PART VII

DISASTER SURVIVAL

073 Escape a Tsunami

With the power to level entire cities and reshape the course of human history, tsunamis are among the most perilous of all natural disasters. Striking with little warning and causing tremendous devastation, the unfathomably powerful and destructive waves start with seismic activity along faults running deep under the seafloor.

Also sometimes caused by volcanic eruptions, the violent, flooding surges travel at speeds of five hundred miles per hour before piling up against the coastline, rising hundreds of feet into the air, and then crashing onto dry ground with the force of several nuclear bombs.

Though smaller tsunamis are frequent in well-known high-risk zones along the coasts of the Pacific and Indian oceans, the American Northwest is said to be overdue for the kind of giant wave that hasn't been documented in the region for more than a thousand years, so preparation is essential.

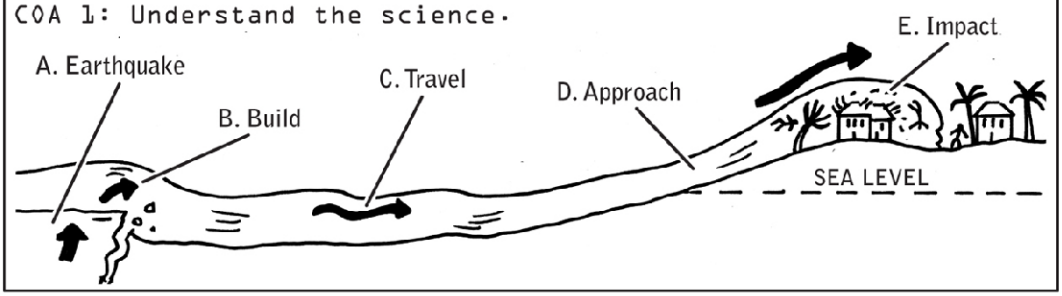
Evacuation routes may be marked in high-risk areas, but don't wait until disaster strikes to acquaint yourself with routes to high ground. If you live near or are visiting a high-risk coastline, plan both foot and vehicle routes to landmasses or solid structures 150 feet above sea level or two miles inland. Don't rely on vegetation to keep you safe. Trees will likely be swept away.

Certain regions are equipped with tsunami warning systems based on detection devices placed along the seafloor. In the absence of a warning, heed nature's clues. Any significant earthquake felt along the coast should be cause for concern, as should a rapid fall or rise in shorelines and unusual behavior seen in animals. The amount of time you will have between the earthquake and a potential tsunami depends on the distance of the fault from the shoreline, but you will often have no more than twenty minutes to get to high ground. Move swiftly, for time is of the essence.

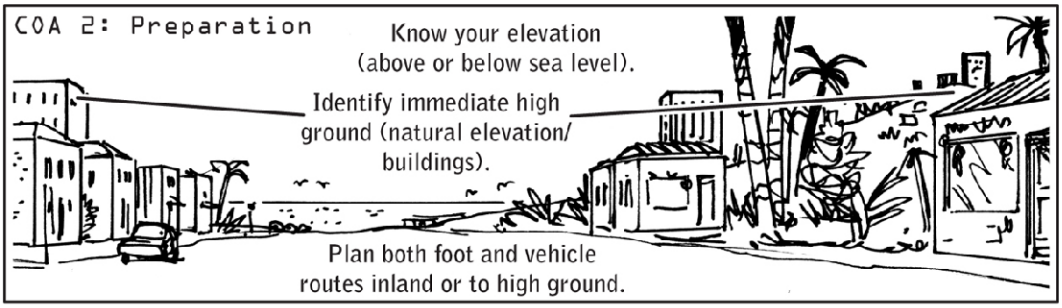
No. 073: Escape a Tsunami

CONOP: Understand the indicators and response to a massive oceanic wave.

COA 1: Understand the science.

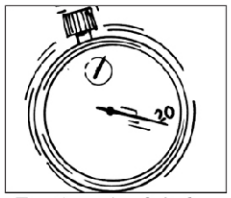


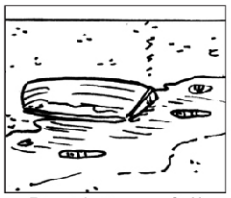
COA 2: Preparation



COA 3: Indicators


Coastal regions


Earthquake felt for twenty seconds or more


Rapid rise or fall in shorelines


Unusual behavior in animals

COA 4: Response


Drop down, find cover, and hold on during earthquake.


Go 2 miles inland, or get 150 feet/45 meters above sea level.


No time or traffic? Get to the closest highest point!

BLUF: Protect yourself from the earthquake first, then find high ground ASAP.

074 Survive an Avalanche

Though occasional incidents involve mass casualties, avalanches claim only some 150 lives per year. But many more non-fatal incidents go unreported. To avoid landing in either category, abstain from skiing, rock climbing, or snowmobile riding on heavily powdered, backcountry slopes that haven't been groomed or detonated in order to purposely precipitate avalanches in advance of human activity. Talk to locals in order to identify known avalanche zones and the general probability of avalanches in the area. Pay attention to the weather—a foot or more of fresh snow can pose a risk factor, as can rain.

If you are caught in the midst of an avalanche while on a steep, barren slope, quickly move to its flanks while you still can. Snow will be funneled down the center of the slope, potentially carrying less momentum and mass on its sidelines. If an avalanche starts below your feet, jump upslope of any crack you might be able to see in the top layer of snow.

If you cannot avoid the oncoming rush, grab onto any solid fixture you can reach (tree, rock formation, telephone pole), or lie down and try to "swim" with the moving snow so that you don't receive the impact at a perpendicular angle.

Being buried in snow isn't dissimilar to being buried in sand. You may not be able to move or breathe once the precipitation comes to a halt, so if you can, create an air pocket by placing your hands in front of your face as you're still moving. Determine which way is up by sensing the direction of the blood flow to your head or lighting a lighter, if movement is available. Punching an air channel from your face up toward the surface of the snow will put you closer to a full breath when a rescue team starts digging.

No. 074: Survive an Avalanche

CONOP: Employ lifesaving tactics to survive an avalanche.

COA 1: Preparation

Know the causes: a foot or more of fresh snow; rain; explosions; earthquakes; foot and vehicle movement.

Talk to locals.

Pay attention to weather.

Always have a buddy.

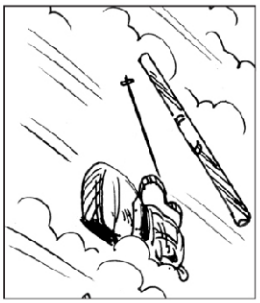
Carry a beacon.

COA 2: Land Burial

1. Avoid center and move to flanks (skiing or snowmobiling).

2. Jump upslope of a visible crack.

3. Grab something (like a tree or rock).



4. Ditch your gear (skis, poles, packs).

5. Swim on top (try to stay on surface of snow waves).

6. Create an air pocket (put your hand in front of face).

7. Determine "up" (blood flow to head, light a lighter).

8. Punch upward (break surface, make dig shorter).

BLUF: Avalanches are frequently caused by skiers, rock climbers, and snowmobilers.

075 Survive an Earthquake

Of the twenty thousand earthquakes that rock the globe each year, about fifteen will be major seismic events. But all too often, even civilians who live in earthquake-prone areas tend to take a blasé attitude toward preparation. Given that some of the safety protocol has changed over the years, a review is in order.

Identify Safe Zones

The outdated notion of rushing for the nearest doorway has been around since the nineteenth century, when the safest spots in California's adobe clay homes *were* the wood-framed doorways. But doorways won't cover you from projectiles, and these days most homes are fully wood-framed.

True safe zones include sturdy pieces of furniture, such as tables and desks, and structurally sound spaces like the inside corners of rooms and interior walls.

Stay away from glass windows or surfaces.

Be Earthquake Proof

Earthquake-proof your home by latching large, heavy pieces of furniture to the foundation of your home.

Secure bracing wire to a ceiling joist to support hanging light fixtures and fans, and use earthquake-proof picture hooks and putty to affix framed art and photographs to your walls.

Large wall-hanging mirrors and televisions should be bracketed to studs and hung on closed hooks.

Prepare to Evacuate

In addition to the more extensive earthquake kit commonly recommended to residents of geologically active zones (tools, a

gallon of water per person per day, and a week's worth of food), a go-bag is a worthwhile precaution.

There's no telling what types of secondary emergencies an earthquake might create—from a collapsed foundation to floods, fires, or violent riots—so it's best to be prepared for sudden egress.

If possible, create several iterations of the go-bag, stashing one in your car, one in the master bedroom, and one in the kitchen or living room.

Stop and Drop

During an earthquake, follow the most widely recommended piece of safety protocol: Stop, drop or cover, and hold on.

Drop to the ground before the earthquake drops you.

Seek cover if possible, holding on to the object you're sheltering under to prevent it from rolling away.

Do not run outside, where toppling trees and power lines can pose grave danger.

If you are in bed, stay there, and cover your face with a pillow to protect yourself from projectiles and glass. If you are in your vehicle, stop once you are clear of underpasses or large trees and remain in your vehicle.

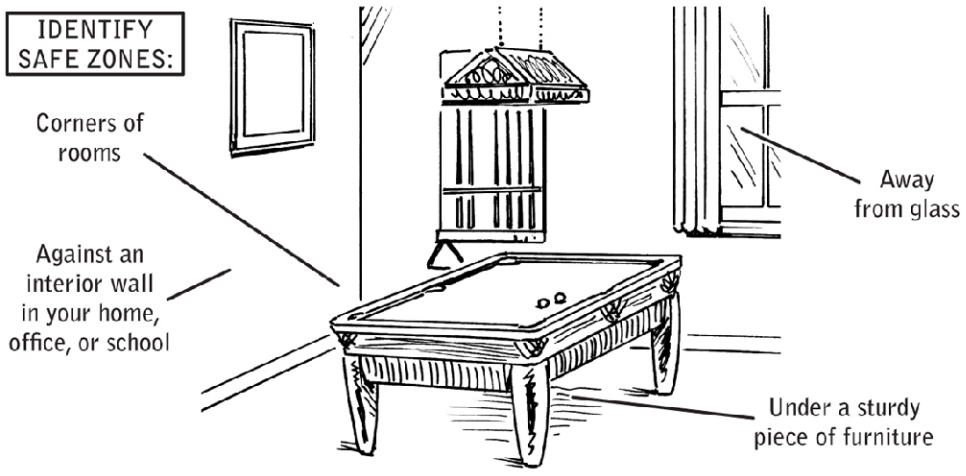
If you are trapped under large pieces of debris, or have fallen down into a basement or subterranean sinkhole, move slowly so as to avoid causing further structural collapse. If your go-bag is nearby, use your whistle to call for help. Tapping on pipes or rebar may produce sounds loud enough for emergency responders to hear.

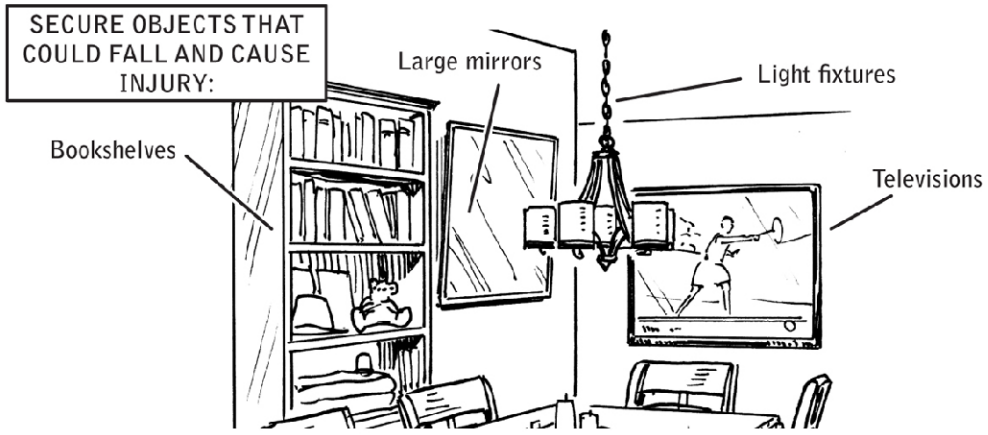
In coastal areas, earthquakes may be a precursor to a tsunami (see page 180), so once the shaking has stopped, get to higher ground as quickly as possible.

No. 075: Survive an Earthquake

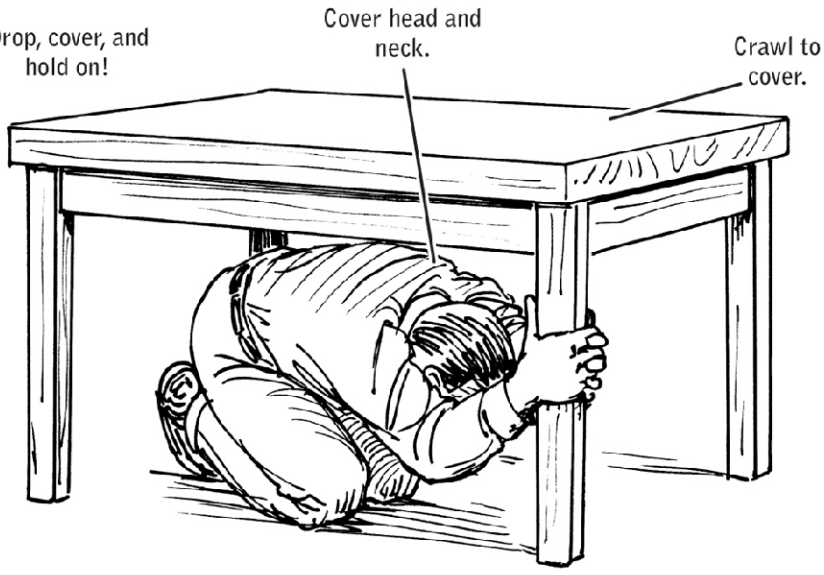
CONOP: Review the proper response to an earthquake.

COA 1: Preparation



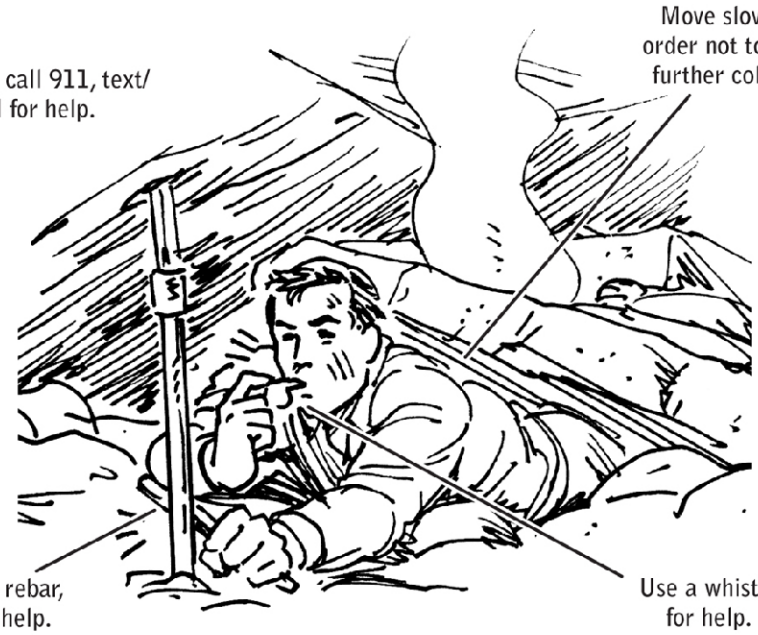


COA 2: During an Earthquake



If in bed, cover head with pillow.	If in vehicle, stop and stay in vehicle.	If outside, move away from buildings, streetlights, and utility wires.

COA 3: After the Earthquake



BLUF: Drop, cover, and hold on.

076 Survive a Thunder Snow Blizzard

Whether you're caught in an old-fashioned blizzard or a rare occurrence of thunder snow—the combination of thunder and snow that strikes when a cold front moves in over a rising mass of warm, humid air—there's nothing novel about the types of precautions most likely to ensure your safety.

Winterize Your Home and Vehicle

In regions where extreme winter weather conditions are common, be prepared. Stock your house and closets with rock salt, sand, shovels, wood, and weather-appropriate gear. Stash emergency blankets, a wool hat, and pocket heaters in the trunk of your car.

Have your car winterized, making sure your mechanic checks your exhaust system for leaks and crimped pipes. Your mechanic should also replace air filters; check brakes for wear and fluid levels; install good winter tires with adequate tread; check oil; ensure the heater, defroster, and thermostat are working properly; check antifreeze; clean and check the battery and ignition system; replace worn-out windshield wipers; and assess all lights.

Know When to Go

To avoid getting stranded on the road, err on the side of caution when making the decision to drive in a blizzard. Avoid driving on unplowed roads. If conditions look questionable, they probably are. A vehicular death caused by driving in low-visibility conditions is most often a death that would have been preventable through the use of one simple tool: human judgment. If conditions rapidly worsen while you're already on the road, don't feel the need to soldier through. Though emergency conditions set off a kind of fight-or-flight response that launches drivers into frenzied attempts to drive

through or away from storms, sometimes the safest course of action is to do nothing—i.e., pull over and wait out the storm.

Wait Out a Storm

If you do become stranded in a remote area, do not attempt to hike your way to safety unless you know the area well and have on appropriate clothing (see page 41 for more on cold-weather gear). Remain in your car. Blizzard conditions will severely reduce visibility and increase the chances of your getting lost while being completely exposed to the elements.

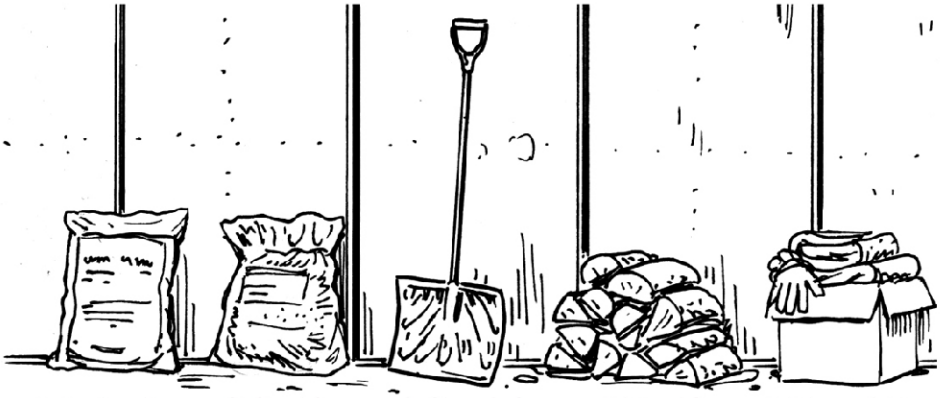
To avoid the risk of carbon monoxide poisoning and conserve your battery, only run your engine and heater for ten minutes of every hour. If you aren't traveling with a trunkful of warm layers and/or blankets, stack seat covers and floor mats on top of you as insulation. At night, leave the dome light on so that your car is visible to other drivers. Hazard lights will burn up your battery.

In the event that you feel the signs of hypothermia beginning to set in, use your stash of emergency pocket heaters to warm up your core (see page 150); if your body temperature has dropped past a certain point, warming your fingers or feet first could cause a dangerous rush of blood to the heart.

No. 076: Survive a Thunder Snow Blizzard

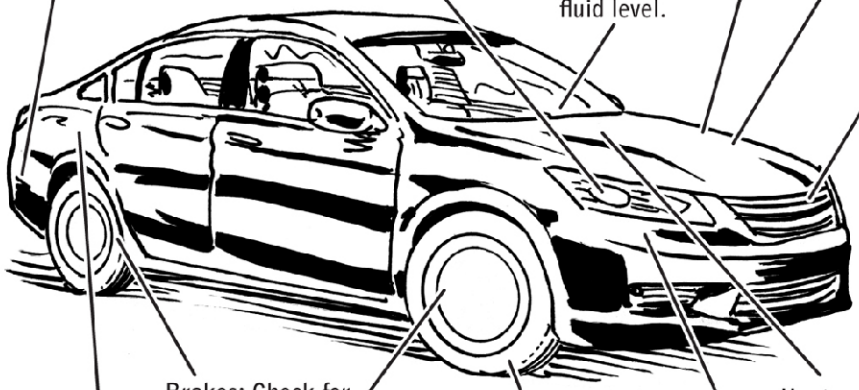
CONOP: Understand and implement counter-blizzard tactics.

COA 1: Preparing Your Home



1. Rock salt for walkways
2. Sand for traction
3. Shovels for clearing areas
4. Wood for stoves and fireplaces
5. Warm clothes

COA 2: Preparing Your Vehicles



Battery and ignition system: in top condition, battery terminals clean

Lights and flashing hazard lights: Check for serviceability.

Exhaust system: Check for leaks and crimped pipes.

Windshield wipers: Repair any problems and maintain proper fluid level.

Thermostat: fully functioning

Antifreeze levels: sufficient to avoid freezing

Brakes: Check for wear and fluid levels.

Heater and defroster: Ensure they work properly.

Fuel and air filters: Replace, keep water out of system with additives, and maintain full tank of gas.

Install good winter tires: Make sure the tires have adequate tread.

