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## BMJ Case Reports Press Release

### Man develops acute hepatitis from consuming too many energy drinks

A 50-year-old man was admitted to the emergency department with acute hepatitis, most likely due to his intake of 4-5 energy drinks every day for three weeks, reveal doctors writing in the journal **BMJ Case Reports**.

After the man started consuming energy drinks, he developed malaise, anorexia and worsening abdominal pain, which progressed to nausea, and vomiting. He originally thought his symptoms were down to a flu-like syndrome. However, he became alarmed when he developed dark urine and generalized jaundice.

He didn't note any changes in his diet or use of alcohol, tobacco, or illicit drugs, apart from consuming energy drinks. As a construction worker, he used the energy drinks to help get through his labor-intensive workday.

Physical examination revealed jaundice and right upper abdominal tenderness. Lab tests revealed high levels of liver enzymes, called transaminases, indicating liver damage, and evidence of chronic hepatitis C infection. Liver biopsy showed severe hepatitis.

Doctors who treated the man explain that his development of his acute hepatitis was likely due to excessive energy drink consumption, specifically vitamin B3 (niacin).

His intake was around 160-200 mg daily, below the threshold expected to cause toxicity, but similar to a previously reported energy drink associated hepatitis (around 300 mg of niacin daily).

Toxicity is likely worsened by accumulative effect. Each bottle of his energy drink contained 40 mg of Niacin, or 200% of the recommended daily value.

The patient was treated with close observation, frequent monitoring, and symptom management. He discontinued consumption of all energy drinks and he was advised to avoid any similar niacin-containing products in the future.

Around 50% of cases of liver failure in the US are due to drug induced liver injury, explain the doctors. The list of associated drugs and toxins has significantly grown as the market for dietary and herbal supplements continues to rapidly expand.

Estimates suggest approximately 23,000 emergency department visits each year are due to adverse events related to dietary supplements.

"As the energy drink market continues to rapidly expand, consumers should be aware of the potential risks of their various ingredients. Vitamins and nutrients, such as niacin are present in quantities that greatly exceed the recommended daily intake, leading to their high risk for harmful accumulation and toxicity," they conclude.

Case Report: A rare cause of acute hepatitis: a common energy drink <http://casereports.bmj.com/content/2016/bcr-2016-216612>

## Doctors warn of prolonged heart effects of multiple bee stings

Doctors writing in the journal **BMJ Case Reports** describe the case of a healthy 55-year-old man in India who developed serious heart problems several weeks after being attacked by a swarm of bees.

While walking in a forest, he suffered more than 50 stings, and he was admitted to hospital with facial puffiness, breathlessness and sudden tiredness.

He had no history of heart problems and heart tests were normal. After initial treatment, his condition improved and he was discharged with anti-inflammatory medication.

But around three weeks later, he was back in hospital after developing a dangerously slow heart rate, repeated fainting, and suffering a cardiac arrest. He almost died.

The doctors managed to save his life by inserting a temporary pacemaker, which was later replaced with a permanent pacemaker. His condition improved and he was eventually discharged home.

The doctors suspect the man had developed Kounis syndrome (a group of acute coronary events) triggered by a delayed allergic reaction to the massive amount of bee venom in his system.

Another possible reason, they say, could have been that the bees had consumed the nectar of a rhododendron flower, which contains 'grayanotoxin' (a natural sodium channel blocker that can slow the heart).

The cardiac effects of bee venom have been previously reported. But this case is of particular importance, explain the authors, "because earlier accounts of massive bee stings have

not reported significant bradycardia. Hence, we were unaware of this complication, and hesitated to implant a temporary pacemaker.”

This report highlights the need to consider heart complications in patients with multiple bee stings, and the need for urgent action in order to prevent death, they conclude.

Case report: Possible complication of bee stings and a review of the cardiac effects of bee stings

<http://casereports.bmj.com/content/2016/bcr-2016-213974>

## **Opium smoker develops lead poisoning**

A 46-year-old man of Iranian origin developed lead poisoning from smoking contaminated opium, reveal doctors writing in the journal **BMJ Case Reports**.

This a phenomenon that is well documented in Iranian medical literature, and there have been similar cases of lead poisoning caused by contaminated marijuana and heroin.

It's believed that lead is added to increase opium's weight for sale or is a contaminant incorporated during processing. Lead levels can be considerable, say the doctors.

The patient was admitted to the emergency department with a 4-day history of abdominal pain and constipation, and several weeks of irritability and malaise, which had strained his personal relationships.

He had also experienced frequent, widespread 'pins and needle sensations' in his arms and legs. He had smoked 10g of opium per week for a year and a half.

The patient's lead in his blood was 11 times the normal level. He was noted to possibly have Burton's line - blue discolouration of the gums - a clinical sign of lead poisoning.

The patient underwent a treatment to remove the lead from his bloodstream. Since being discharged, the patient returned home, is engaged with drug services and has not smoked opium.

The patient commented: "I am back at work and I feel like I have the power to fight in my life again. I hope my story could alert doctors around the world to other patients, especially other Iranians, where opium smoking is prevalent, who might be suffering like I was."

Public Health England was notified and assessed the patient, in collaboration with the Centre for Radiation, Chemical and Environmental Hazards, to determine the source of lead exposure and any risk to others. It concluded that the likely source of lead exposure was smoking opium.

Following this incident, PHE's guide for lead toxicity investigation will be changed to prompt investigating opium or other drugs as a potential exposure source.

### **Notes to editors**

Case Report: Chronic lead poisoning in an Iranian opium smoker resident in London

<http://casereports.bmj.com/content/2016/bcr-2016-215965>

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