

Second quake part of chain reaction: scientists

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The 7.3-magnitude earthquake that struck Nepal on Tuesday, 17 days after a lethal 7.8 temblor, is part of a chain reaction in a notorious seismic hotspot, scientists said.

Like buttons popping off one by one from a shirt that is ripped open, a large [quake](#) displaces stress to another part of a fault, causing it to rupture, they said.

"Large earthquakes are often followed by other quakes, sometimes as large as the initial one," said Carmen Solana, a volcanologist at Britain's University of Portsmouth.

"This is because the movement produced by the first quake adds extra stress on other faults and destabilises them," she told the Science Media Centre (SMC), a not-for-profit organisation based in London.

"It is a [chain reaction](#)."

Tuesday's quake hit 76 kilometres (47 miles) east of the Nepalese capital Kathmandu, followed around half an hour later by a second tremor of 6.3 magnitude.

The April 25 quake, which killed more than 8,000 people, occurred a similar distance west of Kathmandu.

Both events happened on the same fault, where the Indian and Eurasian

plates of the Earth's crust meet, bumping and jostling.

"Since the first earthquake in April, aftershocks have been migrating more or less southeastwards," Nigel Harris, a professor of tectonics at Britain's Open University, told the SMC.

"There has been a rip in the underlying plate which has suddenly moved west to east, and this second earthquake is an extension of that process."

The April 25 and May 12 quakes were shallow, which means that ground shaking is far greater than with temblors that occur at depth, the scientists said.

Pascal Bernard, a seismologist at the Institute for Planetary Physics in Paris, said aftershocks in the region were unlikely to be greater than five magnitude.

Over 80 years prior to Tuesday's quake, eastern Nepal had an 8.1 temblor in 1934. Around 10,700 people were killed in Nepal and neighbouring India.

"This means that pressure between the two [tectonic plates](#) in this region has significantly eased," Bernard told AFP.

At the interface of the two plates, the Indian plate is riding upwards at around two centimetres (fourth-fifths of an inch) a year.

The movement is not smooth but rather laden with friction, leading to sharp and potentially destructive jolts as stress builds up.

"The boundary region of the India and Eurasia plates has a history of large and great earthquakes," the US Geological Survey (USGS) said on its website.

"Prior to April 25, four events of magnitude six or larger had occurred within 250 km of this area over the past century."

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