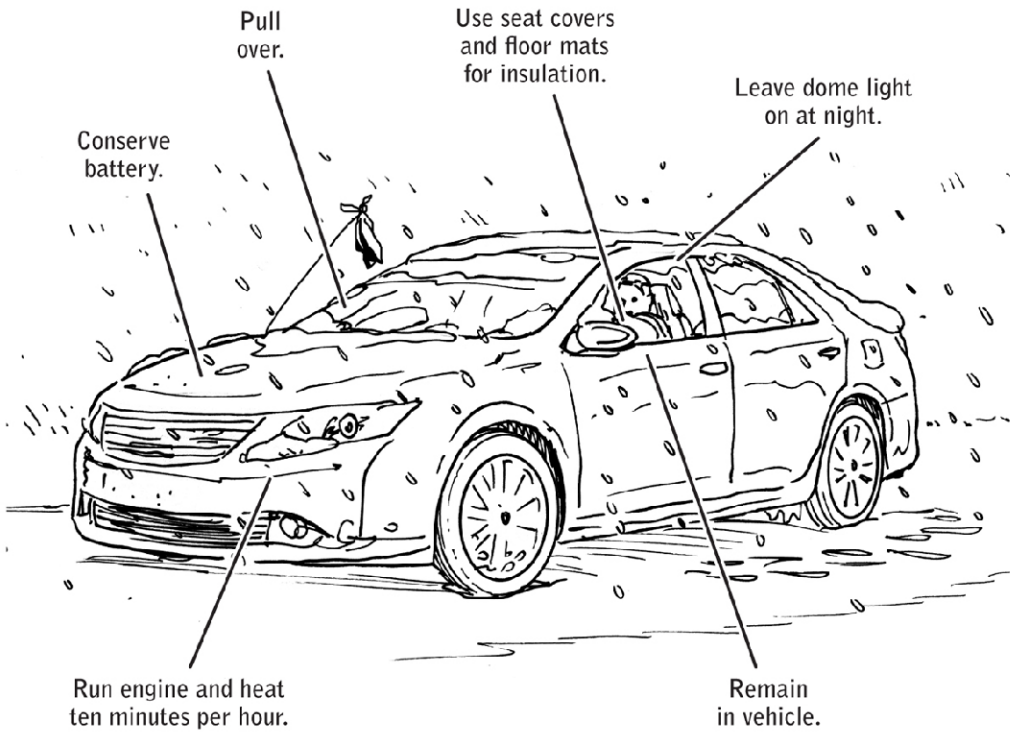
Oil: Check for level and weight.

COA 3: Stay or Go?

STAY:
If stuck on the road, and rescue is likely
If a safe location is neither nearby or visible
If you do not have appropriate clothing to go outside
If you do not have the ability to call for help

GO:
If the distance to help is accessible
If you have visibility and outside conditions are safe
If you have appropriate clothing

COA 4: Stranded in a Vehicle



BLUF: You have three seasons to prepare for winter- get it done.

077 Survive Tornadoes and Hurricanes

No natural disaster strikes more fear in the heart of the average civilian than the threat of an impending hurricane, touted for days if not weeks in advance by weather forecasters as a potentially cataclysmic event. But while history has shown the importance of heeding hurricane evacuation warnings, the unannounced danger posed by tornadoes tends to have even deadlier ramifications.

The world may face ten hurricanes in any given year, but the U.S. alone sees upward of a thousand tornadoes—the American Midwest famously being the world leader in the violent weather system. And while severe hurricanes can create mass casualty scenarios, on average tornadoes claim more lives, their deceptively smaller radius camouflaging their sudden powers of destruction. They are the lone wolves of the weather systems.

Heed Evacuation Warnings

The principal danger with hurricanes is not wind but flooding, making timely evacuation crucial. Residents of high-risk areas may take a casual attitude to such warnings after years of false alarms, but they shouldn't—for it only takes one big flood to sweep away an entire city's infrastructure.

In the event of a tornado, there may be very little time to react, which is why the fast and violent winds tend to claim more lives. Where hurricanes are easily spottable by satellite as they gather their strength over oceans, tornadoes can form in minutes, given the right atmospheric conditions. Contrary to popular belief, they are not always visible, and their path of destruction may spread for more than a mile beyond their cyclical funnel.

Follow the Right Protocol for Your Location

Your location will determine the best safety protocol in response to a tornado. In addition to standard preparedness supplies, be sure to include a wrench and pliers in your go-bag so that you can safely shut off gas and water valves in the event of leakage.

Know When to Shelter in Place: Do not attempt to shelter in a mobile or prefabricated home. Unless your home is safely bolted to the ground, you risk severe harm by staying in place. Find a solid structure and hunker down.

Go Low, Go Central: Staying away from windows and doors, make your way to the centermost and lowest point in the building. Keep doors and windows closed. The outdated practice of opening windows to avoid a pressure vacuum can result in strong winds lifting the roof clear off a home's foundation.

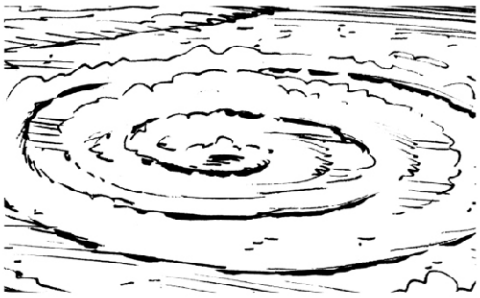
Strap In: If you are outdoors, sheltering inside a car may be your safest bet. Vehicle glass is built for impact, unlike household windowpanes. Strap on a seat belt in case the car is thrown by the force of the tornado.

Do Not Attempt to Outrun a Tornado: A tornado has unlimited energy—you do not. It also has an unpredictable path. Use what time you have to hunker down as safely as possible. Seek low ground, lying down against ditches or depressions that may provide some measure of protection against projectiles.

No. 077: Survive Tornadoes and Hurricanes

CONOP: Know what to do when high-speed rotating winds strike.

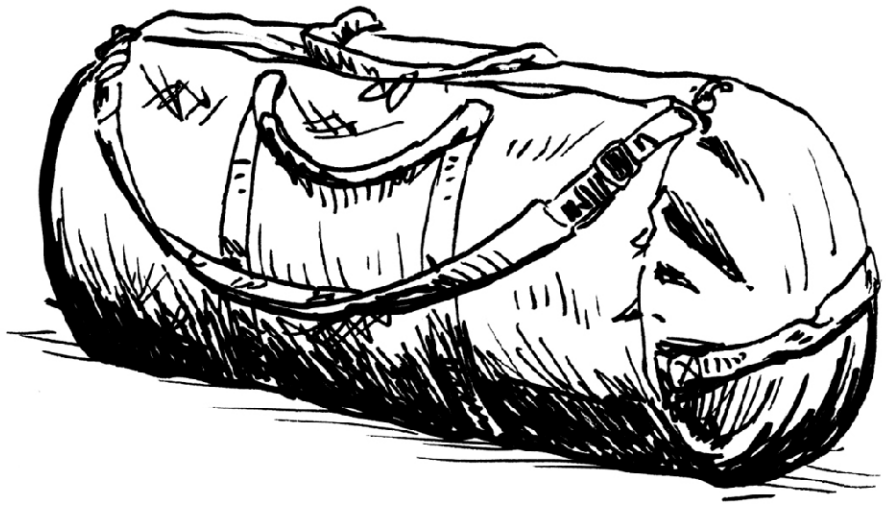
COA 1: Hurricane vs. Tornado



HURRICANE
Where: Over water
Size: Hundreds of miles wide
Duration: Three weeks
Speed: One hundred eighty miles per hour
Occurence: Ten per year
Warnings: Days

TORNADO
Where: Over land
Size: One-quarter mile wide
Duration: Less than one hour
Speed: Three hundred miles per hour
Occurence: Eight hundred to a thousand per year
Warnings: Fifteen to thirty minutes

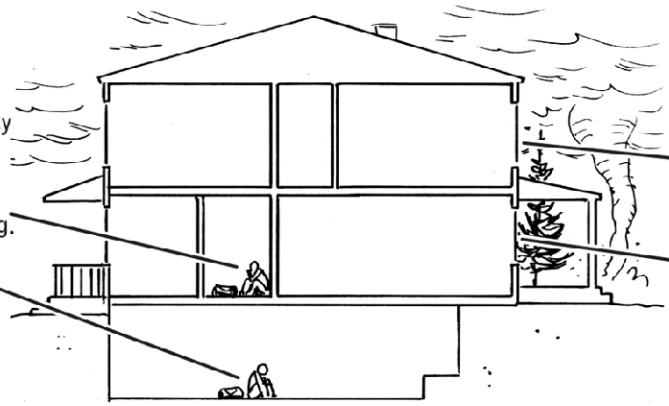
COA 2: Prepare an emergency supply kit.



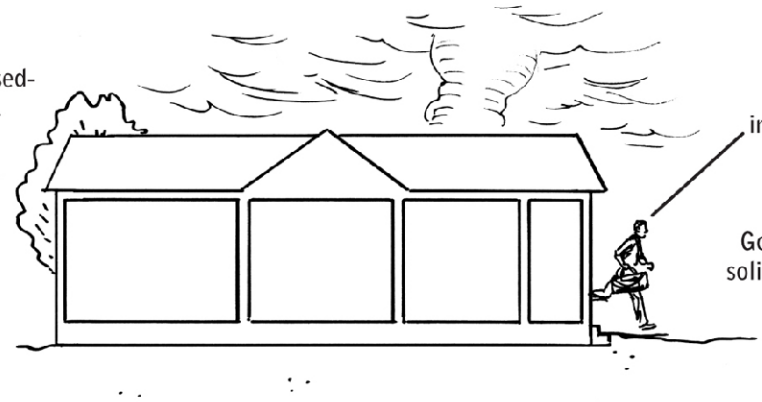
- Water
- Food
- Radio
- Flashlight
- Batteries
- Whistle
- Dust mask
- Duct tape
- Baby wipes
- Wrench/pliers
- Can opener
- GPS
- Cell phone
- Prescription drugs
- Change of clothes
- Cold and rain jackets

COA 3: Identify Safe Zones.

1. Structures (home, work, or school)



2. Prefabricated or Mobile Structures



3. Outside with No Structure

BLUF: Never try to outrun a tornado.

078 Survive a Sinkhole Fall

There are many reasons civilians should be more open to carrying a whistle as part of their EDC. The risk of being trapped under huge chunks of aging infrastructure, without the ability to signal to potential rescuers, is just one.

There's no such thing as solid ground in an urban landscape, where the apparently rock-solid pavement we drive across and stack skyscrapers over is somewhat of an illusion. For beneath that topmost layer lies an entire network of underground transportation, water mains, and sewage lines.

In reality, there are vast pockets of open space beneath our feet. And if we apply too much pressure to the surface, or an aging infrastructure causes a water main or sewage line to rupture, vast and gaping sinkholes can be the result.

There's no way for civilians to anticipate such an occurence, and when solid ground gives way beneath your feet, there's nothing to do but fall. The real question is how to survive.

