CEMEC HANDBOOK SERIES 2



European Centre for Disaster Medicine





European Centre for Disaster Medicine

Safety and Emergency Guidelines for Active Bystanders in Natural, Technological, and Intentional Incidents

Safety in Emergencies Your security, the priority!

by Roberto Mugavero

INTRODUCTION	6
UNDERSTANDING NATURAL, TECHNOLOGICAL, AND INTENTIONAL INCIDENTS	. 7
Overview	. 7
Situational Awareness	. 7
Preparedness	. 7
GENERAL SAFETY RULES FOR ACTIVE BYSTANDERS	. 8
Remain Calm and Assess the Situation	. 8
Avoid Unnecessary Risks	. 8
Call for Help	. 8
Assist Others When Safe	. 8
Communication	. 8
RECOGNIZING AND RESPONDING TO NATURAL DISASTERS	9
Earthquakes	9
Floods	9
Hurricanes and Tropical Storms	9
Tornadoes	10
Wildfires	10
Tsunamis	10
Landslides and Mudslides	11
Volcanic Eruptions	11
RECOGNIZING AND RESPONDING TO TECHNOLOGICAL DISASTERS	12
Chemical Spills	12
Radiation Leaks	12
Industrial Accidents	12
Transportation Accidents	13
RECOGNIZING AND RESPONDING TO INTENTIONAL INCIDENTS (TERRORIST ATTACKS)	14
Bombings	14
Active Shooter Situations	14
Chemical, Biological, Radiological, and Nuclear (CBRN) Threats	14
BASIC FIRST AID FOR BYSTANDERS	15
Haemorrhage Control	15

INDEX

Airway Management
Breathing and CPR 15
Burns
Fractures and Sprains 15
Shock 16
Dealing with Specific Injuries 16
EVACUATION PROCEDURES 17
General Evacuation Steps 17
Evacuation for Specific Scenarios 17
What to Take with You 17
After Evacuation
EMERGENCY CONTACT
EMERGENCY CONTACT
EMERGENCY CONTACT
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR20Key Points20Practice Regularly20
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR20Key Points20Practice Regularly20Psychological Preparedness20
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR20Key Points20Practice Regularly20Psychological Preparedness20Long-Term Preparedness20
EMERGENCY CONTACT19RECAP - SAFE BEHAVIOR20Key Points20Practice Regularly20Psychological Preparedness20Long-Term Preparedness20CONCLUSION21
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR20Key Points20Practice Regularly20Psychological Preparedness20Long-Term Preparedness20CONCLUSION21GLOSSARY22
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR.20Key Points20Practice Regularly20Psychological Preparedness20Long-Term Preparedness20CONCLUSION.21GLOSSARY.22BIBLIOGRAPHY25
EMERGENCY CONTACT19RECAP – SAFE BEHAVIOR.20Key Points20Practice Regularly20Psychological Preparedness20Long-Term Preparedness20CONCLUSION.21GLOSSARY22BIBLIOGRAPHY25AUTHOR26

INTRODUCTION

In an era where natural disasters, technological failures, and intentional acts of violence are increasingly frequent, the safety and well-being of individuals caught in such incidents are key concerns. This handbook provides active bystanders with the knowledge and practical skills needed to address these unpredictable and often threatening situations.

From understanding the dynamics of earthquakes and floods to recognizing the dangers posed by chemical spills and terrorist attacks, this Handbook, produced by the European Centre for Disaster Medicine (CEMEC), provides detailed procedures, risk mitigation strategies, and emergency response guidelines that are vital for ensuring personal safety and aiding others in times of crisis. Whether you find yourself in the aftermath of a natural disaster, during a technological failure, or facing the threat of intentional harm, this guide serves as an indispensable tool designed to empower you with the confidence and competence to act swiftly and effectively.

Through this manual, you will gain insight into situational awareness, learn essential first aid techniques, and understand the steps to take during evacuation procedures. Our aim is not only to prepare you to survive these incidents but to help you become a valuable resource in your community's collective response, ultimately contributing to the safety and recovery of those around you.

UNDERSTANDING NATURAL, TECHNOLOGICAL, AND INTENTIONAL INCIDENTS

Overview

Emergencies can vary widely in scope and impact, ranging from natural disasters like earthquakes and floods to technological failures and intentional acts of terrorism. Understanding these different types of incidents is crucial for effective preparation and response.

- **Natural Incidents**: Natural disasters are events caused by natural forces that can have devastating effects on communities. These include earthquakes, floods, hurricanes, tornadoes, wildfires, tsunamis, landslides, mudslides, and volcanic eruptions. Each type of disaster presents unique challenges and requires specific responses.
- **Technological Incidents**: Technological disasters result from human activities, often involving hazardous materials or infrastructure failures. Examples include chemical spills, radiation leaks, industrial accidents, and transportation accidents. These incidents can cause widespread harm and require specialized responses to contain and mitigate their effects.
- Intentional Incidents: These involve deliberate actions intended to cause harm, such as terrorist attacks, bombings, and shootings. These incidents are particularly dangerous because they are designed to create chaos and fear, often targeting crowded public spaces or critical infrastructure.

Situational Awareness

Situational awareness is the cornerstone of personal safety in any emergency. By staying aware of your surroundings, recognizing potential hazards, and knowing how to respond, you can make informed decisions that increase your chances of staying safe. Always be aware of the locations of exits, emergency equipment, and safe areas. Stay informed about local risks through news and weather updates and have a plan in place for different types of emergencies.

Preparedness

Preparation is key to effective emergency response. Regularly review emergency plans with your family, colleagues, or community. Make sure everyone knows the safest exits from buildings, where to meet if separated, and how to communicate during a crisis. Stock emergency kits with essential supplies, including water, food, first aid items, flashlights, batteries, and important documents.

GENERAL SAFETY RULES FOR ACTIVE BYSTANDERS

Remain Calm and Assess the Situation

In any emergency, the most important first step is to remain calm. Panic can lead to poor decisions that endanger yourself and others. Take a moment to breathe deeply, assess the situation, and determine the best course of action based on the nature of the incident.

Avoid Unnecessary Risks

Your safety is the top priority. Avoid entering dangerous areas, especially if there are visible hazards like fire, smoke, or structural damage. Do not attempt heroic rescues unless you are certain it is safe to do so. Remember, you cannot help others if you become a victim yourself.

Call for Help

Contact emergency services as soon as possible. Provide them with clear and concise information about your location, the nature of the emergency, and the number of people involved. If you are unsure what to do, the dispatcher can provide guidance. In many countries, the universal emergency number is 112 or 911.

Assist Others When Safe

If you are in a safe position and can do so without endangering yourself, help others. Prioritize the elderly, children, and those with disabilities. Use basic first aid techniques to assist those who are injured and stay with them until professional help arrives.

Communication

Keep communication lines open. Use your phone to contact loved ones and update them on your status, but conserve battery life in case of prolonged emergencies. If communication networks are down, have a pre-arranged meeting point or method of checking in with others.

RECOGNIZING AND RESPONDING TO NATURAL DISASTERS

Earthquakes

- <u>*Recognizing:*</u> Earthquakes occur suddenly, causing the ground to shake. They can last from a few seconds to several minutes and may be followed by aftershocks.
- <u>Responding:</u>
 - Indoors: Drop to your hands and knees to prevent being knocked over. Cover your head and neck with your arms and take shelter under sturdy furniture like a table or desk. Hold on until the shaking stops. Stay away from windows, mirrors, and anything that could shatter.
 - Outdoors: Move away from buildings, streetlights, and utility wires, which could fall during the quake. If you're driving, pull over to a safe location and remain inside the vehicle until the shaking stops.
 - After the Shaking Stops: Be prepared for aftershocks, which can be just as dangerous as the initial quake. Check yourself and others for injuries and evacuate damaged buildings carefully. Avoid using elevators, as they may malfunction.

Floods

- <u>Recognizing</u>: Floods can be caused by heavy rain, storms, or rapid snowmelt. Flash floods, which occur within a few minutes or hours of excessive rainfall, are particularly dangerous and can sweep away people, cars, and buildings.
- <u>Responding:</u>
 - *Move to Higher Ground*: If you are in a flood-prone area, move to higher ground immediately. Do not wait for evacuation orders if flooding seems imminent.
 - Avoid Floodwaters: Just six inches of moving water can knock you off your feet, and two feet can carry away most vehicles. Never walk or drive through floodwaters, as they may be deeper than they appear and could hide dangers like downed power lines or debris.
 - *Evacuate when Advised:* Follow evacuation orders from local authorities. Leave your home with essential items and your emergency kit and avoid returning until it is declared safe.

Hurricanes and Tropical Storms

- <u>*Recognizing:*</u> Hurricanes and tropical storms are large, powerful storms that bring high winds, heavy rain, and storm surges. They can cause widespread damage over large areas.
- <u>Responding:</u>
 - Before the Storm: Prepare your home by securing loose objects outside, boarding up windows, and reinforcing doors. Stock up on emergency supplies, including food, water, medications, and batteries.
 - During the Storm: Stay indoors, preferably in an interior room away from windows.
 Be aware of the storm's progress and any updates from local authorities. Do not venture outside until you are sure the storm has passed.
 - After the Storm: Avoid flooded areas and downed power lines. Check on neighbours, especially the elderly or those with disabilities. Do not return home until authorities declare it safe.

