Cannabinoid Hyperemesis Syndrome

Cannabinoid hyperemesis syndrome (CHS) is a gastrointestinal condition associated with frequent and long-term use of cannabis (marijuana).

CHS causes acute onset of recurrent episodes of severe nausea, bouts of vomiting, and intense abdominal pain that last less than 1 week. The symptoms typically start abruptly within 24 hours of the last cannabis use. People with CHS often report temporary relief of symptoms when taking hot showers or baths, which may lead to compulsive bathing.[1,2]

How Common Is CHS and What Are the Risk Factors?

Although the exact number of people with CHS is unknown, based on emergency department surveys, CHS is estimated to affect about 2.75 million people in the US yearly. From 2017 to 2021, emergency department visits for CHS doubled in the US and Canada and were most common among males aged 16 to 34 years. The rise in CHS coincides with legalization of recreational cannabis and increases in delta-9-tetrahydrocannabinol (THC) concentration in cannabis products.

Risk factors for CHS include heavy cannabis use (typically daily or multiple times per day) for more than 1 year. Higher rates of CHS are reported in people who use cannabis before age 16 years, have other substance use disorders, and/or smoke cigarettes.

How Is CHS Diagnosed?

The diagnosis of CHS can be made in people who have had 3 or more yearly episodes of nausea, vomiting, and abdominal pain that last less than 1 week, who have used cannabis more than 4 days per week for more than 1 year, and whose symptoms disappear with cannabis cessation for at least 6 months.

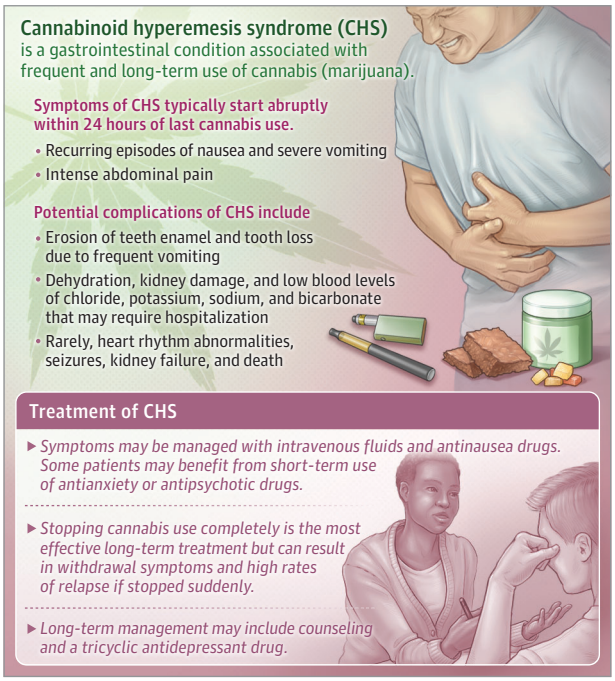
What Are the Complications of CHS?

Frequent vomiting due to CHS can cause erosion of teeth enamel and may result in tooth loss. CHS may also cause dehydration, acute kidney injury, and low blood levels of chloride, potassium, sodium, and bicarbonate, which may require emergency department visits and hospitalizations. Rare severe complications of CHS include heart rhythm abnormalities, kidney failure, seizures, and death.

Treatment for CHS

Patients who go to the emergency department with dehydration caused by CHS typically receive intravenous fluids and antinausea medications. Topical capsaicin (0.1%) cream applied to the upper abdomen may decrease nausea. Some patients may also benefit from acute and short-term use of benzodiazepines (antianxiety medication) and haloperidol (antipsychotic medication).

Complete cessation of cannabis use is the most effective long-term treatment for CHS. However, advising patients with CHS to stop cannabis use immediately may cause cannabis withdrawal symptoms and high rates of relapse. Counseling to achieve cannabis cessation and tricyclic antidepressants (such as amitriptyline) are recommended for long-term management of CHS. People with CHS who do not improve with these treatments may benefit from seeing a psychologist or psychiatrist.



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