Epidemiological Alert
Collection and consumption of wild mushrooms in the Americas Region
17 November 2026

Given the occurrence of severe poisonings and deaths associated with the consumption of toxic wild mushrooms in recent years in countries of the Americas Region, and considering the risk of new incidents related to environmental factors that favor the presence of toxic species, particularly in the context of the El Niño phenomenon, there remains a need to strengthen prevention and response measures. Added to this are the difficulties in providing timely diagnosis and treatment, including the limited availability of specific antidotes. In this context, PAHO/WHO recommends strengthening surveillance, clinical management, risk communication, and intersectoral coordination to reduce the occurrence and impact of these events.

Background on food poisoning due to wild mushroom consumption

The consumption of wild mushrooms is an age-old practice; however, the ingestion of toxic species constitutes a public health problem due to their ability to cause clinical symptoms ranging from gastrointestinal disorders to organ failure and death *(1)*. The morphological similarity between some toxic and edible species contributes to misidentification and accidental consumption *(2)*. Among the species of greatest toxicological significance are those containing amatoxins, which are responsible for more than 90% of deaths from mushroom poisoning worldwide, primarily due to their ability to cause acute liver failure *(1)*.

The risk of poisoning may increase during rainy seasons, when environmental conditions favor the fruiting of toxic species, including those containing amatoxins *(3)*. In this context, the El Niño phenomenon may alter precipitation patterns in the Americas Region. For the period between October and December 2026, the World Meteorological Organization forecasts a higher probability of above-normal rainfall in parts of North America and southeastern South America, which could result in a greater abundance of toxic wild mushrooms and increase the risk of exposure through their collection and consumption *(4)*.

Despite the severity of the clinical presentations that some species of wild mushrooms can cause, their diagnosis and treatment present significant challenges. The difficulty in identifying the species consumed can limit the direction of clinical management, which varies depending on the toxic syndrome and may require specialized care *(5, 6)*. In cases of amatoxin poisoning, limitations also persist regarding the standardization of treatment and access to specialized confirmatory tests *(3)*.

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Summary of the situation in the Americas Region

In the Americas Region, the presence of various toxic wild mushroom species has been documented. Among them are some species of the genus Amanita, such as *Amanita phalloides*, whose consumption can cause severe or fatal poisoning and whose presence has been documented in Canada, Chile, the United States of America, and Uruguay, among other countries *(6–9)*. Likewise, 107 toxic species of wild mushrooms have been identified in Mexico, and in Mexico and Central America, various syndromes associated with their consumption have been characterized, with gastrointestinal, neurological, hepatic, and renal manifestations *(5)*.

The documented cases of poisoning and deaths in the Americas Region highlight the risk associated with the collection and consumption of these species. In Mexico, deaths have been reported in recent years in the States of Chiapas, Hidalgo, Puebla, and Veracruz *(10)*. In Guatemala, cases of poisoning have been recorded in the departments of Huehuetenango, Jalapa, Sololá, Totonicapán, and Quiché *(11)*. Similarly, between November 2025 and March 2026, in the state of California, United States, 39 cases of suspected amatoxin poisoning were reported, including three patients who required liver transplants, and four deaths were recorded *(3)*.

The forecast of above-average rainfall in certain areas of the Americas Region, such as southern Chile, southern Brazil, Uruguay, Paraguay, and northern Argentina, and variations in the rainy seasons in Central America, combined with the documented presence of toxic wild mushrooms, underscore the need to strengthen surveillance of poisoning cases associated with consumption of toxic mushrooms *(12)*. In areas where rainfall coincides with favorable temperatures, the abundance of toxic mushrooms could increase, and where wild mushrooms are collected and consumed, the risks of exposure increases.

Guidance for Member States

Surveillance and epidemiological investigation

- It is recommended to incorporate poisoning from the consumption of wild mushrooms into the surveillance of foodborne illnesses and poisonings, and to establish mechanisms for the timely reporting of severe cases, deaths, clusters, and other unusual events. Information should be shared among health care facilities, poison control centers, laboratories, and public health authorities *(13, 14)*.
- Establish an operational case definition that considers exposure, clinical presentation, the interval between ingestion and the onset of symptoms, geographic location, and the epidemiological link to other cases. Based on available clinical, epidemiological, taxonomic, or analytical information, cases could be classified as suspected, probable, or confirmed *(15)*.
- Record the date and time of ingestion and the onset of symptoms; the mushrooms consumed or their description; the location and circumstances of collection or acquisition; the method of preparation; the number of exposed individuals; the clinical manifestations; the care received; and the course of the illness. Individuals who shared the food should also be identified, even if they remain asymptomatic *(16)*.

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- Upon detection of a cluster, it is recommended to conduct active case finding, compile a list of names, identify the food and the common source, determine whether the mushrooms were collected, distributed, or sold, and establish the distribution of the event by person, time, and place *(16)*.
- It is recommended to periodically analyze information from epidemiological surveillance, poison control centers, and emergency departments to identify changes in the frequency, geographic distribution, severity, and seasonality of poisonings *(17, 18)*.

