

Acute Watery Diarrhea (Cholera)

Look for these symptoms:

- Loose stools, typically at least three times in a 24-hour period.
- * Watery diarrhea is characteristically non-bloody, a "rice-water" appearance of stool flecked with mucous is suggestive of cholera whereas diarrhea with visible blood is dysentery*

- Associated features- abdominal cramping, vomiting, tenesmus and fever
- Signs of dehydration

Key Facts

- Diarrhea is defined as the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual).
- Diarrheal diseases are due to an infection in the intestinal tract, which can be caused by bacterial, viral and parasitic organisms.

Causative organisms:

- Diarrhea may also occur in other systemic infections, such as influenza, dengue fever, scrub typhus and malaria.
- Acute diarrhea can occur at any age, but children are more commonly affected
- Rota virus, Entamoeba histolytica, cholera and E. coli are the common causative organisms in Nepal.

Assessment of severity of dehydration among patients with acute watery diarrhea

	Examination	No signs of dehydration	Some dehydration	Severe dehydration
Look	Mental status	Alert	Restless, irritable	Lethargic, unconscious
	Eyes/anterior fontanelle in infant	Normal	Sunken	Very sunken
	Tears	Present	Absent	Absent
	Mouth/tongue	Moist/slightly dry	Dry	Very dry
	Thirst	Increased thirst	Thirsty, drinks eagerly	Drinks poorly or unable to drink
	Urine output	Normal or mildly reduced	Markedly reduced	Anuria
Feel	Skin pinch	Goes back rapidly	Goes back slowly	Tenting
	Pulse	Normal	Rapid, weak	Very weak or palpable
	Estimated fluid loss	< 50 ml/kg	50-100 ml/kg	>100 ml/kg

Laboratory Tests	Clinical Sample to be collected	Method	Assay	Facility
	Stool	Stool microscopy	Culture	Reference Laboratory/Tertiary level/Secondary level
		Stool dipsticks for cholera	RDT	All level
Other laboratory findings	- Leukocytosis with thrombocytopenia is common. Liver enzymes- SGPT and SGOT may be elevated. - Urea and creatinine may be elevated.			
Treatment	Supportive care: Easily treatable with inexpensive antibiotics with dramatic results and needs to be started on clinical suspicion. - Rehydrate with oral rehydration solution. Patients with severe dehydration and persistent vomiting require intravenous fluid- normal saline or ringer lactate - Zinc supplement 10 mg/day for 14 days for children - Antimicrobials - Severe diarrhea/cholera outbreak setting- doxycycline 300 mg (4-6 mg/kg for children) single dose - Blood mixed diarrhea (Shigellosis)- ciprofloxacin 500 mg (children 10 mg/kg 12 hourly) for 3 days. E. histolytica- metronidazole (400 mg 8 hourly for 5 days) - Nutrient-rich food- boiled starches, and cereals (potatoes, noodles, rice, wheat and oats) with salts are recommended			
Prevention	- Encourage to drink safe (purified) drinking-water. - Use of improved sanitation. - Hand washing with soap and water. - Good personal and food hygiene. - Health education about how infections spread; and - rotavirus vaccination. # exclusive breastfeeding for the infant up to first six months of life;			

*All cases should be reported in SORMAS platform

Reference:

- World Health Organization. Diarrhoeal disease [\[Internet\]](#). Geneva: World Health Organization; 2017 May 2 [cited 2026 Sep 16].



