part of your plan, decide beforehand on a meeting place somewhere on higher ground. In case you become separated and are unable to use cellphones, you'll know that everyone is safe.

If you live near a coastline and have children, teach them everything possible about tsunamis and survival after a tsunami. After the deadly tsunami in Phuket, 10-year-old Tilly Smith led her family to safety because of what she had learned about tsunamis in science class. (read more:

http://news.nationalgeographic.com/news/2005/01/0118_050118_tsunami_geography_lesson.html).

Community Escape and Evacuation Plans

Investigate the community plans in your area. Most coastal areas have community escape plans already laid out. They also have evacuation shelters where evacuees can stay and seek the help they need.

If there isn't a community plan in your area, get together with your neighbors and local government and make one. A community plan includes escape routes, evacuation shelters, a system for counting heads and accounting for all community members, a schedule for tsunami drills, securing of emergency supplies and other preparations.

The community plan should also include a post-tsunami survival plan that involves securing safe water, food, and health care; dealing with infrastructure damage; and a rescue plan in case rescue workers are unable to arrive in a timely manner.

It helps a great deal if you know the topography of your area well. You'll know how to get to the highest places and if one route is obstructed, you'll immediately know an alternate route. If you're not familiar with the topography of the area, go on walks and familiarize yourself with it.

Also know the location of your local Salvation Army, churches and other places that offer relief in the event of a tsunami. Keep these important numbers and addresses somewhere in your survival pack. If you're unable to return home after the waves hit, you can seek help in these places.

Conducting Tsunami Drills

Tsunami drills are evacuation practice exercises that imitate a real tsunami event. They are important because when tsunamis hit, they are fast and unpredictable. If you've run through the routine regularly, it's much easier to get out of the house and to higher ground quickly and easily. Conducting drills builds confidence and helps you improve your escape plan.

Schedule your drills and start them with an alarm, a siren, the ringing of church bells, or some other indication that the tsunami has hit. As soon as the signal is sounded, everyone should grab their safety pack and get out of the house. They should move to higher ground and meet at the established point.

You should create and carry out drills for your household and anywhere else you spend time such as school or work. It's good to have community drills as well as household drills. Set up this system when you create your community plan. Many local governments have started carrying out drills because of recent tsunami news coverage.

An important part of carrying out drills is evaluating them. How effectively was everyone able to get out and get to higher ground? When conducting drills, you'll often find gaps in your escape plan; for example, how to move pets or obstructions for disabled people. Make improvements as necessary.

Timing is an important part of conducting drills. Since tsunamis move quickly, you need to get to higher ground as fast as possible. Time your drills and try to beat your previous time.

Tsunami drills should be ongoing and conducted on a regular basis. Set up a drill schedule for your home and community.

Local Information and Early Warning Systems

Most coastal areas have sensors that alert authorities immediately when a tsunami is building up in the ocean. Warnings are then issued on television, radio and the internet.

Familiarize yourself with local warnings systems. Know how authorities will issue warnings and what you are to do when they are issued. There may be tsunami warnings systems at community, city, county, or state levels.

During times when a tsunami is likely, such as immediately following an earthquake, turn on your television and look for warnings. In countries such as Japan where earthquakes and tsunamis are common, an announcement is made on TV whether or not there is a tsunami danger. If a tsunami is coming, its arrival time can be predicted, which lets you know how much time you have to gather survival packs and head to higher ground.

There are a number of software programs and apps that alert you in real time. If you have a mobile device, get a tsunami app. Local news agencies offer tsunami and earthquake warning Twitter accounts. An earthquake warning system alone will help by letting you know when there is an increased tsunami risk.

Whenever warnings are issued, heed them. Always err on the side of safety. If you hear the warning and act immediately, you have plenty of time to get to safety before the waves hit.

Natural Warning Signs

In case you're away from the television or computer, or you're in a location that doesn't have a good early warning system, there are natural warnings that can alert you to move to higher ground.

Natural warning signs include:

- Earthquakes or shaking underfoot
- A dramatic rise or fall in the water level
- Ocean water suddenly receding (which means it's building up to a big wave)
- A loud roaring sound
- Strange animal behavior such as animals moving away from the coast or grouping together defensively.

Videos from the tsunamis that followed the Sumatra earthquake show the ocean receding dramatically right before the big wave hit. If you see something such as this, don't go to see what's happening. When this happens, you have only minutes before the wave hits, so run in the opposite direction.

Tsunami Risks When Traveling

The death toll from the Sumatra earthquake's tsunami was particularly high among tourists on the beaches of Thailand and other Southeast Asian countries. It's likely that few had included tsunami preparedness in their travel plans.

