The presentation of jaundice is a classic test of understanding of hepatic physiology and history is vital in working out the cause. Below, we give a structure to use to try to ascertain the causes. A scenario could involve a presenting complaint of: “Mr Jones has presented today after his wife started to notice that his eyes were yellow”. It is important to note that jaundice generally appears in the sclera before the skin.

History of Presenting Complaint
- Look at age of patient to help focus history taking:
  - **Young**: consider viral hepatitis due to tattoos, intravenous drug use or risky sexual activity
  - **Middle-aged/elderly**: may focus more on alcohol history/?malignancy.
  - **Young female**: Consider pregnancy (Cholestasis of pregnancy, acute fatty liver of pregnancy, HELLP). If overweight, consider NAFLD/NASH

- Establish time frame:
  - **Slowly developed over time (months-years)**: Think alcohol excess, obesity, Hepatitis B or C, malignancy (e.g. liver metastases).
  - **Rapid onset (weeks)**: Acute viral hepatitis (Hepatitis A or E), autoimmune disorders, pregnancy related

- Associated symptoms:
  - **Dark urine/pale stools**: If YES think about obstructive/cholestatic jaundice (e.g. due to gallstones, pancreatic malignancy)
  - **Itching** (in obstructive jaundice most commonly - deposition of bile acids in skin, NOT caused by bilirubin)
  - **Abdominal pain**: If associated with fever and general malaise, consider Ascending Cholangitis

- Do they drink alcohol? How much, what type, how many times per week and for how many years (calculate total number weekly units). If concerns, screen for dependence using **CAGE** *(see box)*
- Recent travel:
  - In general, developing countries tend to have higher incidence of Hep A/E (epidemics with disruption of water supplies e.g. heavy rainfall). Establish where they stayed, and ask about what they ate and where they got their drinking water from
  - What did they do: sexual history, IV drug use, get any tattoos (unsterile needles can lead to blood borne transmission). All risk factors for Hepatitis B & C.

- If not asked in travel history, take detailed sexual history:
  - number of partners
  - male or female
  - use of condoms/other barrier protection
  - last sexual health check.
  - For extra marks, if high risk consider asking symptoms of other STIs (HIV, chlamydia, gonorrhoea etc) and offer screening.

- Any chance of **pregnancy** (if woman of childbearing age)

OSCE-Aid Tips

Dark urine and pale stools are a feature of CONJUGATED HYPERBILIRUBINAEMIA – i.e. there is biliary obstruction, meaning bilirubin is excreted in the urine and not in the stool, resulting in these colour changes.

CAGE Screening Tool

C Have you ever felt you needed to Cut down on drinking?
A Has anyone become Annoyed by your drinking?
G Have you ever felt Guilty about drinking
E Have you ever had an Eye opener

If answer YES to 2 of the above, further investigation in alcohol consumption is indicated. The most specific question for dependence is ‘Eye opener’ Find out more in our alcohol history station.
- Ask about **intravenous drug** use EVER: Hepatitis C may be asymptomatic for 30 years (!) and then present with decompensated cirrhosis. Ask about any **tattoos**: where they had them done etc. Any previous **blood transfusions**
- Any **weight loss**, fatigue, change in bowel habit (suggestive of malignancy)
- Any history of intentional **overdose** (ask specifically about PARACETAMOL) or unintentional – e.g. due to chronic pain
- Any recent coughs or colds (**Gilbert's syndrome**: 5% population- harmless mild jaundice due to an enzyme deficiency- ask about family history of jaundice during illness

**Past Medical History**
- Gallstones
- Previous malignancy (especially bowel, pancreatic)
- Previous history of jaundice (may have chronic active viral hepatitis, Gilbert’s etc)
- Previous history of cholecystectomy (may have retained stone in CBD)
- History of autoimmune disease (Vitiligo, type 1 diabetes, thyroid disease) may point towards autoimmune hepatitis, primary biliary cirrhosis.

**Drug History**
MANY cause jaundice e.g.:
- Co-amoxiclav (cholestasis)
- Isoniazid, rifampicin (TB drugs)
- Oral Contraceptive Pill
Ask about allergies

**Family History**
- Autoimmune disease
- Jaundice/maternal risk factors for viral hepatitis generally (90% foetal transmission rate of hepatitis B if chronic active hepatitis)

**Social History**
- Occupation:
  - Sewage workers: Hepatitis A & E, Leptospirosis
  - Health care workers: needle stick injury
- Smoking history (malignancy)
- Family - anyone else with similar symptoms (viral hepatitis)
For reference: Some causes of jaundice

<table>
<thead>
<tr>
<th>Pre-hepatic (Unconjugated)</th>
<th>Hepatic (Unconj/conj or mixed)</th>
<th>Post-hepatic (conjugated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilbert’s Syndrome (most common)</td>
<td>Viral Hepatitis</td>
<td>Extra-hepatic:</td>
</tr>
<tr>
<td>Haemolysis (e.g. hereditary spherocytosis)</td>
<td>Other (less common) infections: Leptospirosis, brucellosis</td>
<td>Gallstones (most common)</td>
</tr>
<tr>
<td>Thalassemia</td>
<td>Alcoholic hepatitis</td>
<td>Malignancy (causing biliary obstruction)</td>
</tr>
<tr>
<td></td>
<td>Autoimmune hepatitis</td>
<td>\</td>
</tr>
<tr>
<td></td>
<td>Drug induced (paracetamol)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References: