

# Unexpected toxicity associated with *Uncle Frog's Mushroom Gummies*



## **N** SAFETY NOTICE 015/24

Issue date:	26 June 2024
Content reviewed by:	Centre for Alcohol and Other Drugs – NSW Ministry of Health, NSW Standing Panel on Toxicity Risk, Emergency Care Institute Clinical Director
Distributed to:	Chief Executives; Directors of Clinical Governance; Director, Regulation and Compliance Unit
KEY MESSAGE:	Inform NSW Health clinicians of the risk of unexpected toxicity associated with <i>Uncle Frog's Mushroom Gummies</i> and pathway for reporting such reactions
ACTION REQUIRED BY:	Chief Executives, Directors of Clinical Governance
REQUIRED ACTION:	<ol style="list-style-type: none"> <li>1. Distribute this Safety Notice to all relevant clinicians and clinical departments where patients may present with signs and symptoms of unexpected toxicity related to the use of mushroom gummies.</li> <li>2. Ensure that clinicians and other relevant staff are aware of the <i>Recommendations</i> and <i>Notification</i> sections of this Safety Notice and take appropriate action.</li> <li>3. Confirm receipt and distribution of this Safety Notice within 72 hours to: <a href="mailto:MOH-PRISE@health.nsw.gov.au">MOH-PRISE@health.nsw.gov.au</a>.</li> </ol>
DEADLINE:	COB 1 July 2024
We recommend you also inform:	<p>Directors, Managers and Staff of:</p> <ul style="list-style-type: none"> <li>• Emergency Departments</li> <li>• Drug and Alcohol Services</li> <li>• Mental Health Services</li> <li>• Toxicology Units</li> <li>• Ambulance</li> <li>• Forensic Medicine Services</li> <li>• Intensive Care Units</li> <li>• Neurology Services</li> <li>• Medical Services, Pharmacy Departments and Nursing/Midwifery Services</li> </ul> <p>Drug and Therapeutics Committees.</p> <p>All other relevant clinicians, departments and committees.</p>
Website:	<a href="https://www.health.nsw.gov.au/sabs/Pages/default.aspx">https://www.health.nsw.gov.au/sabs/Pages/default.aspx</a> <a href="http://internal.health.nsw.gov.au/quality/sabs/index.html">http://internal.health.nsw.gov.au/quality/sabs/index.html</a>
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## Situation

Since April 2024, five patients have presented to NSW Health Emergency Departments experiencing unexpected toxicity soon after consuming *Uncle Frog's Mushroom Gummies*. Two varieties of these products have been associated with the unexpected toxicity, the *Cordyceps Mushroom Gummies* and the *Lion's Mane Mushroom Gummies* (see images below). Product packaging lists the contents of the gummies, including non-psychoactive mushrooms (cordyceps or lion's mane), and hemp derived extract. On some product packaging hexahydrocannabinol (HHC) or cannabidiol (CBD) is also listed.

Similar cases have also been reported in other Australian jurisdictions.

The cases had various symptoms including decreased consciousness, involuntary movements (including recurrent twitching of limbs and eye movements) which have been described as seizurelike, hallucinations, dizziness, anxiety, palpitations, nausea and persistent vomiting. All cases recovered and were discharged from hospital.

This Safety Notice is to inform NSW Health clinicians of the risk of toxicity associated with these mushroom gummy products, provide advice on recognition and supportive care, and advise of the need to report unexpected toxicity appropriately.

It is not clear at this time what substance(s) may be causing the toxicity, it may relate to cannabinoids or other substances. Investigations are ongoing.

A public warning [notice](#) will be issued to warn the public not to consume these substances. It is understood that the product will be recalled imminently and the recall notice will be published on the Food Standards Australia New Zealand [website](#).

## Pictures of the products



These pictures are from the company's website, which may differ from products implicated in this cluster.

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### Background

Mushroom gummies are often promoted as a health food, with many online sites advertising various types of products as nutritional supplements containing mushroom powders and extracts. There are increasing reports of toxicities with various substances in relation to some gummy products in Australia and internationally.

Increasing reports of HHC use and inclusion in gummy products have been noted overseas. HHC is an emerging cannabinoid which is a derivative of tetrahydrocannabinol (THC), a key active ingredient in cannabis. HHC is a psychoactive substance with effects reportedly similar to THC. It is naturally occurring but can also be produced synthetically (1).

One type of packaging for this product has listed HHC as an ingredient, however other packaging does not list this ingredient.

### Assessment

Cross-jurisdictional public health investigations with other agencies and regulatory authorities are ongoing.

A review of the cases identified by NSW Health has shown an association with the two *Uncle Frog's Mushroom Gummies* products. It is thought that sale of these products have occurred across Australia over the last 2 months via online purchases. These products are being advertised as containing non-psychoactive mushroom extracts including cordyceps (1000 mg) and lion's mane mushroom (1000 mg) and hemp derived extract (25 mg). A recall of these products is underway.

No samples have been available for laboratory testing of the two *Uncle Frog's Mushroom Gummies* products to date.

### Recommendations

- Clinicians are advised to include health supplements as part of taking a comprehensive patient medical history, and have increased suspicion for cannabinoid or other drug toxicity if mushroom gummies have been ingested. Other brands of gummies have been associated with toxidromes overseas.
- Exercise heightened awareness of the possibility of cannabinoid or other drug toxicity following ingestion of mushroom gummies. Look for signs and symptoms of cannabinoid, other drug toxicity (e.g. new psychoactive substances), and potential contaminants (e.g. psychoactive mushrooms or fungal toxins). These include nausea, vomiting, anxiety, hallucinations, hypotension, tachycardia, involuntary movements (including recurrent twitching of limbs and eye movements) which have been described as seizure like, respiratory depression, or reduced level of consciousness.

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- For clinical advice, consult your local toxicology service or the NSW Poisons Information Centre (PIC) on 13 11 26, who can advise on further management and arrange specific testing as indicated.
- If someone reports having consumed any form of mushroom gummy and is having unexpected toxicity please notify the NSW Poisons Information Centre (13 11 26) or NSW Ministry of Health as per the “notification” section.
- Ensure specific information regarding the specific product and retailer of purchase of mushroom gummies is obtained during history taking including ingredients, brand, and recommended and dose taken. Where possible, obtain samples or photos of the packaging and gummies.

## Notification

Notify the NSW Poisons Information Centre (13 11 26) or NSW Ministry of Health (MOH-PRISE@health.nsw.gov.au) of:

- any toxicity or death following consumption of mushroom gummies, OR
- any toxicity or death following consumption of products branded as *Uncle Frog's Mushroom Gummies*

Please ensure that urine, blood (EDTA sample) and product samples are collected and retained. If there is a physical sample available please request for it to be retained, obtain photos and/or the batch number of the product.

Please report what is available to MOH-PRISE@health.nsw.gov.au

## Further information

1. Russo F, Vandelli MA, Biagini G, Schmid MG, Luongo L, Perrone M, et al. Synthesis and pharmacological activity of the epimers of hexahydrocannabinol (HHC). *Scientific Reports*. 2023 Jul 8;13(1).
2. Labadie M, Nardon A, Castaing N, Bragança C, Daveluy A, Gaulier JM, et al. Hexahydrocannabinol poisoning reported to French poison centres. *Clin Toxicol (Phila)* 2024 Feb; 62(2): 112-119.