First of all, understand that if you're traveling to a country on the Ring of Fire and staying near the beach, there is significant risk of a tsunami occurring if there is an earthquake. However, anywhere near the coast is potentially dangerous. If you're staying at a hotel or resort that's right on the beach, you should be especially prepared.

Bring a small safety pack as part of your luggage. Keep it near your bed in the same way that you would do at home in case you have to evacuate at night.

Find out about warning systems, escape routes, and shelters wherever you are staying. Ask your travel agent or hotel staff. Find out how tsunamis are handled by authority and know community evacuation plans and whatever other information you can get. This information may be available at the country's consulate website.

There have been many cases of official warning systems failing in the past, even in developed countries. This is one of the reasons for the high death toll from the Sumatra quake. Don't rely solely on official warnings but take heed of natural signs as well.

A great deal of local tsunami information is available online. Check travel forums and review sites such as Trip Advisor. Other users may have asked about local information and in the replies you may find resources. If no one has asked, sign up and do so.

If you have a laptop or portable device, bookmark websites or sign up for warning services. Two good websites with real-time information are the West Coast and Alaska Tsunami Warning Center (<http://wcatwc.arh.noaa.gov/>) and the Pacific Tsunami Warning Center (<http://ptwc.weather.gov/>).

Surviving a Tsunami

Following an earthquake or other trigger, the deadly wave of a tsunami can come very quickly. You may have mere minutes to get away. Grab your safety pack and go. Leave all of your possessions and don't stop for any reason. If you are stuck inside the house and swept out to sea, there is little chance of survival.

Move to Higher Ground

Once outside the house, move to the nearest high ground. Tsunamis run at incredible speed. Don't make the mistake of heading inland to land that's at low altitude. Following the 1960 tsunami in Chile, there were some villages miles inland that were under 13 feet of water. Always head for the highest place possible.

Run and help others you encounter along the way. As you move, tell everyone else you encounter. Only a few meters inland, people may be unaware that the wave is coming. Simply yell, 'Tsunami! Move to higher ground!'

In a Boat

If you're in a boat and a tsunami is coming, move out to sea. The further you are from the coastline, the safer you will be. The waves may lift your boat and toss it about, but once it has passed, you're free from danger. If you're close to the coastline, the wave may smash you against it and pull you further out to sea as it recedes.

Escape by Car or Foot – Which is Wiser?

Driving is extremely risky in a tsunami. You can move more quickly than on foot, but if the water covers the road or your vehicle is submerged, you'll be unable to escape. The water pressure makes it

impossible to open car doors. The only way to exit is by breaking a window. Unless you prepared for this moment and stowed a [window breaking](#) tool in the car, it is likely you won't escape by pounding on the windows.

There may also be damage to the road and other infrastructure if the tsunami follows a large-scale earthquake. If fleeing from your home, don't try to drive. If you're in a car when the warning is issued, look for a place to stop and run to higher ground.

In a Building

If you find yourself trapped inside a building after the tsunami hits, go to the roof. This should be a last resort; if you can escape out of the building and run to higher ground before the waves hit, you have more mobility. At the top of the building, you'll be safe from the water but also trapped. Rescuers may not be able to reach you promptly.

In a Tree

As an absolute last resort if waves are coming at you and there is no higher ground to run to, climb the nearest tree. This is far from ideal because the waves may still reach you, and also because it may be hours or even days before rescuers can come.

The Last Resort

If there is no way to escape and no tree to climb, as a truly last resort, grab ahold of something buoyant. If you survive the impact and are swept into the water with something buoyant, you still have a chance of floating and surviving.

Swimming in a Tsunami

Even after the waves have broken and things seem calm, it is not safe to swim in the tsunami's water. There can still be a violent undercurrent and there will be floating debris. It's always best to wait to be rescued than to attempt to swim to safety. Settle your mind on waiting for rescue. If you leave a safe zone by swimming, your survival chances are very slim.

The Wave Train - More Tsunami Dangers

After the waves hit, the water may continue to race inland for hours – another reason to stay put in a safe area. You can see this in many of the videos of the 2011 Tohoku disaster.

One of the main dangers after a tsunami is that more waves might be coming. There are often more waves and sometimes they're bigger than the initial one. This series of waves is called a 'wave train' and can last for hours or even days. After the first wave hits, don't be lulled into a false sense of security. Always expect more waves.

During a tsunami, inland bodies of water are also not safe. Tsunamis can travel up rivers and lakes, causing damage on their shorelines as well. Their waves have been known to hit bays, lagoons, deltas, estuaries and other bodies of water near coastal areas. A tsunami can set off flash floods and mudslides miles inland.

After the Waves

Tsunami survival continues long after the waves have died down. There will be debris, destroyed buildings, damaged infrastructure, disruptions in the water and food supply, diseases and the stresses of surviving.

