

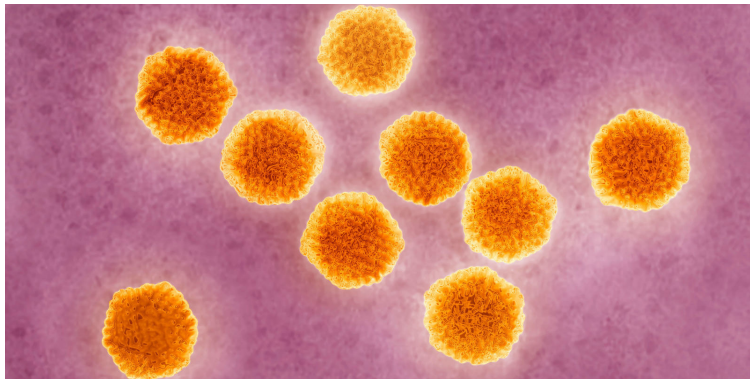
The Los Angeles County Department of Public Health declared an outbreak of Hepatitis A virus (HAV) in March 2017 among homeless persons and illicit drug users (injection and non-injection). HAV cases were discovered in San Diego and Santa Cruz counties, but no clear links to the LA County cases were established.

WHAT IS HEPATITIS A?

Hepatitis A is a highly contagious liver infection caused by the Hepatitis A virus (HAV; see Figure 1). The liver becomes inflamed as a condition of the infection.

The most common causes of hepatitis are viruses, such as Hepatitis A virus (HAV), Hepatitis B virus, and Hepatitis C virus. Alcohol use, toxins, drugs, and other agents may also cause liver inflammation or hepatitis.

Figure 1. Hepatitis A virus



Source: KUSI

WHAT ARE THE SYMPTOMS?

More than 80% of adults with Hepatitis A have symptoms; but, the majority of children who are infected do not have symptoms or have an unrecognized infection. If symptoms develop, they usually appear two to six weeks after infection and can include:

- Fever
- Vomiting
- Fatigue
- Joint pain
- Nausea
- Jaundice
- Dark urine
- Grey stool
- Abdominal pain
- Loss of appetite



WHAT I NEED TO KNOW...

- To prevent the onset of Hepatitis A, get vaccinated. This is especially critical for travelers going to countries where Hepatitis A is prevalent and researchers working with the virus.
- Hepatitis A is transmitted via the fecal-oral route.
- Wash hands if in contact with fecal material. Apply a sanitizer if soap and water are not available.
- Effective disinfectants such as household bleach will neutralize the virus.
- Contact biosafety@usc.edu or (323) 442-2000 for more information.

HOW IS HEPATITIS SPREAD?

Although Hepatitis B and Hepatitis C virus are bloodborne pathogens, Hepatitis A is transmitted through the fecal-oral route. An individual may ingest fecal material from contact with food, beverages, or objects that have been contaminated with even microscopic amounts of feces.

The common causes of contamination are:

- An infected person does not wash his or her hands appropriately or does not wash them at all and then touches food, beverages, or objects.
- A caregiver does not wash his or her hands appropriately or does not wash them at all after changing diapers or contacting stool from an infected person.
- An infected person engages in sexual activities with another person.
- Contaminated water is used near fruits/vegetables during growth / harvest / processing / handling / cooking.
- An individual does not practice proper hand sanitation after contact with an infected patient.
- A Hepatitis A researcher has a break in the biosafety procedures while performing research using the virus.



HOW SEVERE IS THE HAV DISEASE?

Most people who get infected with Hepatitis A may feel sick for a couple of months, but usually recover completely without liver damage. HAV causes acute hepatitis and is not associated with chronic liver disease. In rare cases, HAV can cause liver failure and death.

WHO IS AT RISK?

Although anyone can get Hepatitis A, some people are at greater risk, such as those who:

- Travel to or live in countries where Hepatitis A is common.
- Have sexual contact with someone who has Hepatitis A.
- Use recreational drugs, whether injected or not.
- Have clotting-factor disorders, such as hemophilia.
- Are household members or caregivers of a person infected with Hepatitis A.



CAN HEPATITIS A BE PREVENTED?

Yes. The best way to prevent Hepatitis A is by getting vaccinated. The Hepatitis A vaccine is safe and effective, and is given as two shots, six months apart. Both shots are needed for long-term protection. Researchers who work with Hepatitis A virus may contact biosafety@usc.edu for occupational medicine and biosafety suggestions.

WHO SHOULD GET VACCINATED AGAINST HEPATITIS A?

Vaccination is recommended for certain groups, including:

- All children at age 1 year
- Travelers to countries where Hepatitis A is common
- Family and caregivers of adoptees from countries where Hepatitis A is common
- Men who have sexual encounters with other men
- Users of recreational drugs, whether injected or not
- People with chronic or long-term liver disease, including Hepatitis B or Hepatitis C
- People with clotting-factor disorders
- Unvaccinated HAV researchers

WHAT ABOUT THE INFECTIOUS DOSE, INCUBATION PERIOD, AND COMMUNICABILITY?

The infectious dose is unknown. The incubation period averages 28 to 30 days with a range of 15 to 50 days. Maximum infectivity occurs in the latter half of incubation and continues a few days after the onset of jaundice. Chronic shedding of HAV in feces does not occur.

IS HAV SUSCEPTIBLE TO DISINFECTANTS?

HAV is difficult to inactivate with some widely used disinfectants such as phenolics, iodine-based compound and alcohols.

Some very effective disinfectants include glutaraldehyde, a quaternary ammonium formulation containing 23% HCl, or a 1:10 dilution of common household bleach. For disinfection in a laboratory setting where HAV contamination is suspected, a 1:10 dilution of household bleach may be used. If bleach is used on stainless steel, it should be followed by a rinsing with water, then 70% ethanol to avoid oxidation of the metal.



REFERENCES

[CDC Publication - Hepatitis A General Information](#)

CDC web site - Viral Hepatitis
<https://www.cdc.gov/hepatitis/HAV/index.htm>

Public Health Agency of Canada
Pathogen Safety Data Sheet and Risk Assessment
[Hepatitis A, rev. 2011](#)

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