



First Nations Health Authority  
Health through wellness

# Cannabinoid Hyperemesis Syndrome

## A new clinical condition

With increasing rates of cannabis use, a new clinical condition known as cannabinoid hyperemesis syndrome (CHS) has been identified. [1]

### WHAT IT IS

Cannabinoid hyperemesis syndrome (CHS) refers to cyclic episodes of severe nausea and vomiting, as well as abdominal pain, associated with daily long-term cannabis use. [2] The population most affected by this disorder is primarily young adult and adolescent males. [2] It is currently difficult to quantify the precise amount of cannabis consumed by clients who experience CHS. [2]

### WHY IT HAPPENS

Preliminary evidence suggests that CHS is a subset of cyclical vomiting syndrome triggered by daily, high-dose cannabis use, although the distinction between the disorders is often unclear. [3,4] Some limited evidence suggests that CHS results from a dynamic interplay between cannabinoid metabolism and complex pharmacodynamics at the cannabinoid receptor type 1. Individual genetics and variability in components between plants could also play a role. [2]

### SYMPTOMS

CHS is a recurrent disorder interspersed with symptom-free intervals. Researchers have identified three different phases of CHS: [5,6]

- **Early phase:** These symptoms may last several weeks to months
  - Nausea
  - Fear of vomiting
  - Abdominal discomfort leading to acute vomiting
- **Vomiting phase:** These symptoms may last for several hours and continue for days
  - Intense persistent nausea and vomiting
  - Retching up to five times per hour
  - Abdominal pain
  - Compulsive urge for a hot bath or shower

### ■ Recovery phase:

- Begins when the person stops using cannabis [6]
- It can take a few days to months for all symptoms to resolve and for a return to a normal state of general well-being [1]
- Symptoms resolve faster with 24 to 48 hours of intravenous fluid administration [6]
- Despite inconclusive evidence, pharmaceutical management may relieve symptoms of pain and nausea in some cases [6]

## DIAGNOSIS

Patients with CHS usually remain misdiagnosed for a considerable time period. [1] Clinical guidelines for diagnosing CHS do not currently exist. [7]

A systematic analysis of 170 case reviews and case studies published in 2016 identified some common diagnostic characteristics.

### MAJOR FEATURES OF CHS INCLUDE:

- Less than 50 years of age at onset
- Male predominance
- Daily or weekly cannabis use
- Severe, recurring, cyclic nausea and vomiting
- Abdominal pain resolves after cannabis use stops
- Hot showers or baths provide symptom relief

### ESSENTIAL CRITERIA TO DIAGNOSE CHS:

- Long-term cannabis use (more than one year).

### OTHER FEATURES THAT SUPPORT A DIAGNOSIS OF CHS INCLUDE:

- Weight loss of more than 5kg
- Morning nausea and vomiting

Content obtained from: *Cannabinoid Hyperemesis Syndrome* [6,7]

## PROPOSED TREATMENT OPTIONS

- Low quality and limited evidence suggests the only definitive treatment is abstinence. [2]
- Most treatments are targeted at the hyperemesis (vomiting) phase to prevent dehydration and alleviate symptoms of severe nausea and vomiting. [7,8]
- In some cases, applying capsaicin cream to the abdomen has led to dramatic or complete symptomatic relief of abdominal pain. [2]
- Dopamine antagonists may reduce the effects of THC withdrawal. [2]
- Hot showers or baths can provide temporary symptomatic relief during the hyperemesis phase. [8]

## TRANSFORMATION AND HEALING: THE RAVEN

The Raven is a symbol of identity and transformation. Healing requires knowing who you are and accepting who you were. This healing principle acknowledges that the path to wellness is a journey that encompasses the exploration of identity and that mistakes will be made along the way. We do not need to carry the burdens of the past; they transform us when we learn from them.

## REFERENCES:

- [1] Galli, J. A., Sawaya, R. A., & Friedenberg, F. K. (2011). Cannabinoid hyperemesis syndrome. *Current Drug Abuse Reviews*, 4(4), 241-249. <https://doi.org/10.2174/1874473711104040241>
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- [3] Venkatesan, T., Levinthal, D. J., Li, B., Tarbell, S. E., Adams, K. A., Issenman, R. M., Hasler, W. L. (2019). Role of chronic cannabis use: Cyclic vomiting syndrome vs cannabinoid hyperemesis syndrome. *Neurogastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society*, 31(2). <https://doi.org/10.1111/nmo.13606>
- [4] Venkatesan, T., Levinthal, D. J., Tarbell, S. E., Jaradeh, S. S., Hasler, W. L., Issenman, R. M., Li, B. (2019). Guidelines on management of cyclic vomiting

syndrome in adults by the American Neurogastroenterology and Motility Society and the Cyclic Vomiting Syndrome Association. *Neurogastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society*, 31(2). <https://doi.org/10.1111/nmo.13604>

- [5] Kheifets, M., Karniel, E., Landa, D., Vons, S. A., Meridor, K., & Charach, G. (2019). Resolution of Cannabinoid Hyperemesis Syndrome with Benzodiazepines: A Case Series. *The Israel Medical Association Journal: IMAJ*, 21(6), 404-407.
- [6] Price, S., Fisher, C., Kumar, R., & Hilgerson, A. (2011). Cannabinoid Hyperemesis Syndrome as the Underlying Cause of Intractable Nausea and Vomiting. *J Am Osteopath Assoc*, 111(3), 166-169.
- [7] Sun, S., & Zimmermann, A. E. (2013). Cannabinoid hyperemesis syndrome. *Hospital Pharmacy*, 48(8), 650-655. <https://doi.org/10.1310/hpj4808-650>
- [8] Bajgoric, S., Samra, K., Chandrapalan, S., & Gautam, N. (2015). Cannabinoid hyperemesis syndrome: a guide for the practising clinician. *BMJ Case Reports*. <https://doi.org/10.1136/bcr-2015-210246>

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## FURTHER READING:

Aziz, I., Palsson, O., Whitehead, W., Sperber, A., Simrén, M., & Törnblom, H. (2019). Epidemiology, Clinical Characteristics, and Associations for Rome IV Functional Nausea and Vomiting Disorders in Adults. *Clinical Gastroenterology and Hepatology*, 17(5), 878-886. <https://doi.org/10.1016/j.cgh.2018.05.020>

Simonetto, D. A., Oxentenko, A. S., Herman, M. L., & Szostek, J. H. (2012). Cannabinoid hyperemesis: a case series of 98 patients. *Mayo Clinic Proceedings*, 87(2), 114-119. <https://doi.org/10.1016/j.mayocp.2011.10.005>

Every attempt has been made to review and provide best practice research, evidence and information on the use of cannabis. Each fact sheet has gone through a thorough peer review. References and sources are numbered and listed both inline and at the bottom of every fact sheet.