Tornadoes

- <u>Recognizing</u>: Tornadoes are rapidly rotating columns of air that extend from a thunderstorm to the ground. They can develop quickly with little warning. Signs include a dark, often greenish sky, large hail, and a loud roar resembling a freight train.
- <u>Responding:</u>
 - Indoors: Move to a small, windowless interior room on the lowest level of your home, such as a basement or storm cellar. Crouch down and cover your head and neck with your arms.
 - *Outdoors:* If you cannot get indoors, lie flat in a nearby ditch or low-lying area and cover your head with your hands. Be alerted to flying debris.
 - In a Vehicle: Do not try to outrun a tornado in a vehicle. Instead, seek shelter in a sturdy building or lie flat in a ditch away from your vehicle.

Wildfires

- <u>Recognizing</u>: Wildfires are uncontrolled fires that spread rapidly through forests, grasslands, or other areas with abundant vegetation. Signs include smoke, the smell of burning wood, and visible flames.
- <u>Responding:</u>
 - *Evacuate Immediately:* If authorities issue an evacuation order, leave your home immediately, following designated evacuation routes. Do not delay, as wildfires can spread quickly and unpredictably.
 - *Protect your Home:* If you have time before evacuating, remove flammable materials from around your home, close all windows and doors, and shut off gas supplies.
 - If Trapped: If you are unable to evacuate, stay indoors, away from exterior walls and windows. Close all doors but leave them unlocked to allow emergency personnel to enter if necessary. Cover yourself with a wet cloth to protect against heat and smoke and stay low to the ground where the air is cooler and less smoky.
 - After the Fire Passes: Once the main fire front has passed, continue to stay indoors until it is safe to evacuate or until help arrives. Be aware of potential hazards like falling debris, downed power lines, and hot spots that could reignite the fire.

Tsunamis

- <u>Recognizing</u>: Tsunamis are large, powerful ocean waves caused by underwater earthquakes, volcanic eruptions, or landslides. Warning signs include a noticeable rapid rise or fall in coastal waters and a series of unusual waves that may arrive minutes or hours apart.
- <u>Responding:</u>
 - Move to Higher Ground: As soon as you recognize the signs of a tsunami, move inland or to higher ground immediately. Even if no official warning has been issued, do not wait—evacuate quickly.
 - *Stay Away from the Shore:* Do not return to low-lying areas after the first wave. Tsunamis often consist of multiple waves that can continue for hours.
 - *Listen to Official Warnings:* Follow the guidance of local authorities and do not return to coastal areas until they declare it safe. Monitor emergency broadcasts for updates.

Landslides and Mudslides

- <u>*Recognizing:*</u> Landslides and mudslides involve the movement of rock, earth, or debris down a slope due to gravity. These events can be triggered by heavy rainfall, earthquakes, volcanic activity, or human activity such as construction or mining.
- <u>Responding:</u>
 - *Be Aware of Warning Signs:* Warning signs include cracks appearing on slopes, sudden changes in water flow in streams, unusual noises such as trees cracking or boulders knocking together and tilting of trees or fences.
 - *Evacuate if Necessary:* If you live in a landslide-prone area, be ready to evacuate at a moment's notice. If a landslide is imminent, move quickly to higher ground away from the path of the slide.
 - *During a Landslide:* If you are indoors, move to the highest floor and shelter in a sturdy part of the building. If you are outdoors, move quickly away from the path of the landslide, and seek shelter behind a sturdy object or in a depression in the ground.

Volcanic Eruptions

- <u>Recognizing</u>: Volcanic eruptions are violent events that involve the release of lava, ash, and gases from a volcano. Warning signs may include increased seismic activity, visible ash plumes, the smell of sulphur, and rumbling sounds from the volcano.
- <u>Responding:</u>
 - *Evacuate if Advised:* If local authorities issue an evacuation order, leave the area immediately, following designated evacuation routes. Do not attempt to return until authorities declare it safe.
 - Protect yourself from Ash: If you cannot evacuate, stay indoors and keep all windows and doors closed. Wear a mask or cover your nose and mouth with a damp cloth to avoid inhaling ash. Avoid driving, as ash can clog engines and reduce visibility.
 - Avoid Rivers and Streams: Lava flows can cause flash flooding and mudslides, so stay away from rivers and streams. Be aware of potential lahar flows (volcanic mudflows) that can occur during or after an eruption.

RECOGNIZING AND RESPONDING TO TECHNOLOGICAL DISASTERS

Chemical Spills

• <u>Recognizing</u>: Chemical spills may present with unusual odours, visible leaks of liquids or gases, or the formation of clouds or vapours. Some chemicals are colourless and odourless, making them harder to detect without specialized equipment.