Diagnosis and laboratory confirmation

- It is recommended that the initial evaluation be based on the history of ingestion, the time interval until symptom onset, the clinical presentation, and evidence of organ involvement. It should be noted that the absence of symptoms immediately after ingestion does not rule out severe poisoning, since some toxins can cause hepatic, renal, or neurological manifestations after a latency period that may extend up to 48 hours after ingestion *(19)*.
- Conduct a complete clinical evaluation and, when potentially severe poisoning is suspected, order a complete blood count, glucose, electrolytes, renal and hepatic function tests, and coagulation tests. These tests should be repeated based on the time elapsed since ingestion, the clinical syndrome, and the patient's course *(20)*.
- It is recommended to preserve, when available, unconsumed specimens, food remnants, and other relevant samples, as well as to document the location and date of collection. Identification should be performed by personnel with experience in fungal taxonomy, given that there is no simple visual characteristic that reliably distinguishes all edible species from toxic ones *(21)*.
- Establish referral mechanisms with specialized laboratories or institutions for taxonomic identification and, when available, toxicological analyses. Obtaining or sending samples should not delay clinical care or the implementation of supportive measures *(16, 18)*.
- Communicate the taxonomic and toxicological results to the treating team, the surveillance system, and the toxicology information and advisory center to support case management and the detection of related events *(17)*.

Clinical management and treatment

- It is recommended to treat any suspected wild mushroom poisoning as a time-sensitive medical emergency and to consult the toxicology information and advisory center or a clinical toxicology specialist promptly *(3, 17)*.
- Stabilize vital functions and assess the airway, respiration, circulation, neurological status, and hydration. Treatment should include necessary supportive measures, correction of fluid and electrolyte imbalances and glucose levels, and management of hepatic, renal, neurological, or coagulation complications *(16, 20)*.
- It is recommended to keep patients under observation or admit them when the ingested species is unknown, symptoms are delayed or persistent, laboratory abnormalities or signs of organ involvement are present, or adequate clinical follow-up cannot be ensured *(19, 22)*.

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- The need for gastrointestinal decontamination or specific treatments should be determined based on the time elapsed since ingestion, the toxic syndrome, clinical conditions, and national protocols, preferably with toxicological consultation. In most cases of poisoning, management should focus on clinical observation and symptomatic and supportive treatment *(1, 17)*.

- Consider there is no universal antidote for wild mushroom poisoning and that the availability of specific treatments may be limited in some facilities in the Americas Region *(1, 3)*.

- It is recommended that patients with progressive clinical deterioration, hypoglycemia, coagulopathy, encephalopathy, renal failure, or acute liver failure be referred early to an intensive care unit. In cases of rapidly progressing acute liver injury or suspected acute liver failure, early transfer to a facility with liver transplant capabilities is recommended *(3, 22)*.

- It is recommended to evaluate other individuals who have consumed the same food, even if they remain asymptomatic, particularly if any of them present with delayed-onset symptoms or evidence of liver or kidney involvement *(16, 23)*.

Prevention in the community and health care settings

- It is recommended to consume only mushrooms whose species have been conclusively identified as non-toxic by a person with specialized knowledge. One should not rely on rules based solely on color, odor, shape, the presence of insects, or other visible characteristics to determine their safety; if there is any doubt regarding the safety of the collected specimens, they should be considered unfit for consumption *(19, 21)*.

- It is recommended to inform the public that cooking, drying, peeling, or other common methods of preparation do not necessarily inactivate the toxins present in wild mushrooms *(19)*.

- It is recommended that training be strengthened for staff in primary care, emergency medicine, pediatrics, internal medicine, and intensive care to recognize the main toxicological syndromes, identify signs of severity, and refer patients to specialized services in a timely manner *(17)*.

- It is recommended to develop local educational activities on safe identification and the species to be avoided, with the participation of specialists, experienced foragers, and communities that maintain traditional foraging practices. Both scientific knowledge and local knowledge should be used with caution, as neither is infallible on its own *(21)*.

Public health measures

- It is recommended to establish coordination mechanisms among public health agencies, toxicological information and poison information centers (PICs), healthcare services, laboratories, and authorities responsible for food safety, agriculture, the environment, civil protection, and local governments, with defined roles and procedures for detection, investigation, and response *(18)*.

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- Toxicological information and advisory centers should be strengthened, as should preventive interventions in communities that may be most at risk *(13)*.
- It is suggested that areas and periods of increased risk be identified through an integrated analysis of cases, toxicological consultations, and available environmental and seasonal data. The results should be used to guide surveillance, service preparedness, and preventive communication *(18)*.

Risk communication

- It is recommended to disseminate clear, timely, consistent, and action-oriented information, tailored to the languages, knowledge, cultural practices, and communication channels of exposed populations. Messages should be coordinated among health, agriculture, environmental, and food safety authorities *(24)*.
- It is recommended to communicate that only mushrooms conclusively identified as non-toxic should be consumed; that cooking does not guarantee the elimination of toxins; that some severe cases of poisoning may begin several hours after ingestion; and that, upon the onset of symptoms, immediate medical attention should be sought and health care personnel should be informed about the consumption and source of the mushrooms *(19)*.
- Mushrooms generally considered safe tend to grow at certain times of the year; the emergence of wild mushrooms outside of regular harvesting seasons should be considered risky.

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