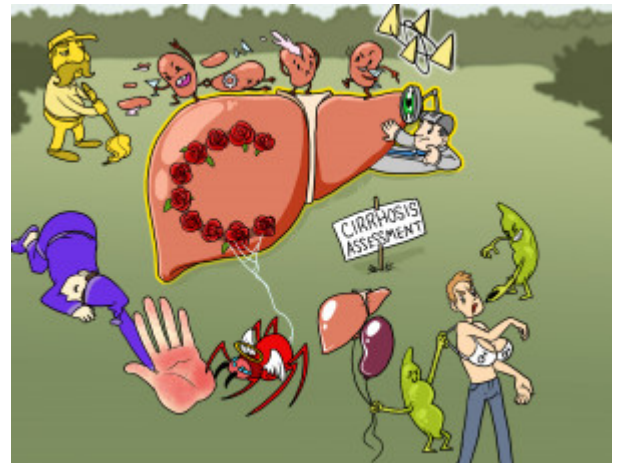


## Cirrhosis Assessment

Be sure to view the Picmonic on Complications of Cirrhosis as this includes important assessment findings, while this Picmonic builds on some additional information and symptoms you may see in patients. Cirrhosis is a chronic liver disease that evolves slowly, has a prolonged course, and occurs as a result of excessive alcohol intake, nonalcoholic fatty liver disease (NAFLD), or certain chronic infections like with hepatitis C. As a result of these disorders, cirrhosis stems from degeneration and destruction of liver cells. Normally the liver metabolizes and breaks down circulating toxins as well as hormones. In cirrhosis, certain hormones and other metabolites accumulate, leading to symptoms of the disease. Jaundice and fatigue are common. High estrogen levels can lead to palmar erythema and spider angiomas. Other findings include hepatosplenomegaly, edema and gynecomastia. Hepatic encephalopathy can develop in part due to impaired ammonia metabolism, and manifests as a change in consciousness, along with other neurologic findings.



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### Mechanism

#### Degeneration and Destruction of Liver Cells

##### [Degenerating and Destroyed Liver Cells](#)

In cirrhosis there is hepatic damage. The liver cells attempt to regenerate, but this process is unorganized. This results in abnormal architecture with irregular lobules that impede blood flow. This leads to decreased liver function in patients.

### Signs and Symptoms

#### Jaundice

##### [Jaundice-janitor](#)

Jaundice occurs because the dysfunctional liver cells can no longer process bilirubin normally. As the body is unable to conjugate and excrete bilirubin, jaundice or yellowing of the skin, occurs.

#### Fatigue

##### [Sleepy-guy](#)

The onset of cirrhosis is insidious, and an early symptom is fatigue. Patients may attribute this to other etiologies and might not be aware of their liver condition.

#### Palmar Erythema

##### [Red Palm](#)

Palmar erythema is described as a red area of skin on the palms that blanches with pressure. This can also develop in cirrhotic patients as a result of increased estrogen.

#### Spider Angiomas

##### [Spider Angel](#)

As a result of increased circulating estrogen and an inability to metabolize steroid hormones, spider angiomas can develop. These are dilated blood vessels with a bright red center point and spider-like branches, which can occur on the trunk, neck, face, nose and shoulders.

## Hepatosplenomegaly

### Liver-and-spleen-balloons

Due to dysfunctional liver cell degeneration, the liver becomes enlarged and fibrosed. This leads to hypertension in the portal vein (going through the liver), which leads to increased venous pressure in organs feeding into the liver. This leads to splenomegaly as well. Additionally, patients with end-stage disease may present with a shrunken, fibrotic, nodular liver.

## Edema

### Edamame

Because the liver is producing less albumin, and there is more portal hypertension, fluid is squeezed out of the vasculature into tissues. This is displayed as peripheral edema (ankle, legs), but can also turn into ascites, which is the accumulation of serous fluid in the abdominal cavity.

## Gynecomastia

### Man-boobs

Normally, the liver metabolizes hormones like estrogen. With cirrhosis, these hormones are not broken down as normal, and excess estrogen leads to gynecomastia in men.

## Change in LOC

### Delta Halo

Patients display a change in their level of consciousness, in a complication known as hepatic encephalopathy. Increased circulating ammonia leads to neurotoxic effects, and patients experience changes in mental responsiveness, impaired memory and consciousness, or even coma.