• <u>Responding:</u>

- *Evacuate Immediately:* Move away from the spill area quickly and safely. If you are downwind, move upwind to avoid inhaling toxic fumes.
- *Avoid Contact:* Do not touch or attempt to clean up the spill. Even brief contact with some chemicals can cause serious harm.
- Shelter in Place: If evacuation isn't possible, stay indoors, seal windows and doors, and turn off any ventilation systems that could draw in contaminated air. If you suspect you've been exposed, remove contaminated clothing and rinse your skin thoroughly with water.
- *Report the Spill:* Contact emergency services immediately to report the incident, providing details about the location and any visible signs.

Radiation Leaks

- <u>Recognizing</u>: Radiation leaks are often signalled by warning alarms, notifications from authorities, or unusual behaviours in animals. Radiation is not detectable by human senses without specialized instruments.
- Responding:
 - *Seek Shelter:* Move indoors immediately, preferably into a basement or a central room away from exterior walls, windows, and the roof.
 - Seal the Space: Close and lock all windows and doors and seal any cracks or openings with duct tape or wet towels to prevent contaminated air from entering. Turn off any ventilation systems.
 - *Listen for Instructions:* Follow the instructions of local authorities via radio or other emergency broadcasts, as they will provide information on when it is safe to leave the shelter.
 - Minimize Exposure: Limit your exposure to radiation by staying indoors, avoiding contaminated areas, and not consuming food or water that may have been exposed to radiation.

Industrial Accidents

- <u>Recognizing</u>: Industrial accidents can involve explosions, fires, chemical releases, or other catastrophic failures. Warning signs may include loud noises, visible flames, smoke, or alarms.
- <u>Responding:</u>
 - *Evacuate:* Leave the area immediately, following any evacuation orders from authorities. Move upwind and uphill from the site if possible.
 - Avoid the Site: Do not return to the area until it has been declared safe by officials, as there may be lingering hazards like toxic fumes, unstable structures, or contaminated water.

• Assist Others: If safe, help those who need assistance to evacuate, especially those with mobility issues or injuries. Be cautious of secondary explosions or other dangers.

Transportation Accidents

- <u>Recognizing</u>: Transportation accidents can involve trains, planes, or vehicles carrying hazardous materials. Signs include visible damage to the transportation method, spillage, or unusual sounds and smells.
- <u>Responding:</u>
 - *Move Away from the Accident:* If you are nearby, move a safe distance away from the scene to avoid potential explosions or exposure to hazardous materials.
 - *Do Not Approach:* Avoid approaching the accident scene, as there could be additional dangers such as fire, toxic fumes, or unstable debris.
 - *Report the Incident:* Call emergency services to report the accident, providing as much detail as possible. Follow any instructions given by authorities.

RECOGNIZING AND RESPONDING TO INTENTIONAL INCIDENTS (TERRORIST ATTACKS)

Bombings

- <u>Recognizing</u>: Bombings are typically characterized by explosions, fire, and shrapnel. Suspicious packages, unattended bags, or vehicles left in unusual places could indicate a bomb threat.
- <u>Responding:</u>
 - *Evacuate Immediately:* If you suspect a bomb or after an explosion, leave the area as quickly as possible, avoiding large crowds and moving to a safe location.
 - *Avoid Touching Suspicious Items:* Do not touch or attempt to move any suspicious items. Report them to the authorities immediately.
 - Assist Others: If safe, help the injured by applying basic first aid and moving them to a safer location. Be aware of secondary devices that may be intended to target first responders or crowds.

Active Shooter Situations

- <u>Recognizing</u>: An active shooter situation involves one or more individuals actively engaging in violence using firearms. Warning signs include gunfire, people running or hiding, and visible weapons.
- <u>Responding:</u>
 - Run: If there is an accessible escape route, leave the area immediately. Encourage others to do the same but do not wait for those who hesitate.
 - Hide: If escape is not possible, find a secure place to hide. Lock and barricade doors, turn off lights, and silence your phone. Stay quiet and out of sight.
 - Fight: As a last resort, if your life is in immediate danger, attempt to incapacitate the shooter using any means available, such as heavy objects or teamwork with others. Focus on survival by any means necessary.

Chemical, Biological, Radiological, and Nuclear (CBRN) Threats

- <u>*Recognizing:*</u> CBRN threats involve the use of hazardous materials to cause harm. Signs might include strange smells, liquids, powders, or unusual illnesses in people or animals.
- <u>Responding:</u>
 - *Evacuate or Shelter in Place:* Depending on the nature of the threat, authorities may advise evacuation or sheltering in place. Follow their instructions precisely.
 - *Decontamination:* If exposed, remove contaminated clothing and wash your skin thoroughly with soap and water. Seek medical attention immediately. Avoid touching your face or any open wounds.
 - *Report to Authorities:* Provide detailed information to emergency services to help them assess the situation and respond appropriately. Stay away from the affected area to avoid further contamination.