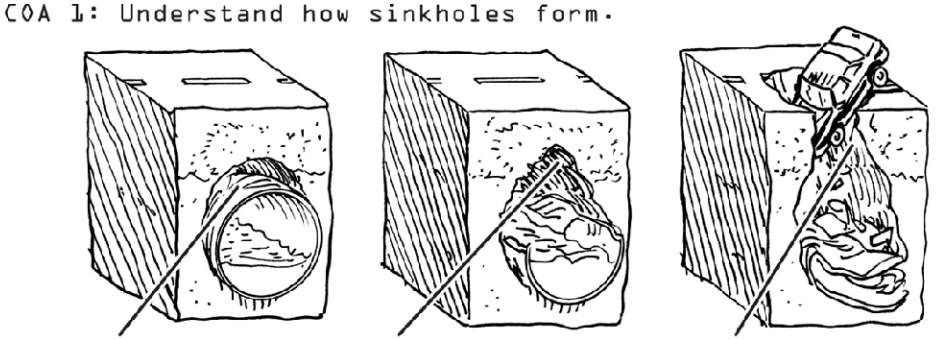
If you are driving, do not attempt to exit until your vehicle comes to a halt—cars are built to withstand impact, so you may stand a better chance of survival by remaining strapped in. To learn how to escape a car whose doors are jammed shut, see page 198.

If you are sucked into a sinkhole while on foot, practice a parachute landing fall (PLF) to protect your bones. Squeezing your arms and legs together along the midline as pictured, bend your knees. Upon impact, fall to the side, so that the impact is sequentially distributed along your joints and spine, from the ankle through the knee and hip. Roll backward. Landing with straight body positioning and joints risks breaking the feet and harming the spine.

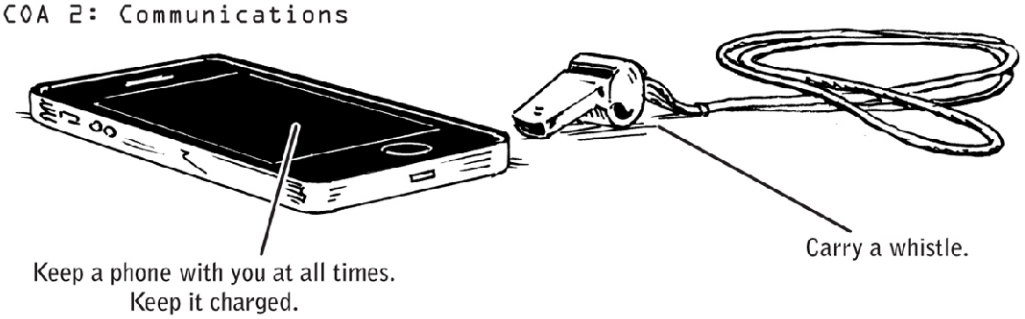
No. 078: Survive a Sinkhole Fall

CONOP: Know what to do when the ground collapses beneath your feet.

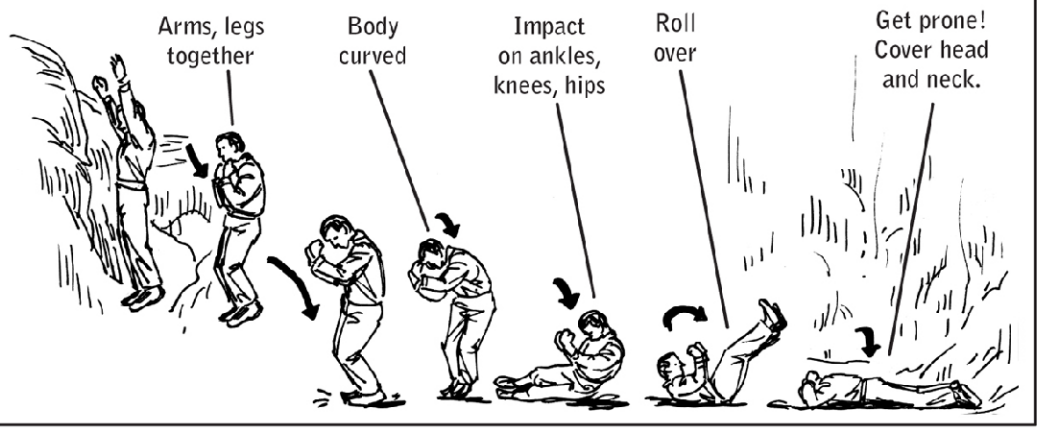
COA 1: Understand how sinkholes form.



COA 2: Communications



COA 3: Practice a PLF (parachute landing fall).



BLUF: Sinkholes are unpredictable, but rarely kill people.

079 Escape a Flooding Vehicle

Rule of the road: Never attempt to drive through flooding waters high enough to enter your vehicle's tailpipe. Doing so could potentially flood the engine, causing you to stall and inflicting serious damage on your vehicle.

In the event that you are swept into flooding waters and have enough time to react, prepare to exit your vehicle by opening windows and unlocking doors. Though the electrical function on automatic windows and locks will still function when the vehicle is submerged, the pressure differential may keep windows and doors jammed shut. Car doors may be impossible to open underwater until the interior of the vehicle is fully flooded, so prepare for escape while you still can.

Safety protocol indicates that seat belts should be left buckled until the vehicle comes to a full stop, but a particular situation may dictate otherwise. Keep a knife or razor blade in a closed compartment inside the vehicle in order to cut yourself free should the seat belt lock, a real possibility if you are stuck upside-down and the weight of your body jams the closure mechanism.

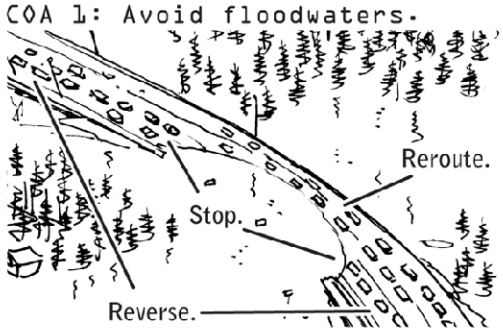
Do not attempt to break through your car's windshield, as it's double-paned and designed to withstand impact. Kick out a side window instead, aiming for the top of the glass, away from the anchors that bolt the pane down into the door.

Car windows can be difficult to break. Jamming a headrest spoke or knife down between the glass and the door may create a fulcrum that causes the pane to shatter. If you have an emergency glass punch tool, aim it at the corners of the glass.

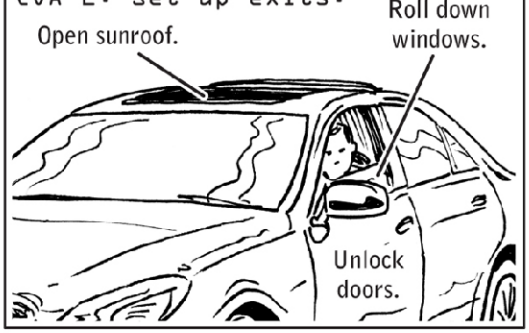
No. 079: Escape a Flooding Vehicle

CONOP: Use orderly procedures to escape a flooding vehicle.

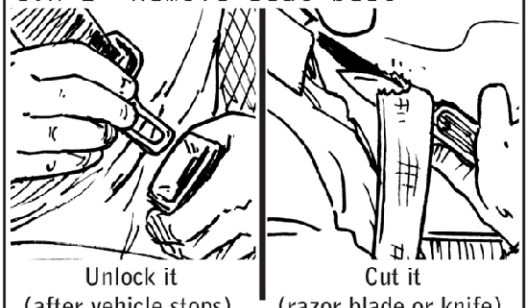
COA 1: Avoid floodwaters.



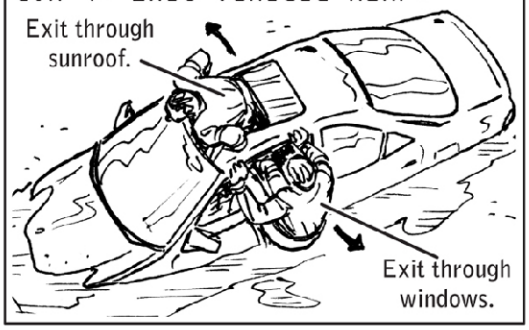
COA 2: Set up exits.



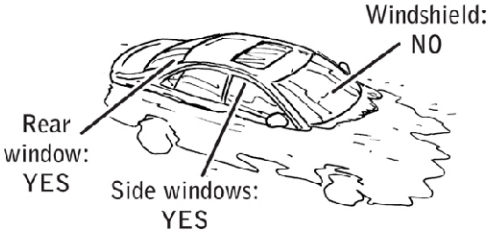
COA 3: Remove seat belt.



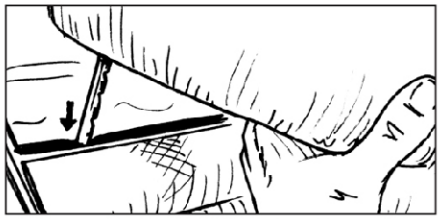
COA 4: Exit vehicle ASAP.



COA 5: Break a window.



KICK IT OUT.



BREAK IT (headrest).

SHATTER IT (glass punch tool).

BLUF: Exit a flooding vehicle before you enter a watery grave.

080 Walk Away from a Runaway Train

We may think of tragic derailments as the province of subpar rail systems in undeveloped countries, but recent history has proven otherwise. Train accidents are often the result of human error, and even a momentary lapse in attention has the potential to catapult a fully functioning rail system into fiery disarray.

A lack of passenger seat belts is disturbingly common among all modalities of public transportation—rail, bus, and underground metro—in most parts of the world. But given how instrumental these simple devices are in saving lives, the survival-minded civilian would be well advised to BYO belt. On airplanes, seat belts make the difference between passengers who survive serious turbulence without injury and those who exit the aircraft with broken bones or worse. (In at least one documented instance, the lone fatality of a plane crash was the single passenger *not* wearing a seat belt.)

Prep Your DIY Seat Belt

Using only a carabiner or two and either a length of one-inch tubular nylon cord, a purse or messenger bag strap, or a tie-down strap (also known as a cargo strap), a passenger can easily create a lifesaving seat belt in a matter of seconds (see illustrations). Attaching the strap to a carabiner using a waterman knot will create an adjustable, non-slipping loop that will allow the belt or cord to be used as a tether.

The safest way to travel is to strap yourself into a seat, an immovable anchor that will prevent you from becoming a human projectile upon impact. But if a seat is not available, you can still increase your survivability by strapping yourself to a balancing pole. Attaching yourself to a hard metal surface may sound less than desirable, but any injuries you may suffer as a result are likely to pale compared to the potential for being ejected out of the

compartment upon impact. As the saying goes, when it comes to vehicular accidents, it's not the speed that kills you, it's the sudden stop—the moment when the vehicle comes to a halt and your body continues at the former speed of transit.

Single-point Anchor: To execute a single-point anchor, simply girth-hitch the belt or strap to the pole, attaching the carabiner to your belt buckle or purse strap.

