Interpretation of LFTs during pregnancy can be difficult as the normal ranges are different from nonpregnant women and alter with each trimester. Consider testing if:

- **Pruritis - commonest symptom:**
  - 25% of pregnant women will have pruritis (without a rash); in most cases this is benign.
  - Intrahepatic cholestasis of pregnancy needs to be considered (affects 0.7% in UK)
    - Check LFTs and serum bile acids (latter is predictive of adverse outcomes)
    - Associated with preterm labour, foetal hypoxia and interuterine death.
    - ALT and bile acids raised, bilirubin usually normal.
    - If present, referral for urgent gynaecology review is required.

- **Other conditions** which may be associated with abnormal LFTs include pre-eclampsia and HELLP syndrome, acute fatty liver of pregnancy (rare, very different from normal fatty liver, a medical emergency with mortality of 12-18%), and hyperemesis gravidarum.

- **Medications**
  - Certain drugs taken during pregnancy can cause hepatocellular damage (e.g. paracetamol, methyldopa, amoxicillin, co-amoxiclav, some antiretrovirals) or cholestasis (e.g. amoxicillin, flucloxacinill, progestogens, oestrogens, some antipsychotics, PPIs).
  - Affected women are usually asymptomatic and it is an incidental finding.
  - The drug should be withdrawn and an alternative used if required.

- **Testing is also indicated with a history of exposure to infectious contacts or risk factors for bloodborne infections, and in those at high risk of liver disease** (e.g. previously affected pregnancies, a FHx of liver disease in pregnancy, pre-existing liver disease).

- **Refer to gynaecology**

Abnormal LFTs may be due to a non-pregnancy specific disease such as non-alcoholic steatohepatitis (the most common cause in the UK), gallbladder disease, viral hepatitis, primary biliary cirrhosis, primary sclerosing cholangitis, etc. Specialist liver advice should be consulted.

<table>
<thead>
<tr>
<th>Liver Enzyme</th>
<th>Not pregnant</th>
<th>Pregnant</th>
<th>1st trimester</th>
<th>2nd trimester</th>
<th>3rd trimester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT (IU/L)</td>
<td>0–40</td>
<td>–</td>
<td>6–32</td>
<td>6–32</td>
<td>6–32</td>
</tr>
<tr>
<td>AST (IU/L)</td>
<td>7–40</td>
<td>–</td>
<td>10–28</td>
<td>11–29</td>
<td>11–30</td>
</tr>
<tr>
<td>Bilirubin (μmol/L)</td>
<td>0–17</td>
<td>–</td>
<td>4–16</td>
<td>3–13</td>
<td>3–14</td>
</tr>
<tr>
<td>GGT (IU/L)</td>
<td>11–50</td>
<td>–</td>
<td>5–37</td>
<td>5–43</td>
<td>3–41</td>
</tr>
<tr>
<td>Alk. phos. (IU/L)</td>
<td>30–130</td>
<td>–</td>
<td>32–100</td>
<td>43–135</td>
<td>133–418</td>
</tr>
<tr>
<td>Albumin (g/L)</td>
<td>35–46</td>
<td>28–37</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>