BASIC FIRST AID FOR BYSTANDERS

Haemorrhage Control

- <u>Direct Pressure</u>: For severe bleeding, immediately apply firm pressure directly on the wound using a clean cloth, bandage, or even your hand if necessary. Maintain pressure until help arrives or the bleeding stops.
- <u>Wound Packing</u>: For deep wounds where direct pressure is insufficient, pack the wound with clean gauze or cloth, then apply pressure. This is particularly important for wounds located on the trunk or neck.

Airway Management

- <u>Clear Airway</u>: Ensure that the injured person's airway is open. If they are unconscious, gently tilt their head back and lift their chin to keep the airway clear. If there are any visible obstructions (such as vomit or debris), carefully clear them with your fingers.
- <u>Recovery Position</u>: If the person is unconscious but breathing, place them in the recovery position on their side to keep the airway open and allow fluids to drain from the mouth. This position also helps prevent choking.

Breathing and CPR

- <u>Assess Breathing</u>: Look, listen, and feel for normal breathing. If the person is not breathing, start rescue breaths if you are trained to do so. Seal your mouth over theirs, pinch their nose shut, and give two breaths while watching the chest rise.
- <u>CPR:</u> If there is no breathing or pulse, immediately begin CPR if trained, and continue until emergency responders arrive or the person starts breathing. If possible, switch with another person to avoid fatigue.

Burns

- <u>Cool the Burn:</u> Immediately cool burns with cool (not cold) running water for at least 10-20 minutes. This helps to stop the burning process and reduce pain. Do not use ice or very cold water, as this can cause further tissue damage.
- <u>Cover the Burn</u>: After cooling, cover the burn with a clean, non-stick cloth or cling film. Avoid using creams, ointments, or butter, as these can trap heat and cause more damage.
- <u>Monitor for Shock</u>: Burns can lead to shock, especially if they are extensive. Keep the person warm and monitor their condition while waiting for emergency services.

Fractures and Sprains

- <u>Immobilize the Limb</u>: If you suspect a fracture, avoid moving the affected limb unnecessarily. Use a splint or sling to immobilize the limb, securing it to reduce pain and prevent further injury.
- <u>Apply Ice</u>: If possible, apply ice wrapped in a cloth to the injured area to reduce swelling and pain. Avoid placing ice directly on the skin, as it can cause frostbite.

• <u>Do Not Realign Bones</u>: Do not attempt to realign broken bones. Focus on stabilizing the limb and minimizing movement until professional medical help is available.

Shock

- <u>Recognize Shock:</u> Signs of shock include pale, cold, and clammy skin, rapid breathing, a weak pulse, dizziness, confusion, and fainting. Shock is a life-threatening condition that requires immediate attention.
- <u>Lay the Person Down</u>: If possible, lay the person down and elevate their legs to help maintain blood flow to vital organs. Keep them warm by covering them with a blanket or clothing.
- <u>Monitor and Reassure</u>: Keep the person calm and continue to monitor their vital signs (breathing, pulse) until help arrives. Do not give them anything to eat or drink, as this could complicate treatment.

Dealing with Specific Injuries

- <u>Head Injuries</u>: If someone has suffered a head injury, monitor them closely for signs of concussion or more serious injuries such as loss of consciousness, vomiting, or changes in behaviour. Keep the head and neck still and avoid unnecessary movement.
- <u>Spinal Injuries</u>: Suspect a spinal injury if the person has suffered a fall, been in a car accident, or complains of neck or back pain. Do not move the person unless they are in immediate danger. Keep them as still as possible and support the head and neck.

EVACUATION PROCEDURES

General Evacuation Steps

- <u>*Plan Ahead:*</u> Know the safest exit routes from your location, whether at home, work, or in public places. Familiarize yourself with emergency exits, stairwells, and evacuation routes.
- <u>During Evacuation</u>: Remain calm and move quickly but cautiously towards the nearest exit. Follow the instructions of emergency personnel and assist others if possible. Avoid using elevators during evacuations, especially in cases of fire or earthquakes, as they may become inoperable.
- <u>Assist Those who Need Help</u>: Help children, the elderly, and those with disabilities to evacuate safely. Be mindful of people who may panic, and offer calm, clear guidance. If someone is injured, try to stabilize them before moving, or signal to rescuers for assistance.