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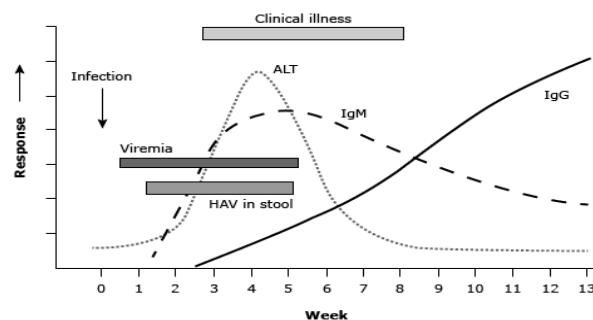
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Acute Hepatitis A

Clinical features

- Prodromal symptoms: Fatigue, nausea, vomiting, fatigue, malaise, arthralgia, myalgia may precede jaundice by 1-2 weeks
- A low-grade fever between 38° and 39°C (100°–102°F) may present
- With the onset of clinical jaundice, the constitutional prodromal symptoms usually diminish.
- Physical findings include jaundice, hepatomegaly (80 % cases), and right upper quadrant tenderness on palpation. Less common findings include splenomegaly, arthritis and skin rash.

HAV infection typical serologic course



Key Facts

- Hepatitis A virus is a single-stranded, RNA virus in the Hepatovirus genus of the pic
- This virus is transmitted almost exclusively by the fecal-oral route (person to person contact or consumption of contaminated food or water).
- Incubation period: usually 14–28 days.
- It replicates in hepatocytes, but it is also present in bile, stool, and blood during the late incubation period and acute pre-icteric phase of illness. It may persist longer in the liver, but fecal shedding, viremia and infectivity diminish rapidly once jaundice becomes apparent.
- Antibodies to HAV (anti-HAV), IgM can be detected during acute illness when serum aminotransferases (SGPT and SGOT) are elevated and persists for ~3 months.
- No HAV carrier state has been identified after acute hepatitis A.
- Prognosis is excellent with chance of fulminant hepatic failure less than 1%

Laboratory diagnosis	Clinical Sample to be collected	Method	Assay	Facility
	Serum	Serology	Anti-HAV IgM	
Other laboratory findings	• Transient neutropenia and lymphopenia with relative lymphocytosis. • Variable degree of rise in SGPT and SGOT (400-4000 U/L) precedes the rise in bilirubin • γ-GT and alkaline phosphatase may be elevated			
Treatment	Supportive management • Almost all persons with acute hepatitis A recover spontaneously and do not require specific antiviral therapy. • Management is supportive and focuses on maintaining adequate hydration, nutrition, and symptom relief. • Intravenous fluids and antiemetics may be required for severe vomiting or dehydration. • Treatment of inter-current infections.			
Prevention	Hepatitis A is mainly spread through contaminated food, water, and unclean hands. Safe water, good sanitation, hand hygiene, safe food practices, and vaccination are the most effective ways to prevent infection. • Drink safe, treated, or chlorinated water, as chlorine helps inactivate the virus. • Practice good hand hygiene and safe food handling: wash hands with soap and water after using the toilet and before preparing or eating food. • Avoid preparing or sharing food and drinks when ill with Hepatitis A. • Avoid consuming raw or undercooked foods; thorough cooking helps inactivate the virus. • Educate household members and close contacts about how Hepatitis A is transmitted and prevented. • Vaccination- Inactivated hepatitis A vaccines (2 doses, 6 months apart) especially to children and adolescents (1-18 years), and people with chronic liver disease			

*All cases should be reported in SORMAS platform.

Reference

1. Lai M, Chopra S. Hepatitis A virus infection in adults: epidemiology, clinical manifestations, and diagnosis [Internet]. UpToDate; 2022 Jan 26 [cited 2026 Sep 16].
2. Dienstag JL, Isselbacher KJ. *Acute viral hepatitis*. In: Longo DL, Fauci AS, Kasper DL, Hauser SL, Jameson JL, Loscalzo J, editors. Harrison's Principles of Internal Medicine. 22nd ed. Vol. 2. New York: McGraw Hill; 2025. p. 2562-84.
3. World Health Organization. Hepatitis A [Internet]. Geneva: World Health Organization; 2026 Jul 28 [cited 2026 Sep 16].