Single Anchor: To create a seated lap belt around a single anchor, hook or girth-hitch the belt to the hardware beneath your seat on either side of your body, creating a semicircle around your legs. If there is no secondary anchor point available, it may be possible for you to hook the belt back onto itself in a full circle around your legs and the seat.

Double Anchor: To create a seated chest belt around a double anchor, hook or girth-hitch a belt to the hardware beneath the seat on one side of your body, and above the seat, to the handhold over your opposing shoulder, on the other.

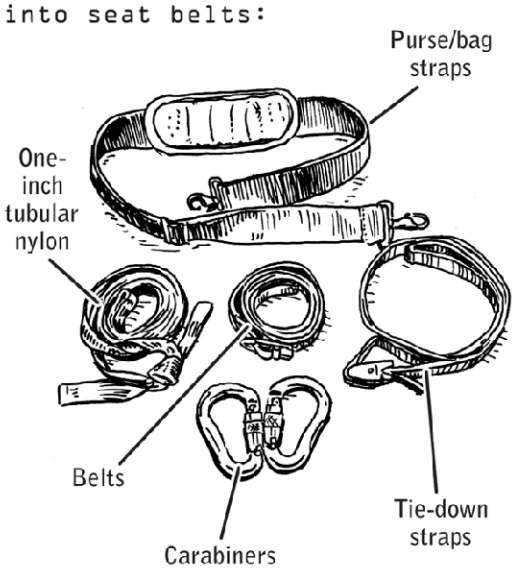
Configurations will vary depending on the particular vehicle. Modify accordingly.

Bringing a DIY seat belt to a public transportation scenario may seem absurd. But when you consider survival a possible upside, a few curious glances from fellow passengers may be worth the trade-off. And who knows—you may inspire other passengers to belt up for a safer ride themselves.

No. 080: Walk Away from a Runaway Train

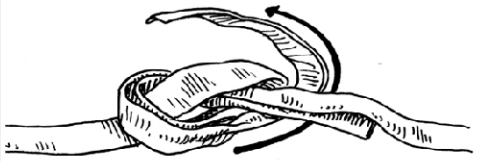
CONOP: Convert everyday items into lifesaving seat belts.

COA 1: Items to be converted into seat belts:



COA 2: Tie a waterman knot.

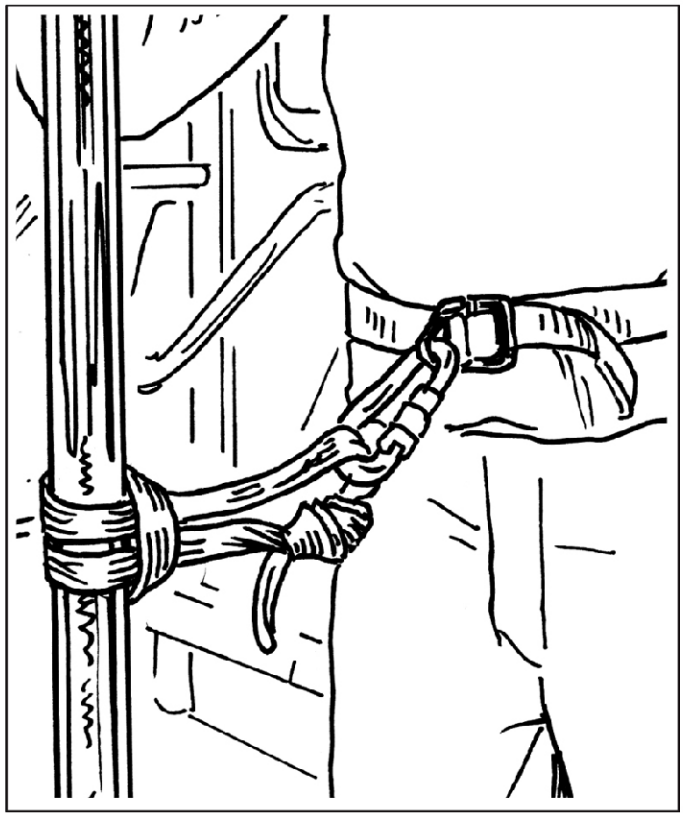
Begin with one simple overhand knot.



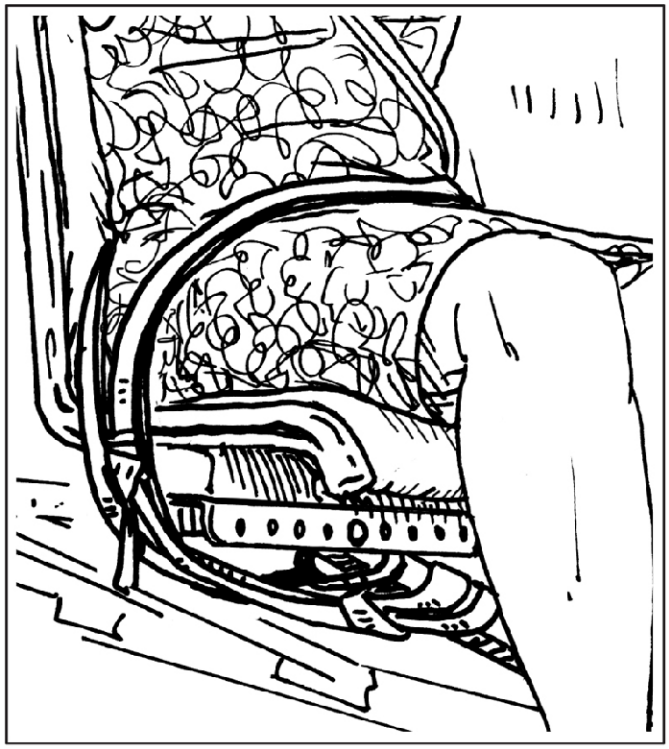
Feed other end back around knot, creating a second overhand knot in opposite direction.

Tighten by pulling both ends.

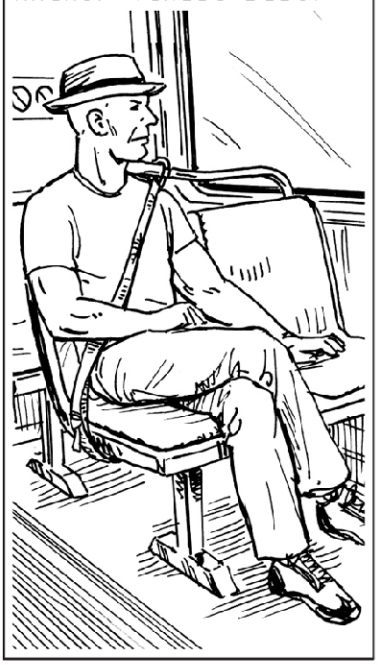
COA 3: Single-Point Anchor (Pole)

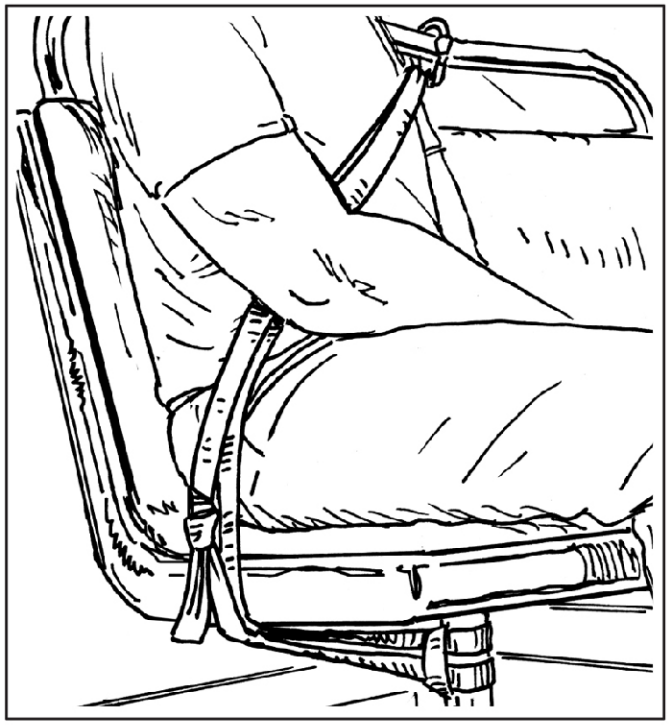


COA 4: Single Anchor (Lap Belt)



COA 5: Double Anchor (Chest Belt)





BLUF: Seat belts may prevent passenger ejection at one hundred miles per hour.

081 Escape a Skyscraper Fire

Denizens of corporate America tend to grumble through fire drills with barely disguised contempt, anxious to return to their desks and get on with their days. But the reality is that these drills, considered a nuisance by most, represent only a fraction of the preparation office workers *should* endure. From bolt bags to evacuation routes to emergency protocol, there is more to fire preparation than what is currently served up.

Build a Bolt Bag: A baseline requirement furnished by too few offices is an emergency bolt bag distributed to one of every five employees. Contents should include food and water, but also visibility and signaling essentials such as flashlights, Sharpies, ChemLights, and whistles, along with several dust masks.

Know Your Escape Routes: Be diligent about memorizing the location of primary and secondary fire escapes on your floor. Ordinary stairwells, though preferable to elevators, aren't built to code and may be larded with flammable materials. Elevators are generally designed to drop to the first floor and then disengage once a building's fire alarm or sensor is activated, but they should be avoided at all costs. The hot metal boxes can become death traps during a fire, whether they're stuck and slowly baking their passengers or depositing them straight onto a ground floor that's completely ablaze. Devoid of flammable materials, fire stairwells are also ventilated and pressurized to keep out smoke-filled air.

Take a close look at evacuation routes, snapping a photograph so they're stored on your phone. In the event of an emergency, know that you may have to be flexible. If fire blocks your path to exit, you

may have to zigzag across floors and down the building in order to get to safety.

Be a Force for Good: Team up with others as you exit. The more eyes, ears, and brains on deck, the better.

Mark your movements as you travel, so that first responders and other emergency evacuees can follow your path. Designate one or two members of your group to mark your path with Sharpies, ChemLights, or Post-it notes. Assume others may be crawling through smoke, so place markings knee-height or lower.

And remember: Calm is just as contagious as panic. Be a viral agent for good.