Evacuation for Specific Scenarios

- Natural Disasters:
 - *Earthquakes:* Once the shaking stops, evacuate the building if there are signs of structural damage. Be cautious of aftershocks and debris.
 - <u>Floods</u>: Move to higher ground immediately if you are in a flood-prone area. Avoid crossing bridges over fast-moving water and do not walk or drive through flooded areas.
 - <u>Hurricanes</u>: If you are in the path of a hurricane, evacuate as directed by authorities. Leave early to avoid traffic congestion and ensure you reach safety before conditions worsen.
 - <u>Wildfires:</u> Evacuate immediately when advised, taking the most direct route to safety. If time permits, clear flammable materials from around your home and shut off gas supplies.
- Technological Disasters:
 - <u>Chemical Spills</u>: Evacuate upwind and uphill from the spill site to avoid exposure to harmful vapors. If you are instructed to shelter in place, seal doors, windows, and ventilation systems.
 - <u>Radiation Leaks</u>: Move indoors to a central room or basement and seal the area.
 Avoid consuming food or water that may have been exposed to radiation.
- Intentional Incidents:
 - <u>Bombings:</u> Move away from the blast site quickly, avoiding large crowds. Be aware of potential secondary devices and avoid touching suspicious objects.
 - <u>Active Shooters</u>: Evacuate immediately if safe to do so. If you cannot run, hide in a secure location and silence your phone. As a last resort, be prepared to defend yourself.

What to Take with You

• <u>Emergency Kit</u>: Prepare an emergency kit that includes essentials such as water, nonperishable food, a flashlight, batteries, a first aid kit, medications, important documents, and a whistle. Keep this kit in an easily accessible location.

- <u>Personal Items</u>: Bring your phone, charger, identification, cash, credit cards, and any necessary medical supplies. If time allows, take items of sentimental value, but prioritize essentials.
- <u>Pets:</u> If you have pets, include them in your evacuation plan. Have a carrier or leash ready, and bring food, water, and any medications they may need.

After Evacuation

- <u>Reunification Plan</u>: Have a pre-arranged meeting spot where you and your family or group can reunite after an evacuation. Ensure that everyone knows this location and has a way to get there.
- <u>Stay Informed</u>: Continue to monitor news reports and official updates to determine when it is safe to return or if further action is needed. Stay in touch with local authorities and follow their guidance.
- <u>Post-Evacuation Safety</u>: Once you are in a safe location, check for injuries, and provide first aid as necessary. Be prepared to stay in a shelter or with family/friends until it is safe to return home.

EMERGENCY CONTACT

- <u>Local Emergency Services</u>: Know the emergency numbers for your area, such as 911 in the USA, 112 in Europe, or other local emergency services. Program these numbers into your phone and ensure all family members know how to use them.
- <u>Medical Assistance</u>: Keep contact details for local hospitals, urgent care centres, and your primary healthcare provider. Ensure you know the quickest routes to these facilities from your home, workplace, and other frequently visited locations.
- <u>Utilities:</u> Have contact information for your utility providers (electricity, gas, water) so you can report outages, gas leaks, or other issues. Many utility companies offer emergency notification services that can alert you to problems in your area.

RECAP – SAFE BEHAVIOR

Key Points

- <u>Stay Informed</u>: Regularly monitor news and official alerts to stay updated on potential threats. Subscribe to local emergency alert systems and ensure you have a reliable method of receiving updates, such as a battery-powered radio.
- <u>Be Prepared:</u> Keep an emergency kit ready and practice your emergency plan regularly. Make sure everyone in your household knows what to do in various emergency scenarios.
- <u>Help Others Safely:</u> Your safety is the priority but assist others when you can do so without increasing your own risk. Ensure that you are prepared to provide basic first aid and understand the specific needs of those around you, including children, the elderly, and pets.

Practice Regularly

- <u>Drills and Exercises</u>: Participate in emergency drills at home, work, and school to ensure that everyone knows what to do in the event of a disaster. Practice different scenarios, including evacuations and sheltering in place.
- <u>Review and Update Plans</u>: Regularly review and update your emergency plans to account for any changes in your living situation, health, or local risks. Ensure that your emergency contacts are up-to-date and that everyone knows how to reach each other during a crisis.

Psychological Preparedness

- <u>Mental Resilience</u>: Emergencies can be traumatic, and the psychological impact can be as significant as the physical. Prepare yourself mentally by understanding that it is normal to feel stress, fear, and confusion during a crisis. Focus on actionable steps to maintain control over the situation.
- <u>Stay Focused</u>: In an emergency, keep your mind focused on immediate priorities: safety, survival, and helping others. Break tasks down into manageable steps to avoid feeling overwhelmed.
- <u>Support Networks</u>: Maintain a strong support network of family, friends, and community members. After the immediate danger has passed, talk about your experiences and seek professional help if you find it difficult to cope with the emotional aftermath.

Long-Term Preparedness

- <u>Community Involvement</u>: Engage in community preparedness activities. Join or start a neighbourhood emergency response team or participate in local disaster preparedness workshops. Communities that work together before disasters strike are often more resilient in the aftermath.
- <u>Continual Learning</u>: Emergency preparedness is an ongoing process. Stay informed about new risks and best practices by attending training sessions, reading updated materials, and participating in community drills. Encourage others to do the same.