The First 24 Hours

After you've moved to safety, there are two things that need to be done immediately. The first is to check to make sure everyone is okay. If anyone needs medical attention, take care of it before you do anything else. Tsunamis don't usually cause a great deal of injury, but there could be injuries from the escape or debris thrown around by the waves.

Once everyone is okay, try to establish communications. With a TV, radio, mobile phone or whatever other device possible, tune in to local information and stay tuned in. You'll hear the latest developments and any important announcements, such as where emergency food, water, or healthcare is available for survivors.

You should also try to establish contact with other survivors. Try to account for everyone in your community or neighborhood. When rescue workers arrive, they'll want to know if anyone is missing. At this point, don't try to go back and rescue people yourself. The area may still be too risky.

Water

You can only live a few days without water so it's important to secure a water supply. If potable (water that is safe to drink) isn't available, then it's time to break out the water purification pills or drops. In fact, water sources which appear to be safe, such as inside buildings or from outdoor faucets are probably contaminated. Instead of

consuming untreated water, break out the water purification pills or drops you packed in your emergency bag.

If you've packed water in your survival pack, don't try to ration it. Drink whenever you need it. You can minimize your water needs by staying cool and being as inactive as possible.

If you don't have water, DO NOT consume floodwater. It's not potable and may contain toxic chemicals, debris and other contaminants.

Food

Start by eating those foods that are most perishable. Canned foods and other packaged goods can be saved until later. Eat enough so that you're not hungry and like water, don't try to ration. Food is a great relieve during disasters and when you're stressed, you need the calories.

Shelter

Once everyone is safe and accounted for, start moving to the nearest community evacuation shelter. In addition to designated community shelters, there may be other organizations such as the Red Cross that have shelters. If you're in the United States, you can also contact the Federal Emergency Management Agency (FEMA) for housing assistance at 800-462-9029 (TTY: 800-462-7585).

Things to Avoid

Electrical Lines. If electrical lines have been brought down by the tsunami, they present a serious hazard, especially if they come into contact with water. Assume that all wires on the ground are dangerous and avoid them.

Gas Leaks. Gas lines can be ruptured by the waves or by the earthquake or other trigger that set off the tsunami. Avoid using flammables (use flashlights rather than matches) and move away from the area if you smell gas.

Floodwater. Stay out of floodwater. Even if it looks shallow and easy to cross, stay on land. Just a few feet of water can have a serious undercurrent and this is especially common in the case of a tsunami.

Damaged Infrastructure. Watch out for buildings, houses, bridges, sidewalks and other parts of infrastructure that may be damaged or that could collapse.

Dangerous Animals. Be careful around debris that may be providing shelter for poisonous animals such as snakes.

Dangerous People. Unfortunately, natural disasters bring out the fraudsters and con artists. Don't accept help from people you don't know. Listen to your gut. If you see people looting, it's best not to get involved. Notify the police instead.

Bodies. Along with the debris scattered by the ocean waves, there are likely to be bodies. Stay away from bodies and don't try to move them. If you have children, try to steer them away from areas with bodies so they don't see them.

Going Home

In the best case scenario, you and your family will escape to higher ground along established routes and take refuge in an evacuation shelter. Once the tsunami area has been declared safe, you'll be allowed to return home and pick up the pieces.

If this is the case, wait until the authorities have told you it's alright to go home. Don't take chances. There may be more waves or dangers related to damaged infrastructure such as ruptured power lines. Local officials have a system for monitoring and determining whether it is safe or not to return home, so listen to them and heed their instructions.

When it's time to go home, be prepared for what awaits. Tsunamis can have such destructive force that they smash buildings to pieces. Your home and possessions may be gone or damaged beyond repair.

When you return home, inspect the outside of your house or building first for structural damage. Tsunamis can do a great deal of damage to homes, so look for any signs of damage that could pose potential dangers once inside such as roof damage or broken windows.

One of the biggest dangers after a tsunami is mold. Sometimes mold is visible but other times it isn't. When mold reaches a dangerous level, you'll suffer an allergic reaction to it that may include sneezing or other cold-like symptoms. If you're aware of the presence of mold in your home, don't stay there. Spend short amounts of time inside and stay in a shelter or with a friend until you can get it remediated. Keep children, elderly people and those with respiratory problems out of the house entirely because they are at much higher risk.

Recall you packed earloop masks. Now is a good time to start wearing them. There is going to be a lot of airborne contaminant everywhere. The masks help minimize what you inhale directly, but they also act as a reminder to keep your fingers out of your mouth.

If you're able to get into your home, the first thing to try to recover is your important documents. This includes your driver's license, birth certificate, bank books, insurance policies, and other important paperwork. Most of this documentation is kept on file electronically with local government or your bank if you're unable to find it.

