

Indian Academy of Pediatrics (IAP)



GUIDELINES FOR PARENTS

Viral Hepatitis

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10 FAQs on VIRAL HEPATITIS

1. What is jaundice? Are there different types of jaundice?
2. What are the viruses that cause the "liver jaundice" or "acute viral hepatitis"?
3. Apart from yellowish discoloration of eyes, what are the other symptoms in acute viral hepatitis, and how long will they last? When can my child return to school and normal activity?
4. Can I manage my child at home doctor? When is hospitalization essential?
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8. The elders in our family wish to give herbal medicines? I am confused. Is it OK doctor?
9. Should I bring my child for follow up?
10. Is there some way to prevent these infections? Are vaccines available in our country?

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Viral Hepatitis

QUESTIONS FOR JAUNDICE: VIRAL HEPATITIS

Q1

What is jaundice? Are there different types of jaundice?

- Jaundice is only a symptom-like cough and not a disease.
 - Jaundice only means yellowish discoloration of the sclera (white part of the eyeball) (**Fig. 1**) and is due to increase in the blood level of bilirubin.
 - Bilirubin is an end product of red blood cells breakdown.
 - The liver is the main factory to handle this bilirubin. Thus, there are three types of jaundice (**Fig. 2**):
1. *Hemolytic jaundice*: Overproduction of bilirubin due to increased red blood cell hemolysis.
 2. *Hepatic jaundice*: "Sick liver": inability to work adequately. The most common cause is acute viral hepatitis (AVH). Acute means abrupt in onset and "hepatitis" indicates inflammation (itis) of the liver cells (hepa).
 3. *Obstructive jaundice*: Blockage in pathway of bile anywhere from liver to duodenum.

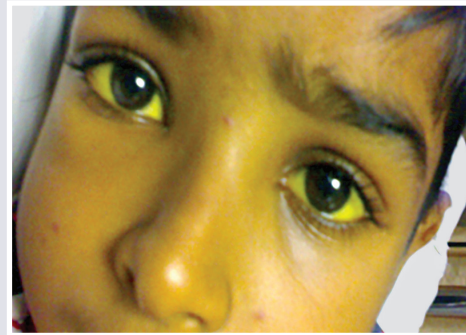


Fig. 1: Yellowish discoloration of sclera.

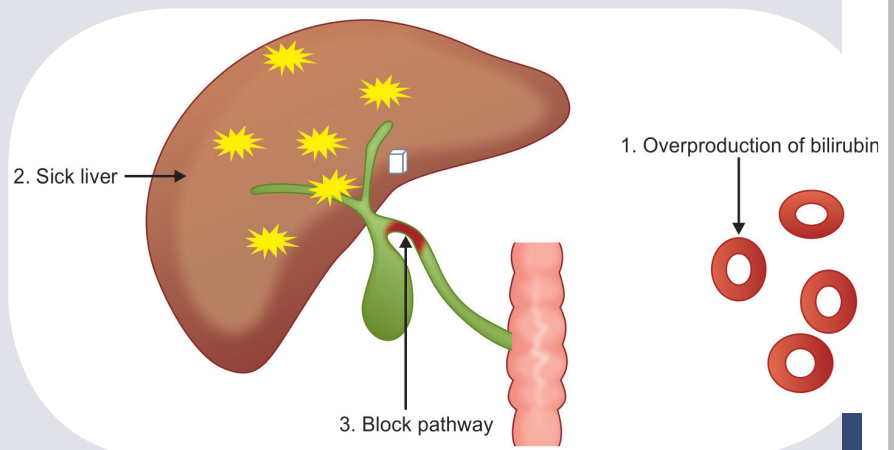


Fig. 2: Types of jaundice.

Q2

What are the viruses that cause the “liver jaundice” or “acute viral hepatitis”?

Remember the alphabets A, B, C, and E. These viruses are named alphabetically hepatitis A virus (HAV), hepatitis B virus (HBV), etc.

A

1. HAV and HEV are common.
2. Share similarities.
3. Spread by contaminated food and water.
4. Do not progress to chronicity.
5. Less harmful culprits.

E

B

1. HBV and HCV are less common and share similarities.
2. Spread by blood and blood products.
3. *Source:* Injections without disposable needles, tattoos, intravenous drug abuse, earlobe boring, blood transfusions without screening and mother-to-child transmission.
4. Progress to chronic liver disease, cirrhosis, end-stage liver disease, liver cancer and death.
5. These two are more troublesome viruses.

C

Q3

Apart from yellowish discoloration of eyes, what are the other symptoms in acute viral hepatitis, and how long will they last? When can my child return to school and normal activity?

The common symptoms apart from jaundice depend on the stage of illness:

Stage	Duration	Symptoms
1. Prodrome/ Prejaundice	2–7 days	<ul style="list-style-type: none"> • Fever, nausea, vomiting, lethargy, pain in right side of abdomen and loss of appetite • The urine becomes high colored and stools pale before the eyes become yellow
2. Icteric/ Jaundice	7–14 days	<ul style="list-style-type: none"> • Fever, nausea, and vomiting subside • Urine continues to be high colored and stools may be pale • Jaundice deepens
3. Convalescent/ Recovery	3–5 days	<ul style="list-style-type: none"> • Jaundice decreases and clears • Appetite improves • Urine becomes normal in color • Stool becomes yellow in color

- Child can go to school once jaundice clears and appetite improves.
- Child can start normal physical activity once he/she is able to take regular diet, has no vomiting, and is attending school.