CONCLUSION

Preparedness is a vital component of safety in the face of natural, technological, and intentional incidents. By understanding the types of threats you may encounter, following the guidelines provided in this handbook, and regularly reviewing and updating your emergency plans, you can significantly increase your chances of staying safe during an emergency.

Remember, the actions you take as a bystander can have a profound impact on the outcome of an emergency, not only for yourself but for those around you. Stay informed, stay prepared, and stay safe.

GLOSSARY

Active Shooter Situations: Incidents where one or more individuals actively engage in killing or attempting to kill people in a confined and populated area.

Aftershock: A smaller earthquake that occurs after the main seismic event. Aftershocks can continue for days, weeks, or even months and can cause additional damage, particularly to structures already weakened by the initial earthquake.

Bystander: An individual who is present at an emergency situation but is not directly involved. Bystanders can play a critical role in providing assistance, calling for help, or performing life-saving measures until professional responders arrive.

Bombings: The use of explosive devices to cause destruction, injury, or death.

Cardiopulmonary Resuscitation (CPR): An emergency life-saving procedure that combines chest compressions with artificial ventilation (rescue breaths). CPR is performed on individuals who are in cardiac arrest, meaning their heart has stopped beating, to help maintain circulation and breathing until professional medical help arrives.

Chemical, Biological, Radiological, and Nuclear (CBRN) Threats: The use of hazardous materials with the intent to harm or terrorize a population.

Chemical Spill: The accidental release of a chemical substance that can pose significant health risks to humans, animals, and the environment. Chemical spills may involve liquids, gases, or solids and require immediate action, such as evacuation or sheltering in place, to prevent exposure.

Decontamination: The process of removing or neutralizing hazardous substances, such as chemicals or radioactive material, from people, objects, or the environment. Decontamination is critical in preventing further contamination and reducing the risk of injury or illness.

Earthquakes: Sudden shaking of the ground caused by the movement of the Earth's tectonic plates. Earthquakes can result in significant structural damage, landslides, and tsunamis.

Emergency Kit: A collection of essential items that you may need during an emergency, including water, food, medications, first aid supplies, flashlights, batteries, and important documents. An emergency kit should be easily accessible and kept in a location known to all household members.

Evacuation Route: A pre-designated pathway that guides individuals to a safe location during an emergency. Evacuation routes are planned to avoid hazards and ensure a quick and orderly exit from dangerous areas.

First Aid: The initial assistance provided to an injured or ill person before professional medical help is available. First aid includes actions such as controlling bleeding, treating burns, performing CPR, and stabilizing fractures.

Flash Flood: A rapid and powerful flood that occurs with little or no warning, often as a result of heavy rainfall. Flash floods are particularly dangerous because they can quickly inundate areas, trapping people in homes, vehicles, or low-lying regions.

Floods: Overflow of water onto normally dry land, often caused by heavy rainfall, storm surges, or dam failures. Floods can submerge homes, roads, and entire communities.

Hazardous Material (HAZMAT): Substances that pose a significant risk to health, safety, or property due to their chemical, physical, or biological properties. Hazardous materials include toxic chemicals, radioactive substances, and biological agents that require special handling and disposal.

Hurricanes and Tropical Storms: Powerful storms characterized by strong winds, heavy rainfall, and storm surges. They can cause widespread damage to infrastructure and pose severe risks to life.

Industrial Accidents: Unplanned incidents in industrial settings that can result in injury, death, environmental damage, or significant economic loss.

Lahar: A destructive mudflow composed of volcanic ash, debris, and water that flows down the slopes of a volcano, typically along river valleys. Lahars can be triggered by volcanic activity or heavy rainfall and can cause severe damage to communities downstream.

Landslide: The downward movement of rock, earth, or debris on a slope, often triggered by natural events like heavy rainfall, earthquakes, or volcanic eruptions. Landslides can destroy buildings, roads, and infrastructure, and pose significant risks to life and property.

Personal Protective Equipment (PPE): Equipment worn to minimize exposure to hazards that can cause serious injuries or illnesses. PPE includes items such as gloves, masks, goggles, and protective clothing designed to shield the wearer from harmful substances or environments.

Pyroclastic Flow: A fast-moving current of hot gas, ash, and volcanic debris that flows down the sides of a volcano during an explosive eruption. Pyroclastic flows are extremely dangerous due to their high speed, temperature, and ability to cover large areas.

Radiation Leak: The release of radioactive materials into the environment, which can occur due to accidents at nuclear facilities, improper handling of radioactive substances, or other incidents. Radiation leaks pose serious health risks, including cancer and radiation sickness, and require immediate containment and protective measures.