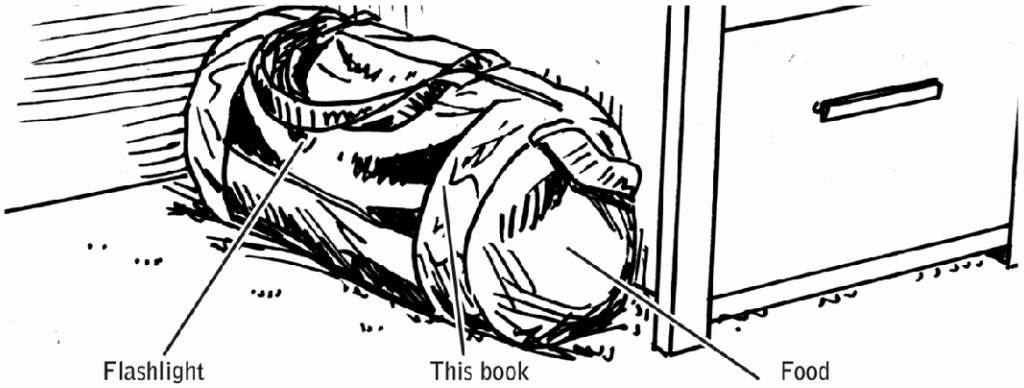
Use Available Supplies: If you have no choice but to travel through fire, avail yourself of a corporate building's ready water supply. Should you have access to one of the fire hoses on your floor, use it to clear a path. Or head to the nearest bathroom, remove heat conducting jewelry, accessories, and electronics, and completely soak your clothing and hair in water. Roll down sleeves and button up collars to obtain as much coverage as possible. Cover head, face, and hair with a wet cloth and a dust mask.

Whenever you encounter a door, check for heat conduction before opening. A very hot door signals the strong possibility of a hallway engulfed in flames.

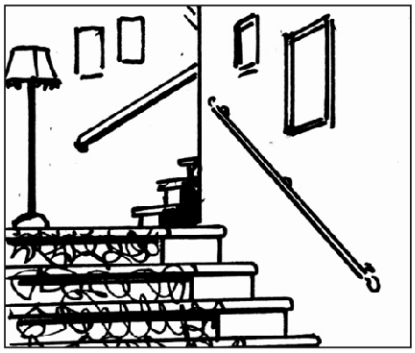
No. 081: Escape a Skyscraper Fire

CONOP: Escape and survive fire within vertical environments.

COA 1: Build an emergency bolt bag.

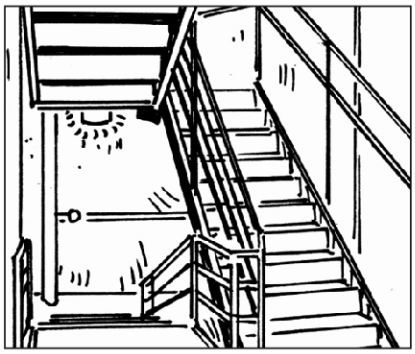


COA 2: Know fire escape stairwell locations.

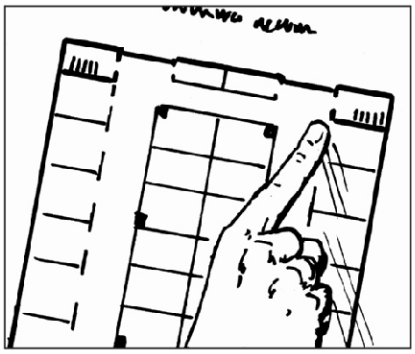


NO! If it looks inviting, it's not a fire escape stairwell.

NO! Elevators are death traps: Most are programmed to descend straight to ground floor, which could be on fire.

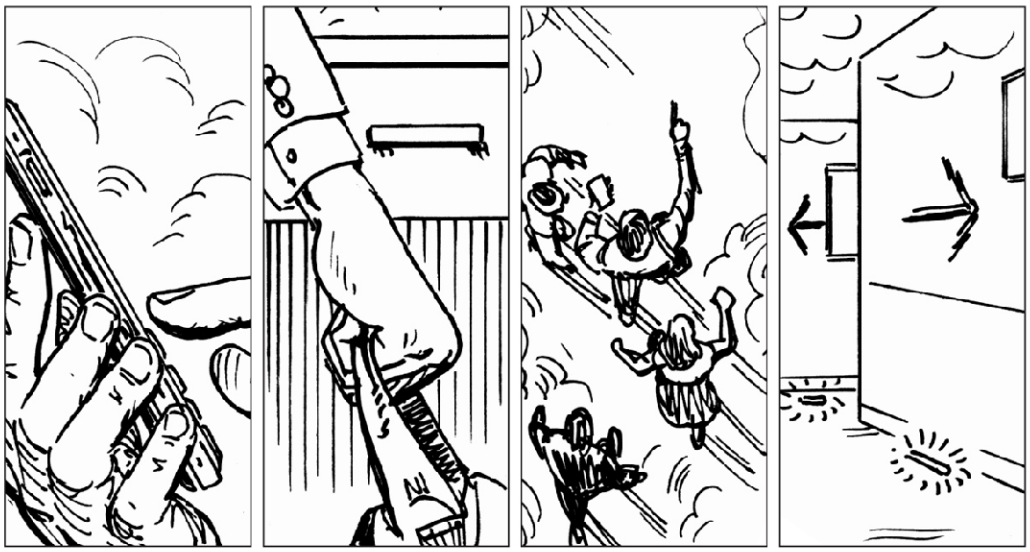


YES! Fire stairwells are concrete, and equipped with fire doors, fire hose, and/or wall hydrants.



YES! If first route is on fire, immediately move to second stairwell. Take a pic and store evacuation routes on your phone.

COA 3: Call and signal for help.



Use a cell phone to call 911. Don't assume someone else did.

Grab your bolt bag.

Team up with others and stay together.

If separated, mark walls with arrows and drop ChemLights in direction of travel.

COA 4: Moving Through or Near Fire

Remove all heat conductors:
Watches
Rings
Belts
Necklaces

Stop in the bathroom or at a water fountain. Wet yourself from head to toe. Roll down sleeves, button collars. Cover all exposed skin. Don wet dust mask.

Check doors before opening. Use back of hand and touch door from top to bottom. Use caution when touching door knobs. Open doors slowly and look for fire or smoke.

BLUF: Fire can spread in any direction, so have a multidirectional plan.

082 Escape Social Unrest and Riots

Banned by repressive governments, yet condoned as a fundamental pillar of democracy, protests can turn into chaotic, violent events wherever they take place—even if they start out peaceful. A tiny band of picketers isn't likely to be cause for concern, but when emotionally volatile groups of people gather in large numbers, acts of violence may be the result. Whether you're a willing participant, an observer, or a passerby inadvertently swept up in the crowd, keep an eye on crowd dynamics at all times. A peaceful protest may be hiding pockets of violence at its center.

De-escalating mass violence is very difficult, because aggression tends to spread contagiously in an already agitated crowd. The safest course of action is to bypass violent crowds altogether and identify points of potential danger before they erupt. Avoid the space between groups of protesters with opposing beliefs, the front lines of protests, areas where protesters are massed against barricades, or dividing lines between protestors and law enforcement.

If you are unwittingly caught in a violent protest or riot, think twice before turning to law enforcement for help. Law enforcement officials will be in defensive mode and may reflexively lash out at anyone who approaches. Instead, move to the periphery of the crowd. Seek shelter inside or on the backside of buildings. Get to elevated ground. Skirt a large crowd rather than attempting to cross it.

Journalists covering volatile protests should aim to blend in with crowds and seek out safe havens in which women and peaceful protesters congregate to keep each other safe. Flow with the crowd rather than walking against the grain. Avoid the center of the crowd, where chaos tends to accumulate and violence can go undetected.

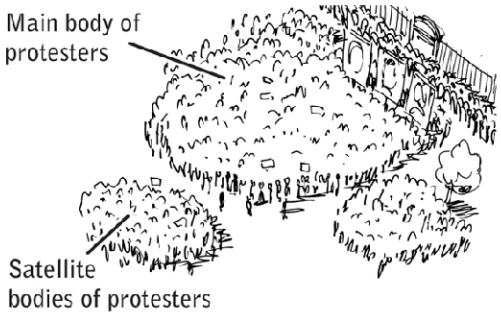
Exercise caution and vigilance at any large gathering, as sizable crowds have increasingly become a favorite target of terrorists and lone wolves.

No. 082: Escape Social Unrest and Riots

CONOP: Implement tactics that increase survivability when surrounded by emotionally charged crowds.

COA 1: Types of Protest

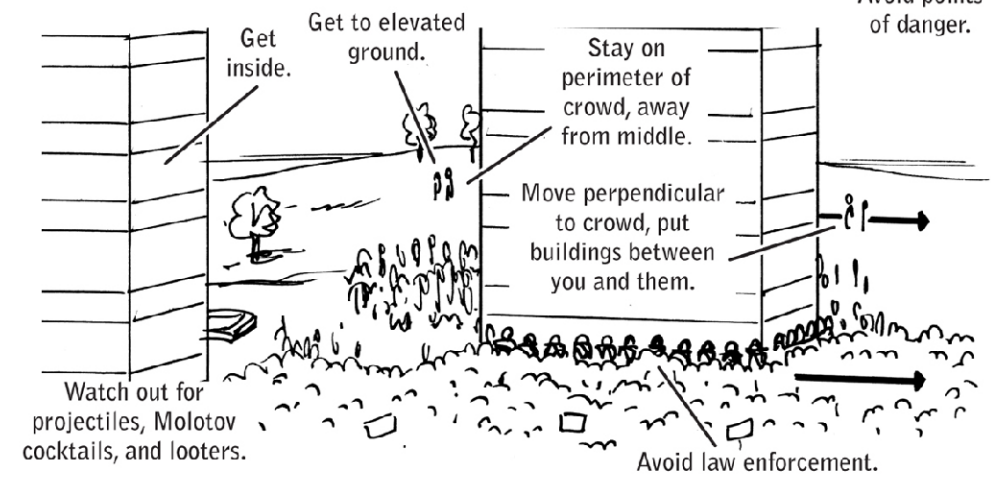
COA 2: Understand the crowd.



COA 3: Identify points of danger.

People vs. barricades | People vs. buildings | People vs. people | People vs. law enforcement

COA 4: Surprised by Civil Unrest



BLUF: An emotionally charged crowd can quickly become a very hostile environment.

083 Survive a Pandemic

As we're slowly starting to learn, the medical advances of the past few centuries may have lulled us into a false sense of complacency regarding our vulnerability to communicable disease. The widespread use of antibiotics in our medical and food systems, along with the porosity of our modern world's international borders, have contributed to the rise of a class of superviruses and drug-resistant pathogens with the ability to travel faster than they can be contained. Though we may think we live in a modern society in which it's no longer possible to perish from a case of the flu, recent outbreaks have shown that belief to be anything but true.

Of course, it's near impossible to imagine epidemics on the scale of those from the past, like the outbreak of Spanish influenza that killed forty million people in 1918. The most widely publicized recent viral outbreak, Ebola, took somewhere in the neighborhood of ten thousand lives. But unknown new variants that emerge before a vaccine is created can hamper the containment abilities of even the most medically advanced facilities.

In the case of a true pandemic, avoiding public spaces will be the safest way to limit your exposure. In the early days of an outbreak, misinformation about communicability is common. Stock up on food and water supplies before shelves are stripped bare, and wash hands religiously before eating and after any expedition or contact outside the household.

Steer clear of public bathrooms, particularly those equipped with hand dryers—these supposedly hygienic contraptions have been shown to send germs ricocheting through the air.

If surgical and dust mask supplies are depleted at the first news of an outbreak, silk ties and scarves may be used as reasonable substitutes. The finely woven material has the ability to filter out

foreign particles, but in a pinch you can also use any piece of cloth that has been doused with clean filtered water.

No. 083: Survive a Pandemic

CONOP: Prepare and outlast a global pandemic outbreak.

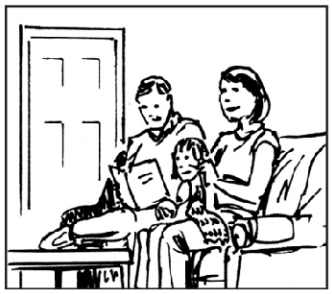
COA 1: Before a pandemic: Store two weeks of food and water.

Eight hundred calories of dry nonperishable food, per day, per person

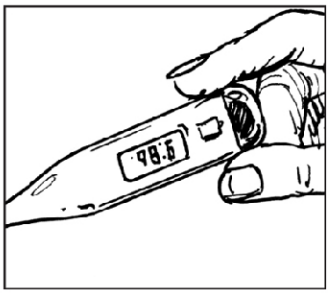
Gallon of water per day, per person in household

COA 2: During a Pandemic

Avoid contact with others.

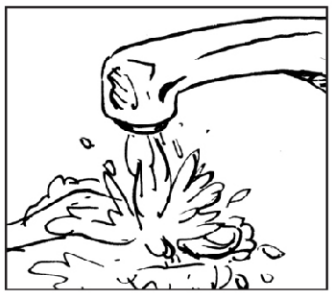


Stay home.



Take temperature.

Cover coughs and sneezing.



Wash your hands.

Stay tuned.

BLUF: Mother Nature is full of unpleasant surprises.

084 Survive a Human Stampede

The stuff of nightmares, human stampedes can happen anywhere from emotionally charged sporting events to peaceful religious pilgrimages. When crowd control is overwhelmed, crushing injuries that lead to fatal suffocation can be the unfortunate result.

If you are caught in an evolving stampede, do not let feelings of panic cause you to lose control over your personal space. Widen your stance and keep your knees bent to ground your weight. Travel via shuffle step, shifting weight by dragging your feet in order to minimize the amount of time spent on one leg. Avoid getting pushed to the ground at all costs—it will be very difficult to get back up again once you're pushed beneath a rushing tide of panicked people. Keep your arms up in fighting stance, not so that you can punch people, but to create a shield. This defensive posture will protect your head and chest from crushing injury while preserving a bubble of space in which you can breathe.

While the rest of the horde beelines for the exit, seek out and exploit gaps in the crowd. Others may be so single-minded in their quest for release that they fail to notice pockets of breathing room around them. Move from gap to gap. Keep moving. Do not attempt to stand your ground. The rush of bodies will make it very difficult to stay on your feet.

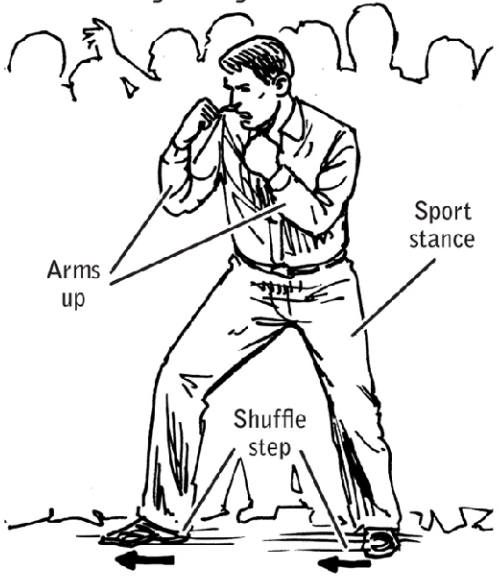
Avoid barricades and walls, solid surfaces without give. Better to be crushed against a human body, which at least contains soft tissue.

If, despite your efforts to stay upright, you are pushed to the ground, immediately assume the tornado position—knees bent, spine curved over, hands clasped behind neck and elbows tucked in. You will be protecting your head and neck and carving out breathing space. A completely prone body is far too easy to step on.

No. 084: Survive a Human Stampede

CONOP: Employ crowd-control tactics to survive human stampedes.

COA 1: Fighting Stance



COA 2: Fill the gaps and keep moving.

COA 3: Avoid barricades and walls.

COA 4: Tornado Position

BLUF: Stay on your feet. Do not fall down!

085 Escape a Stadium or Theater Shooting

Characterized by high fatality and injury rates, shootings in crowded, contained public spaces are volatile and extremely dangerous. A density of targets, the potential for bottlenecks, and a lack of clarity about emergency response protocol create a ripe environment for one or more armed aggressors to do serious harm. As with all crisis scenarios, survival depends partly on preparation and response—and partly on dumb luck. The level of security in any given public space is not under your control, but you *are* the sole owner of your personal preparation and response.

Identify Exits and Choke Points

Take note of standard and emergency exits in any public space. But also consider unconventional exit paths such as stadium balconies. Dropping down to a seating area or walkway below yours may result in injury, but could be worth the risk if standard pathways have become target points for the shooter's rifle sights.

Rather than instinctually following the herd, identify potential choke points and think through alternative pathways in advance of a crisis scenario so that you're able to decisively execute an exit plan without excess forethought when emergency strikes. But look before you jump—do not attempt to exit from stadium high points. And hit the deck before you move, dropping down to a crouch at the first sign of gunfire and identifying the shooter's direction before proceeding. The fight-or-flight instinct may cause those around you to blindly run when the first shots are fired, but the proper response is to get low as quickly as possible.

Seek Cover and Crawl to Safety

Locate the shooter in the room or stadium before you attempt to run to safety. The last thing you want to do is accidentally run in the shooter's direction. Do not blindly head for the emergency exits. Shooters may have snuck into theaters through improperly closed emergency exit doors.

Use available materials, furnishings, and structures as protection. Due to the fact that movie theater and stadium seating rows are built out of concrete, chairs may provide both concealment and a lifesaving form of cover, depending on the angle of the shooter. Stay low as you crawl between seat rows. Keep your eyes on the shooter at all times, adjusting your path depending on his whereabouts.

Listen and Watch

Take advantage of lulls in gunfire, when the shooter may be changing magazines, to gain serious ground toward exiting. If the shooter is within arm's reach, use such a lull to attempt to take him down (see page 149).

Do not box yourself in by hiding in a dead-end zone such as a bathroom stall. The best choice for a contained space is one with a solid door that can be barricaded (see pages 141–45).

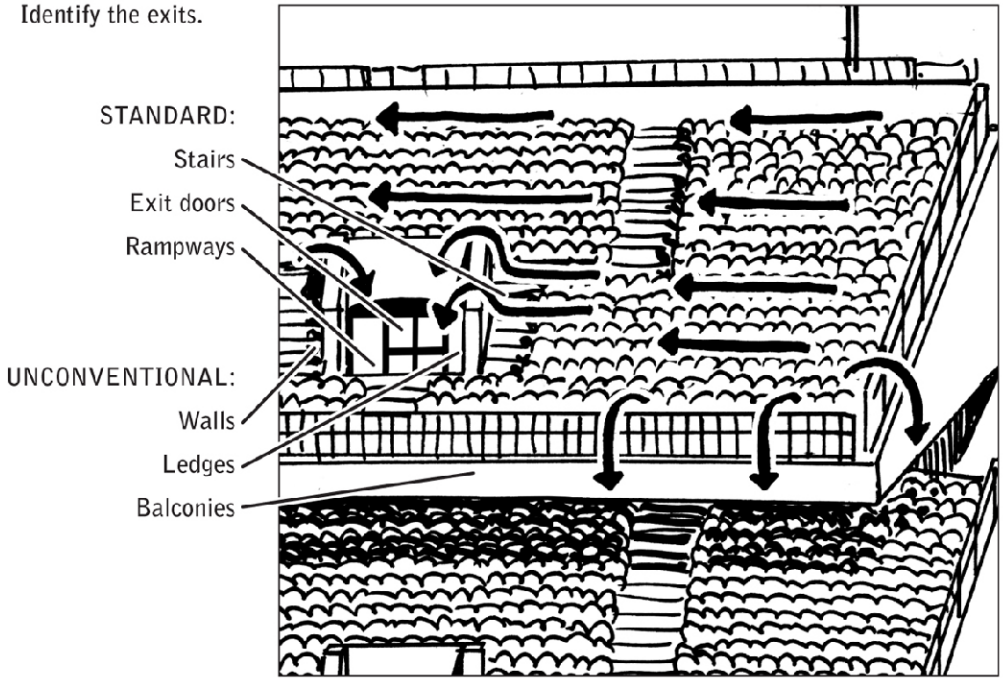
Playing dead may or may not have some chance of success, but prioritize escape or tackling the shooter (see page 154) over surrender. Be brave, be bold, be violent.

No. 085: Escape a Stadium or Theater Shooting

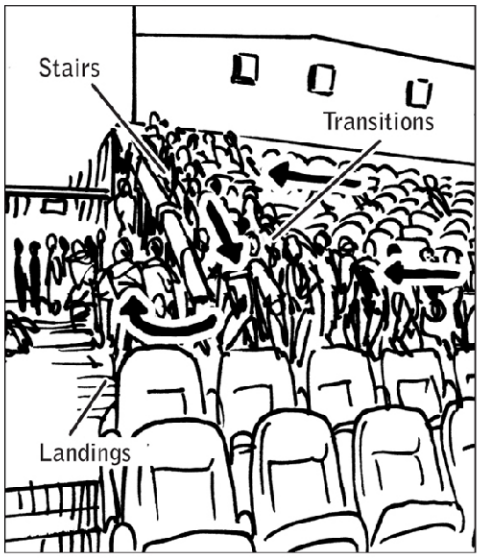
CONOP: Survive an active shooter in contained populated environments.

COA 1: Preparation

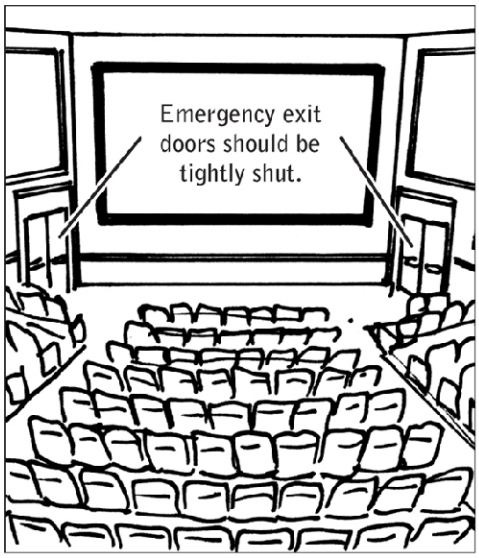
Identify the exits.



