

Death cap mushrooms (*Amanita phalloides*)

What are death cap mushrooms?

Death cap mushrooms (*Amanita phalloides*) are extremely poisonous because they contain harmful toxins. When eaten they can cause liver failure and death. Death cap mushrooms can be yellow, green or white depending on their age. These mushrooms have white gills, a white ring skirt on the stem and a loose, sac-like cup. These features develop at different growth stages. For photo examples and additional information, including what these mushrooms may look like at different growth stages), visit <https://explore.beatymuseum.ubc.ca/mushroom-sup/A-phalloides.html>. They can be mistaken for species that are safe to eat.

Death cap mushrooms were introduced to B.C. from imported European trees such as beech, chestnut, hornbeam, oak and many others. The mushroom is the fruiting body that appears above ground while the fungus remains underground.

Where are these mushrooms found?

Death cap mushrooms are mostly found in urban areas on Vancouver Island and the Lower Mainland. However, it's possible that these mushrooms grow in other areas of B.C. but have not yet been detected. They can be found in lawns, parks and outdoor shared spaces near host trees.

Death cap mushrooms usually appear during the fall rainy season (August to November). They may appear earlier in the summer (July to August) in lawns and areas that are regularly watered.

Who is at risk?

Two-thirds (66 percent) of mushroom-related calls (2017 to 2021) to the BC Drug and Poison Information Centre (DPIC) were about toddlers accidentally ingesting wild mushrooms, though

very few young children become more than moderately ill.

Severe illness is most often observed in teenagers and adults when death cap mushrooms have been mistaken for edible types and ingested in larger quantities. Cooking, drying or freezing does not inactivate the toxin found in death cap mushrooms.

In 2016, a young child in B.C. died due to eating harvested, wild mushrooms that were later identified as death cap mushrooms. Of the world's mushroom-related fatalities, 90 percent are caused by death cap mushrooms.

What are the symptoms?

Symptoms of death cap mushroom ingestion occur in three phases:

- First phase – within 6 to 24 hours of ingestion: Abdominal cramping and pain, nausea, vomiting, watery diarrhea, low blood pressure from severe fluid loss and dehydration can occur
- Second phase – within 24 hours of ingestion: symptoms may fade, and you may feel fine for up to 72 hours
- Third phase – within 3 to 6 days: symptoms of liver and kidney damage. For example, yellowing of the skin and eyes, low blood sugar and confusion

In the most severe cases, individuals may die.

What is the treatment?

There is no known antidote for death cap mushroom poisoning, although activated charcoal and other medications may be given in health care settings. Treatment is generally supportive, meaning medical care is focused on helping reduce symptoms. A liver transplant may be required if liver failure occurs. Once organ failure begins, this may lead to convulsions, hemorrhage, coma and death.

What should I do if I think I have eaten a poisonous mushroom?

If you suspect you have eaten a death cap mushroom or another poisonous mushroom, **call the Drug and Poison Information Centre at 1-800-567-8911 or go to an emergency room, especially if you are having symptoms.**

Bring samples of the mushroom with you if possible. If these are not available, provide photos and information about where the mushrooms were collected.

What should I do if I suspect I have found a death cap mushroom?

If you find a death cap mushroom around your home, you can remove it safely. Touching death cap mushrooms is not a risk, however you may want to use disposable gloves to handle them. Place the mushroom securely in a bag and then place the bag in the regular garbage or into municipal compost (where temperatures higher than 60°C will degrade the mushrooms). Wash your hands with warm water and soap after handling. Do not place the mushroom in your home compost pile as this could help spread the fungus to new locations.

Death cap mushrooms are an invasive species, and you can submit a report using the Invasive species mobile app to the Ministry of Forests. Visit the [Reporting invasive species](#) page for more information.

How do I protect myself and my family?

Do not collect or eat unknown mushrooms. Be sure about identification, because death cap mushrooms can look similar to edible species. Only buy mushrooms from retail stores that receive their mushrooms from commercial growers. Be cautious about buying wild mushrooms from vendors that cannot verify their knowledge and the source of the mushrooms. The sale of wild mushrooms is an unregulated industry in Canada.

Remove any fruiting mushrooms from your yard if you have young children or pets in your

household and monitor outdoor play areas before letting them play outside.

Reduce watering in areas where death cap mushrooms are known to grow. This will prevent mushrooms from fruiting in the summer months; however, they will likely appear again with rain in the autumn.

How can I tell whether a mushroom is poisonous?

Death cap mushrooms can be mistaken for puffball mushrooms (found locally) or paddy straw mushrooms (edible, and common in parts of Asia).

Not all wild mushrooms are poisonous but identifying the poisonous species can be difficult, even for experts. You should only eat mushrooms that have been identified by someone who is knowledgeable and has experience identifying edible mushrooms.

Do not eat anything that you cannot identify as an edible species.

For more information

- Mushrooms Up! *Amanita phalloides* (Beaty Biodiversity Museum)
https://explore.beatymuseum.ubc.ca/mushroomsup/A_phalloides.html
- BC Centre for Disease Control – Death Cap Mushrooms www.bccdc.ca/health-info/prevention-public-health/death-cap-mushrooms
- Death cap Mushroom Map
www.bccdc.ca/health-info/prevention-public-health/death-cap-mushrooms/death-cap-mushrooms-map
- BC Drug and Poison Information Centre
www.dpic.org
- Reporting Invasive Species (Ministry of Forests)
www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species

For more HealthLinkBC File topics, visit www.HealthLinkBC.ca/health-library/healthlinkbc-files or your local public health unit. For non-emergency health information and advice in B.C. visit www.HealthLinkBC.ca or call **8-1-1** (toll-free). For the deaf and hard of hearing, call **7-1-1**. Translation services are available in more than 130 languages on request.