Each volcano has unique warning signs that eruption is imminent

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Mount Agung is a volcano in Bali, Indonesia. Volcanoes are mountains that can erupt with lava, which is melted rock. Lava is burbling at the top of Mount Agung. People living near Agung were told to leave. Scientists think Mount Agung might erupt soon. How do they predict this?

Mount Agung’s sides are bulging from all the magma inside it. The magma is trying to push its way out. Magma is melted rock from below the ground. If it is hard for the lava and magma to come out, the pressure builds up. Then Agung shoots out ash instead.

Every volcano is different. They each do different things before erupting. One might tell you it's going to erupt by causing more earthquakes. A different volcano might just get taller as melted rock swells under it.
Scientists study each volcano closely. They look at how it acted before the last time it erupted.

**Collecting Information About Volcanoes Is Difficult**

For most volcanoes, we don’t know enough. The last time Agung erupted was in 1963. That was before we had all the tools we have today to measure it.

Mount Pinatubo in the Philippines erupted in 1991. Before that, it had not erupted for 500 years. In 1991, two months of changes came before the eruption. Ash burst from the top. The volcano's shape changed. Earthquakes were bigger. They also happened more often.

We know more about Mount St. Helens volcano in the U.S. Scientists have watched it for many years. They can now make good predictions about it. They know that if there are small earthquakes happening it will erupt in two weeks.

We don’t know exactly what Agung volcano did before its 1963 eruption. These events could mean an eruption is coming in two weeks. Or, it could be months or even years.
Correct Predictions Are Important

Today, we use satellites to study volcanoes. Satellites give scientists a good look at the volcano from space. They can’t give smaller details, though. Satellites usually only pass over a given volcano once every week or two. The other tools we use cost a lot of money. We cannot have them everywhere.

Predicting volcanic eruptions correctly is very important. If it erupts before people leave, they could die. They need to know before it happens.

What if they leave and the volcano doesn’t erupt? That can be a different problem. This happened in Mammoth Mountain, California, in 1984. People stopped visiting. It cost money for everyone to leave. The community lost millions of dollars. The eruption never happened.

To predict eruptions correctly, we need to know about each volcano. Without that, we have to compare with other volcanoes. Nothing beats really getting to know each volcano, though.

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