The second best scenario is that although you won't be able to return home, you can live long-term in an evacuation shelter. Shelters provide food, water, healthcare, clothing and the other basics you need to survive. It's not an ideal situation and it has its own stresses and problems, but it's somewhere to take shelter as you pick up the pieces and move on. There are government assistance programs to help you find housing.

Post-Disaster Insurance Claims

At some point, you'll have to make a claim with your insurance company. Take note of any damage to your home or possessions that you find. If possible, take pictures. Document it as well as possible and show it to your insurance adjuster. You should also keep receipts for any expenses after the tsunami because they can be used as losses when you claim your taxes. Try to recall all of the possessions that are missing. Draw a floor plan to help you remember and document everything.

If there have been any injuries related to the disaster, include these in your claim. Document injuries as well as possible.

If you don't have insurance, there are several sources of help. One is the Red Cross, which provides repairs and living expenses to those who need them. The Small Business Administration offers loans for rebuilding homes and businesses after a disaster. If you qualify as a low-income individual, you can receive free legal counseling from your local chapter of the American Bar Association.

Coping Emotionally in the Tsunami Aftermath

Whether you have to live in a shelter for months or years to come, or you can go home and resume life fairly normally, a tsunami will have a psychological impact on you and your family. Sudden natural disasters such as this can cause long-ranging emotional problems such as Post Traumatic Stress Syndrome and anxiety.

You and your family members may experience shock, despair, helplessness, fear, worry and confusion following a tsunami disaster. This is perfectly natural and it's good to talk about how you feel. Everyone is going through the same thing and it's therapeutic to relate to each other by talking about it.

One feeling many feel after a disaster is survivors' guilt. You may feel that you didn't do all you could to save others. Many people blame themselves for the deaths of others even when they did all they could. Provide support for those who feel this way and reassure them that they did everything within their power.

One way to reduce the damage caused by a tsunami is to maintain your pre-tsunami routine as well as possible. Maintain the same family rules you observed before the disaster and to the best of your ability, maintain family chores. This gives everyone in your family the feeling that things are returning to normal.

In your family pack, it's a good idea to pack a few distractions. It's usually recommended that you pack a few toys, games, and snacks to help ease the psychological pain caused by the disaster for kids, but adults need these comforts as well. Pack a few distractions but not enough to make your pack overly burdensome or to the exclusion of things you really need.

For those who experienced the most danger or loss of life, posttraumatic stress disorder is a potential risk. The symptoms of PTSD include re-experiencing the trauma, sleep disturbances, avoidance of things that trigger memories, and emotional numbness. Symptoms may not appear until long after the traumatic event. If you or someone near you shows these symptoms, seek the help of a therapist as soon as possible.

Tsunamis and Kids

In children, these emotional problems are particularly acute. Younger children may express their anxiety through behaviors like clinging, bed-wetting, regressing, thumb sucking and loss of appetite. Older children may act out or obsess over the disaster. Children are more likely to experience long-term psychological effects and PTSD can lead to other emotional problems.

For kids, the level of trauma is related directly to the perceived threat of loss of life. You can counter this by reminding your child that the waves are all gone and now you're safe. You're okay because you could get away. As long as you're prepared, you're alright.

If emotional disturbances are severe, seek therapy as soon as possible. For kids, methods like art therapy work very well for coping with disasters. They can also deal with the disaster through play with human figures, animals, sand and so on.

For both kids and adults, it may be a good idea to avoid media coverage of the tsunami. Keep listening to local authorities through radio or TV, but try to avoid graphic images and videos of the waves hitting. This can be especially harmful for kids, who often absorb visual information without fully processing it.

In general, focus on the positive. You're alive, you're rebuilding your life, and the worst of it is over.

Take comfort in the fact that while these psychological effects are common in the short-term, very few disaster survivors develop long-term psychological problems. Getting back to normal live will take time and there will be reminders. Reach out to friends, family members, and community members to offer and receive support. The most important part of recovery is to realize that you're not alone.

Moving on

In the spring of 2011 following the Great Tohoku Earthquake, stories of widespread death and destruction caused by massive ocean waves were everywhere in the news media. The search for the missing carried on for months and most were assumed to be dead. Horrifying videos appeared on YouTube.com and news stories continue today that tell us how the people of Tohoku are struggling.

But there were other stories that didn't gain such media attention. After the tsunami, an outpouring of support flooded into Japan and the region began to rebuild. People put their communities back together and moved on. Stories of people selflessly helping each other in these difficult times didn't get as much news coverage, but these were the real stories of the tsunami and its aftermath that people live with today.

If you live near the coast, tsunamis are a persistent threat. But if you're prepared to escape and survive the tsunami, you and your family will be safe. Hopefully this guide has given you what you need to get started preparing to survive the tsunami.