

Frequently asked questions about Pele's hair and health

This document complements an existing FAQ document on vog that is available on the Hawaii Interagency Vog Information Dashboard at <https://vog.ivhnn.org/what-vog>

What is Pele's hair?

Pele's hair is commonly produced from eruptions in Hawai'i, during fissure, vent, or lava lake activity, as well as by other similar eruptions around the world. Pele's hair is formed when liquid lava is propelled into the air, some of which stretches into long, thin strands of glass, which can look a lot like human hair. These strands can be carried by the wind and land on the ground far from the eruption site. The strands often break into much smaller, sharp pieces.

Is Pele's hair harmful if touched?

The broken pieces of Pele's hair can have sharp ends. They can poke or puncture the skin, like a wood splinter, if people handle these particles or walk on them with bare feet. This can be irritating or painful. Please warn children not to pick up or play with Pele's hair. The glass itself is not poisonous although it can be a problem if swallowed or inhaled (see next questions).

Is Pele's hair harmful if inhaled?

Most Pele's hair is too large to be breathed in (inhaled). Particles in the air can only enter the lungs if they are less than 10 micrometers (PM10) in diameter, which is about an eighth of the width of a human hair. It is possible for some Pele's hair to be this small, and analyses are ongoing to measure the very smallest hairs produced from recent eruptions on Hawai'i. People may be concerned that Pele's hair could cut, lacerate or abrade the lungs because it is made from glass and is sharp, but this does not happen because such tiny particles float in the air stream and gently deposit.

People with existing respiratory diseases, like asthma, might find that their symptoms are worse when they are exposed to airborne volcanic particles. They should always carry their medication and talk to their doctor about a treatment plan. People without existing respiratory disease may find that the particles cause them to cough or have a sore throat.

There is little evidence in the medical literature that other types of volcanic mineral particles (i.e. volcanic ash from explosive eruptions) can cause respiratory or other disease, but no medical studies have been conducted specifically on the effects of inhaling Pele's hair.

Is Pele's hair harmful if swallowed?

Young children may be attracted to the glass and be tempted to put the glass pieces in their mouth. The glass shards may cut or be a choking hazard. Please keep children away from Pele's hair.

How can I protect myself from Pele's hair?

The best approach is to limit exposure. The information compiled by IVHHN on precautions for volcanic ash also generally applies to Pele's hair (<https://ivhhn.org/information>). When outdoors, consider wearing a well-fitting N95 or similar mask if you are in an area with falling or blowing Pele's hair. People involved in any clean-up of Pele's hair should make sure to wear a well-fitting N95 mask, good gloves, eye protection, and protective clothes, as Pele's hair can irritate the skin.

Will Pele's hair make my catchment water dangerous to drink?

For information about impacts of volcanic emissions on catchment water supply systems, please see <https://vog.ivhhn.org/catchment-systems>. This page includes specific advice for precautionary measures for catchment users during volcanic activity. During heightened activity, gutters should be temporarily disconnected from tanks and not reconnected until roof and gutters have been cleaned.

Volcanic emissions can acidify rainwater which, in turn, can dissolve metals such as lead, zinc and copper from roofing and plumbing materials. Volcanic elements (e.g., fluorine in the form of fluoride) may also get into rain catchment tanks close to the volcanic eruption. It should be noted that, even if levels of metals are found to be above EPA regulatory levels for drinking water, the EPA guidelines are based on exposure over many years.

Please note that the Hawaii State Department of Health advises people to not drink catchment water due to the risk of infectious diseases such as Rat Lung Worm and leptospirosis. However, showering, washing dishes and laundry uses are safe.

Additional resources:

Detailed information and FAQs on vog composition, protection, and impacts to human health, agriculture, infrastructure, and the environment is available on the Hawaii Interagency Vog Information Dashboard at <https://vog.ivhhn.org>.

Additional information on health impacts and protection from breathing volcanic ash is available from the International Volcanic Health Hazard Network at <https://ivhhn.org/information>.