Recovery Position: A side-lying position used to maintain an open airway in an unconscious but breathing person. Placing someone in the recovery position helps prevent choking by allowing fluids to drain from the mouth and keeps the airway clear.

Shelter in Place: A safety protocol used during emergencies when it is safer to remain indoors rather than evacuate. This might involve sealing windows, doors, and ventilation systems to protect against external hazards such as chemical spills, airborne toxins, or radiation.

Tornadoes: Violently rotating columns of air that extend from a thunderstorm to the ground. Tornadoes can cause devastating damage over localized areas.

Tsunami: A series of large ocean waves caused by seismic activity, such as underwater earthquakes, volcanic eruptions, or landslides. Tsunamis can travel across entire ocean basins and cause widespread destruction when they reach coastal areas.

Volcanic Eruption: The violent expulsion of magma, ash, and gases from a volcano. Eruptions can vary in intensity, from slow lava flows to explosive blasts that release ash clouds and pyroclastic flows, posing significant dangers to nearby communities.

Wildfire: An uncontrolled fire that spreads rapidly through vegetation, often fuelled by dry conditions, high winds, and flammable plant material. Wildfires can devastate large areas, destroy homes, and threaten lives, requiring prompt evacuation and firefighting efforts.

BIBLIOGRAPHY

CEMEC. (2016). Vademecum: Sapere affrontare le emergenze. European Centre for Disaster Medicine.

Centres for Disease Control and Prevention (CDC). (2019). Emergency Wound Care After a Natural Disaster. Centres for Disease Control and Prevention.

Committee for Tactical Emergency Casualty Care. (2020). Tactical Emergency Casualty Care (TECC) guidelines for active bystanders. TECC.

American Heart Association. (2020). Basic Life Support (BLS) Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC). American Heart Association.

National Health Service (NHS). (2021). First Aid: Dealing with Bleeding, Burns, and Choking. National Health Service.

Federal Emergency Management Agency. (2023). Full suite of hazard information sheets (FEMA P-2143). U.S. Department of Homeland Security.

American Red Cross. (n.d.). How to Perform First Aid for Burns, Bleeding, and Airway Management. American Red Cross. Retrieved from <u>www.redcross.org</u>

AUTHOR

Prof. Roberto Mugavero is the President of the European Centre for Disaster Medicine – CEMEC – a specialized centre of the Council of Europe's EUR-OPA Agreement. With a degree in Environmental Engineering, he is also the Director and a Professor at the CUFS - Centre for Security Studies at the University of San Marino Republic. He holds prominent roles at multiple institutions, including the University of Rome "Tor Vergata," the University of Rome "Sapienza," and the University of Padua in Italy; the NATO School in Oberammergau, Germany; and the NATO JCBRN CoE in Vyskov, Czech Republic. Prof. Mugavero oversees numerous master's and advanced programs, specializing in international security studies, environmental and CBRNe risk management. As a renowned expert in security and defence, he chairs the Italian research institute "Observatory on Security and CBRNe Defence – OSDIFE." Additionally, he significantly impacts global discourse through his lectures, publications, and leadership at various conferences. Beyond academia, Prof. Mugavero brings 40 years of experience as an Officer in the Italian National Fire and Rescue Service at the Ministry of Interior, where he continues to serve as a dedicated volunteer. He also actively engages in EU and international security and defence research programs. His commitment is further demonstrated through direct participation in emergency activities and exercises.

Disclaimer

The information contained in this handbook is intended for general guidance and educational purposes only. While the European Centre for Disaster Medicine (CEMEC) has made every effort to ensure the accuracy and reliability of the content, this handbook is not a substitute for professional training or advice. The procedures, recommendations, and guidelines presented herein are based on current knowledge and practices as of the date of publication. However, the nature of emergencies and disasters is inherently unpredictable, and the effectiveness of the information provided may vary depending on specific circumstances.

CEMEC and the authors of this guide do not assume any liability for actions taken or not taken based on the content of this guide. Readers are encouraged to seek appropriate training, consult with professionals, and follow the instructions of local emergency services and authorities during actual incidents. Always prioritize your safety and the safety of others when responding to emergency situations.

The use of this manual is at your own risk, and CEMEC disclaims all warranties, expressed or implied, including but not limited to any implied warranties of fitness for a particular purpose.

Contacts

CEMEC - European Centre for Disaster Medicine c/o Ospedale di San Marino Via Scialoja 1 – 47893, Cailungo – Republic of San Marino Phone: (+) 378 0549/994535 or 0549/994600 – Fax: (+) 378 0549/903706 E-mail: <u>cemec@iss.sm</u> Web Site: <u>www.cemec-sanmarino.eu</u>

> Published by Aiep Editore, San Marino, ISBN: 9788860862501 October, 2024