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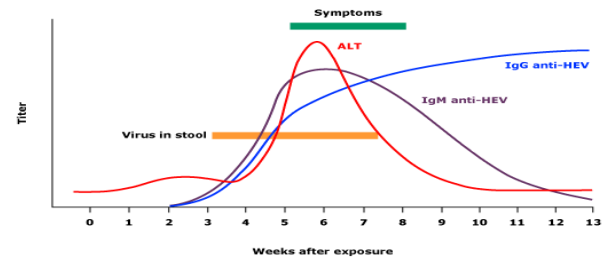
Acute Hepatitis E

Clinical features

- Majority of cases asymptomatic or mildly symptomatic.
- When symptomatic, jaundice is usually accompanied by malaise, anorexia, nausea, vomiting, abdominal pain, fever, and tender hepatomegaly.
- Less common features include diarrhea, arthralgia, pruritus, and urticarial rash

Key Facts

- Hepatitis E virus is a single-stranded, RNA virus in the Hepatovirus genus of the Hepeviridae family.
- It is the most common cause of acute viral hepatitis worldwide.
- Four groups of HEV- A, B, C and D. Group A infects human, deer, pig and rabbit; group C infects rat and can be transmitted to human while groups B and D infect avian species and bat respectively
- This virus is transmitted through contaminated food and water (most common); zoonotic transmission (undercooked meat of deer, wild boar, or pig); blood transfusion and possibly breast milk
- Incubation period: ranges from 2 to 10 weeks (average of 5 to 6 weeks)
- Antibodies to HEV (anti-HEV), IgM can be detected during acute illness when serum aminotransferases (SGPT and SGOT) are elevated and persists for ~3 months.
- Prognosis is good with chance of fulminant hepatic failure 0.5-4% cases (pregnancy, malnourishment and people with chronic liver disease are at increased risk). Acute HEV infection during pregnancy particularly in 2nd or 3rd trimester has been associated with a mortality rate of 15 to 25 % due to acute liver failure. Acute hepatic failure is characterized by hepatic encephalopathy, elevated aminotransferases (often with abnormal bilirubin and alkaline phosphatase levels), and coagulopathy (INR>1.5)
- Other less common complications are cholestatic hepatitis and chronic HEV



Laboratory diagnosis	Clinical Sample to be collected	Method	Assay	Facility
	Serum	Serology	Anti-HEV IgM	
			HEV RNA	
Other laboratory findings	- Transient neutropenia and lymphopenia with relative lymphocytosis is common. - Variable degree of rise in SGPT and SGOT (400-4000 U/L) precedes the rise in bilirubin γ-GT and alkaline phosphatase may be elevated			
Treatment	Supportive management - Most of the patients with acute hepatitis E recover spontaneously and do not require specific antiviral therapy - Ensure adequate hydration and nutritional support. - Administer intravenous fluids and antiemetics as needed for severe dehydration, nausea, or vomiting. - Treatment of inter-current infections			
Prevention	Hepatitis E can be prevented through safe water, sanitation, hand hygiene, and safe food practices. Drink safe, treated, or boiled water. - Use safe sanitation facilities and dispose of human waste properly. - Wash hands with soap and water after toilet use and before food preparation or eating. - Practice safe food hygiene and consume thoroughly cooked food; avoid raw or undercooked meat and shellfish. - Ensure appropriate water treatment (e.g., chlorination) if water source is compromised. - Pregnant women should take extra precautions to avoid contaminated food and water.			

*All cases should be reported in SORMAS platform.

Reference:

- Sherman KE. Hepatitis E virus infection [Internet]. UpToDate; 2026 May 7 [cited 2026 Sep 16].
- Chung RT, Dienstag JL. [Acute viral hepatitis](#). In: Loscalzo J, Fauci AS, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al., editors. *Harrison's Principles of Internal Medicine*. 22nd ed. New York: McGraw Hill; 2025.
- World Health Organization. Hepatitis E [Internet]. Geneva: World Health Organization; 2026 Jul 28 [cited 2026 Sep 16].



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