Identify choke points.



Check the exits.



COA 2: Response

IDENTIFY SHOOTER!

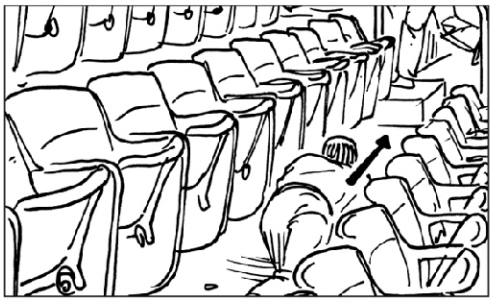
Above/from behind

Below/in front

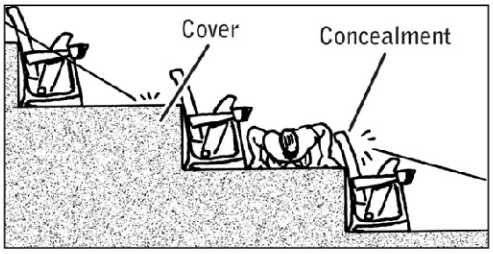
HIT THE DECK!

Use chairs to conceal your position.

CRAWL!



Toward cover and unconventional/ standard exits



Keep low to use concrete steps for cover.

KEEP EYES ON SHOOTER AT ALL TIMES.

BLUF: Get out of sight, crawl toward cover and exits.

086 Survive an Inspired Terrorism Attack

A climate of severe global instability indicates that acts of terrorism and their copycat offspring aren't going anywhere anytime soon. But whether an attempted mass shooting is inspired by the propaganda of an organized group or the disturbed fantasies of a lone individual, the results tend to look much the same. At least within the U.S., these acts of violence still tend to center around gunfire rather than suicide vests or pipe bombs.

Your response to any sign of gunfire should begin with hitting the deck. "Run, hide, fight" is the order of operations for civilians caught in a cross fire, running being the first option, and fighting the last. But before you run, drop and take cover. Squat or move to hands and knees rather than lying down, as most ricocheting bullets follow the path of the floor. So that you don't accidentally run toward live fire, do not attempt to escape before you've established the direction of the shooter.

When you do escape, run from cover to cover. Choose sources of cover over concealment when hiding. Cover consists of materials that stop or slow bullets—concrete, steel, dense wood, and granite. Concealment options such as curtains, Sheetrock walls, or aluminum trash cans won't stop bullets, but might help you escape the notice of an assailant who's revved up on adrenaline and psychotic delusions. When running through areas with no sources of cover, travel in a zigzag pattern to create a challenge for a shooter who is likely to be inexperienced.

If you're hiding in a confined space, lock down and barricade doors (see pages 142 and 144). Steer clear of the line of the doorway, the "fatal funnel" through which the majority of bullets fly.

If all else fails, fight. Team up, grab improvised weapons, and assign tasks. Fight with extreme violence and aggression. Your life

depends on it.

No. 086: Survive an Inspired Terrorism Attack

CONOP: Employ proactive tactics to survive an inspired terrorism attack.

COA 1: Hit the deck! Take cover.

COA 2: Identify where shots are coming from.

COA 3: Run away from shooter.

COA 4: Hide behind cover or concealment.

COA 5: Lock down if in confined space.

COA 6: Fight if all else fails.

BLUF: In the U.S. alone, there are approximately twenty mass shootings per year.

087 Survive Long-term Captivity

Long-term solitary confinement in a windowless subterranean warren, far outside the reach of law enforcement or rescue, would be enough to make most human beings crack. Yet survivors of prolonged episodes of captivity report monumental and sometimes surprisingly successful efforts at preserving their mental acuity and psychological equilibrium under even the most unimaginable conditions. Though most captives assume they are completely powerless, a combination of internal habits of mind and external behaviors can improve both their survivability and their odds of escape.

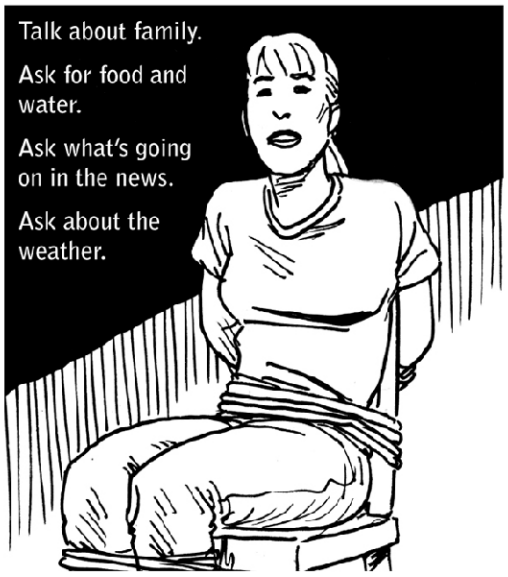
Despite the complex and dark matrix of feelings captors will inspire, they become the other half of a captive's primary relationship during captivity—a relationship the smartest of captives learn to nurture and manipulate. Establish a rapport with captors over time, developing individual bonds with the most sympathetic among them. Use small talk to extract information about the outside world and to humanize yourself to captors—while making the most of your limited access to social contact, an essential component of psychological stability. And remember: Your captor is human, too. You're both going through the same ordeal, though you may be on different sides of the bars. The more quickly you can humanize yourself to the person on the outside, the better chance you'll have of cultivating an asset who'll advocate on your behalf for basic survival needs and improvements in quality of life. But be very strategic about when and how you ask for favors. You are engaged in a mental game of chess, using your dependence to create a sense of responsibility without arousing suspicion or the sense that your captor is being taken advantage of.

Captors from other cultures may hold long-entrenched beliefs about the inferiority of captives, who may be seen as dogs, heathens, intrinsically evil, and essentially subhuman creatures. Wild or erratic behavior will only confirm their prejudices. Regardless of poor treatment on their part, do your best to maintain a polite and collected external facade. A crying, whimpering, or outwardly angry prisoner becomes a prisoner who is all too easy to neglect or ignore, where a prisoner who gratefully accepts food is one who is more likely to be regularly fed.

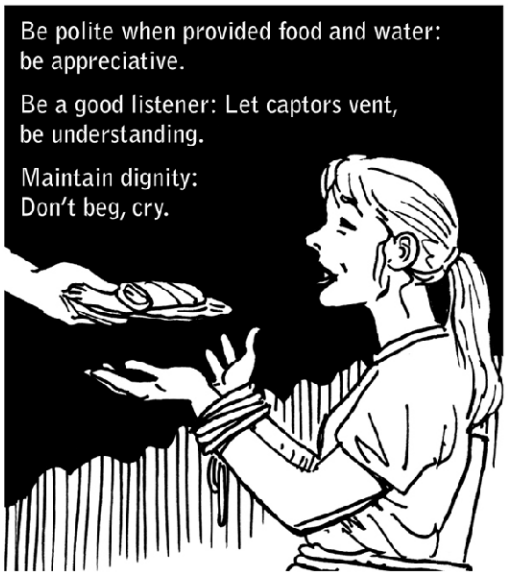
No. 087: Survive Long-term Captivity

Implement daily habits to increase odds of survivability during long-term hostage situations.

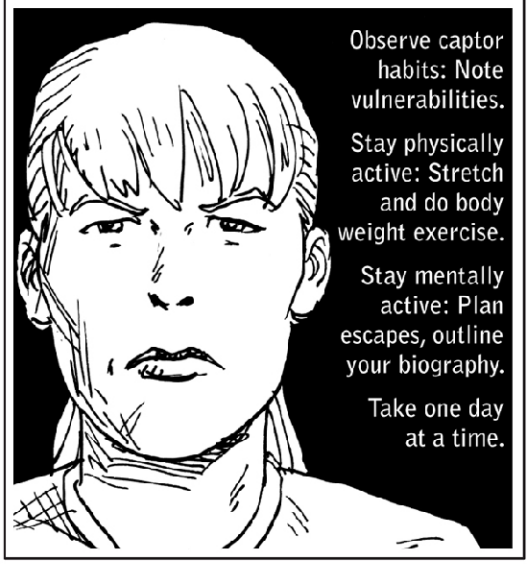
COA 1: Establish rapport.



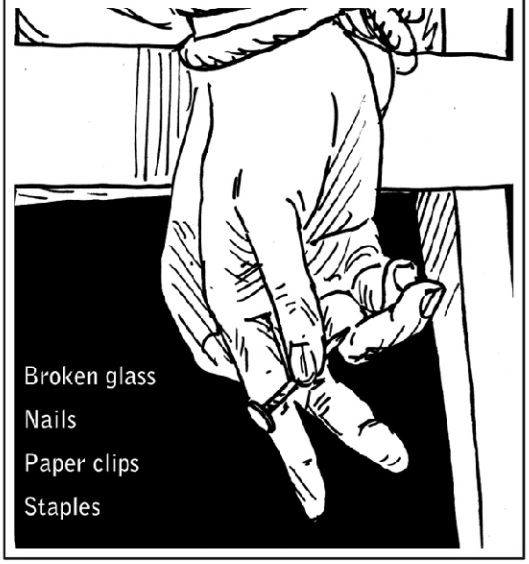
COA 2: Create dependence.



COA 3: Maintain survival mindset.



COA 4: Collect tools for escape.



BLUF: The more human you are, the more difficult it is to rape or kill you.

Do not fall into the trap of assuming your captivity will end in either rescue or death, a mindset that makes it all too easy to slip into passivity while ignoring the third option, escape. Staying physically and mentally active will both improve your odds of survival and make it more likely that you will be able to seize the opportunity for escape when it arises.

And arise it will. Take advantage of the natural accumulation of complacency in your captors. On day forty of your captivity, they will not be nearly as attentive as they were on day one. Unlike the wardens of organized, ultramodern prison facilities, captors aren't generally working in airtight security contexts. There *will* be holes in their routines and structural vulnerabilities in their detainment compounds, and the watchful captive will observe, catalog, and exploit these security gaps over time. Staying focused on this constant state of information collection will have the beneficial side effect of keeping the captive mentally alert.

Watch, wait, and plan. Collect tools and ideas. An empty room is not as empty as you think. Gather nails and splinters from furniture, scrape paint chips off the wall, break pieces of metal away from air vents.

There's no telling what a particular escape path may look like, but any routine that involves temporarily moving you out of the containment space is an opportunity to gather intel or make a run for it. Use glimpses of external facilities to catalog information that may be useful for escape. Where are the exits? Where are guards stationed? When are guards' mealtimes?

A locked door that is temporarily opened presents an opportunity to tamper with the strike plate, the part of a lock into which the deadbolt enters. Each time you pass through the doorway, surreptitiously pack the strike plate with a balled-up wad of paint stripped from the wall. Eventually, you will have created a situation in which the deadbolt isn't fully seated and can easily be pushed back into the door with a nail or other piece of thin metal debris.