

Surviving an Asteroid Strike



Unless you are actually unfortunate enough to be in the area that has become ground zero of a large asteroid strike there is a distinct possibility that you will survive the initial impact.

Having said that the size of the rock, its speed and composition as well as the geography of the area you live in will all determine if the strike pushes you towards your terminal event or whether you survive. Lets take those things one by one:

- **Size and Speed:** It's not hard to understand that the larger the asteroid the more damage will be caused over a wider area. A high-powered rifle bullet leaves the barrel at around 2,500 miles per hour...or 0.69 miles per second. Now the bullet is small but the speed is fast so it will cause significant damage to whatever it bumps into before it runs out of energy and falls to the ground. Now lets look at an asteroid, a modest one, 20 yards across shall we say? Ok, the average speed of an asteroid when it hits the ground is around 12.5 miles per second which equates to nearly 45,000 miles an hour...and it's a lot bigger than a rifle bullet – there's going to be a very large hole and nothing left of anything it hits before it's sheer momentum forces it into the earth's crust.
- **Composition:** The composition of the asteroid doesn't alter its size, 20 yards is 20 yards. What it does alter is the mass of the object. An asteroid higher in iron will be much heavier than one made of just rock and the heavier it is the more damage it will cause. If you want to test this out throw a small rock at a watermelon then throw a lump of iron the same size as the rock at the watermelon. Providing you hit the melon both times the difference the added mass made will be instantly apparent.
- **Geography:** Where you live and the geography of the area will help decide your fate. Living on the coast when an asteroid plunges into the ocean near by may give rise to a tsunami due to the massive displacement of water. Living near an active fault when it takes a hit from an asteroid could trigger a massive earthquake. Living in the mountains and you may find yourself dealing with rock falls and landslides. Geography matters.

So, surviving a non-direct hit from an asteroid depends on many things and to even contemplate living through such an impact means you need to know the hazards that a

strike could cause in your area. There is no point even considering long-term survival until you have worked this out and mitigated the risks as far as you can.

Unlike moving away from an active fault line to a safer area there is no point at all moving because there are hazards in your area unless you were going to do so anyway. Where an asteroid hits depends on the speed and direction of travel and the rotation of the earth, it's a lottery. Given time, we would be warned of the prospective impact site but other than that you wouldn't even be able to hazard a guess where it was going to land.

So, you've done your homework, mitigated as many problems as you can...life is sweet right? Well no, not really.

“The big chill following the impact of the asteroid that formed the Chicxulub crater in Mexico is a turning point in Earth history,” says Julia Brugger from the Potsdam Institute for Climate Impact Research (PIK), lead author of the study to be published in the *Geophysical Research Letters*. “We can now contribute new insights for understanding the much debated ultimate cause for the demise of the dinosaurs at the end of the Cretaceous era.” To investigate the phenomenon, the scientists for the first time used a specific kind of computer simulation normally applied in different contexts, a climate model coupling atmosphere, ocean and sea ice. They build on research showing that sulfur-bearing gases that evaporated from the violent asteroid impact on our planet's surface were the main factor for blocking the sunlight and cooling down Earth.

In the tropics, annual mean temperature fell from 27 to 5 degrees Celsius

“It became cold, I mean, really cold,” says Brugger. Global annual mean surface air temperature dropped by at least 26 degrees Celsius. The dinosaurs were used to living in a lush climate. After the asteroid's impact, the annual average temperature was below freezing point for about 3 years. Evidently, the ice caps expanded. Even in the tropics, annual mean temperatures went from 27 degrees to mere 5 degrees. “The long-term cooling caused by the sulfate aerosols was much more important for the mass extinction than the dust that stays in the atmosphere for only a relatively short time. It was also more important than local events like the extreme heat close to the impact, wildfires or tsunamis,” says co-author Georg Feulner who leads the research team at PIK. It took the climate about 30 years to recover, the scientists found.

The study goes on to say that disturbed ocean circulation altering the turnover patterns in the water most likely led to massive algae blooms – which are often toxic, causing even further changes to marine life.

Now regardless of what Hollywood will have us believe man and dinosaurs did not exist at the same time...there were no humans for the Chicxulub impact to affect. If such an impact were to happen today billions of people would be affected and a several of those billions would most likely die from the initial impact, the geographical changes brought on by the impact or the change in climate caused by the impact.

If there was a 20°C drop in temperatures around the globe much of the northern hemisphere would be looking at decades of zero to sub-zero temperatures. The rest of the world would have severe disruption to farming and agriculture as crops usually grown in warmer areas became susceptible to increasing cold.

So how would we survive?

With forward planning and ingenuity, something that is already a way of life for many of us:

- Long-term food supplies in quantities to last for at least 10 years and preferably a little more.
- A pre-planned solution for growing food undercover such as a walpini. . Heat loss would be minimized by having soil around the walpini even if ground heat diminished over time.
- Alternative heating and cooking facilities and enough fuel to accommodate both systems. Who knows what state the grid will be in and even if it survives relatively intact then massively increased demand will mean rolling blackouts in order for the system to stay operational.
- A means to provide extra insulation to your home so the heat you do produce stays inside where you want it.
- A means of dealing with rodents who at the first sign of unexpected cold will be in your garage, your home and anywhere else that offers shelter from the elements.
- Enough “other” supplies to last for an extended period of time. Again grid linked if supply chains fail what you have is all that you have and it will remain that way.

In short, what you need to do is pretty much what you do already but on a bigger scale. It's what you need to do, and are most likely already doing in preparation for any other mega-disaster that could see the grid down for an extended period.

Most disasters come down in some way to a lack of electricity, the magic stuff that powers our homes and industry, that keeps us warm – or cool, that keeps the supply chain running.

Plan for a life without electricity and you are covering a major aspect of most disasters. Surprising how dependant we have become on this invisible thing that has only actually been around for a couple of hundred years isn't it?

Original at <http://undergroundmedic.com/page/8/>