Q4

Can I manage my child at home doctor? When is hospitalization essential?

- Most children with jaundice due to acute viral hepatitis (AVH) can be managed at home.
- Child should be hospitalized if the following 10 symptoms are present:

Persistent vomiting	Swelling of feet
Persistent fever	Deepening jaundice
Poor intake of food	Repeated jaundice
Drowsiness	Severe abdominal pain
Decreased urine output	Red/black colored vomiting and/or stools

Warning: All children on long-term medications (like antiepileptics/medicine for tuberculosis, etc.) should consult their physician in regard to their ongoing treatment, as these drugs may be toxic for the liver.

Q5

My child does not like blood tests. When are these necessary?

I understand the fear your child has of injections. As your doctor I assure you no tests will be done unless it is necessary. I ensure that the poke will be done gently taking all precautions.

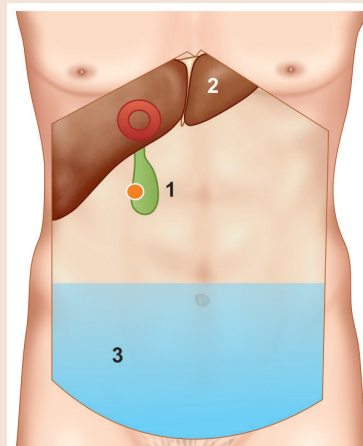
- Blood tests are not necessary in all children with AVH.
- The only essential blood test is checking for hepatitis B surface antigen (HBsAg)
- They are required in those admitted in hospital to check status of the liver, complications, and cause of hepatitis.

Q6

I heard that ultrasound is very child friendly, will this help doctor?

- Yes, ultrasound is a safe and a painless imaging test.
- However, it has no role in the majority of children with AVH. It identifies structural lesions.
- It is done if the child has the following atypical manifestations:

Symptoms	To exclude
Significant abdominal pain	1. Gallstones
Fever and pain right upper abdomen	2. Liver abscess
Abdominal distension	3. Fluid in abdomen



Q7

I have some doubts regarding the food to be avoided and those which can be allowed during jaundice. Please clarify.

- This jaundice is due to a sick liver and generally it is thought that a restricted diet is necessary.
- Remember the liver needs energy to work and build new cells.
- If we do not provide adequate energy the body will provide the same by stealing from its own muscle mass and subcutaneous fat.

Stage	Appetite	Diet
Prejaundice	May be poor	Child may prefer to take fluids, soup and fruit juice. Ensure adequate fluids are given.
Jaundice	Appetite will improve	Encourage child to have three regular meals with steamed food, dal, vegetables, and fruits.
Recovery	Normal	Normal diet

There are several myths in the management of jaundice:

Common beliefs	Myth	Reality
Salt should not be added in diet.	Yes	Normal salt
Yellow color in turmeric should not be added in diet.	Yes	Can be added
Oil should not be added in cooking.	Yes	Can be added
Egg, mutton, and chicken should not be given during recovery.	Yes	Can be given
Water should be restricted during jaundice.	Yes	Normal amount can be given.

Improvement of appetite is indicator of convalescence period.

Q8

The elders in our family wish to give herbal medicines? I am confused. Is it OK doctor?

- Elders at home should be respected; however, you have to be careful and wise when and where your child's health is concerned.
- All over the world, herbal medicines to treat jaundice have been tried for ages. We should remember three important facts:
 1. There are several causes of jaundice and there is no single form of treatment.
 2. It is not correct for doctors like us practicing allopathy to prescribe herbal medications as we have no knowledge of its efficacy and side effects.
 3. All herbal medications are not safe and there are reports of hepatitis following herbal drugs.

Q9

Should I bring my child for follow up?

- Children diagnosed with HAV and HEV infection do not need any follow up.
- Children who are diagnosed with hepatitis B or hepatitis C infection need follow up to check whether the body has cleared the virus. Biochemical tests such as serum glutamic pyruvic transaminase (SGPT) and serum glutamic oxaloacetic transaminase (SGOT) are done as surrogate markers to check liver status. Those children who have elevated values even 6 months following illness are further evaluated.
- Six months after HBV infection, if hepatitis B surface antigen is still present, then that child has chronic HBV infection and needs evaluation and treatment as per the recommendation.
- Six months after HCV infection, if HCV-ribonucleic acid (RNA) is present, then that child has chronic hepatitis C infection and needs therapy.

Q10

Is there some way to prevent these infections? Are vaccines available in our country?

Yes, all these viral infections are preventable.

- *Hepatitis A and E*: These two viruses are spread by the orofecal route.
 - They can be prevented by following good and strict hygiene and ensuring proper sanitation.
 - Washing hands before eating, drinking boiled water, taking food from home or in hygienic places, washing hands with soap and water after defecation.
 - To prevent infections in siblings avoid sharing utensils for eating and drinking. The toilet seat should be cleaned and disinfected before use.
- *Hepatitis B and C*: These two viruses are spread by the parenteral route.
 - They can be prevented by avoiding unnecessary injections using reusable needles, unsafe ear boring and tattooing, and shared intravenous drug abuse.
 - Proper screening for hepatitis B and hepatitis C in all blood banks before blood transfusion.
 - Screening of children born to mothers who are hepatitis B or hepatitis C virus positive.
- *Vaccines*: Yes. Safe and effective vaccines are available for hepatitis A and hepatitis B. The timing and dosage are marked on your immunization card.