

**PAL Worksheet**  
**Week 15 Problem Set 2**

**GI Physiology**

1. Gallstones, obstructing flow through the common bile duct, will lead to all of the following:
  - Pain after eating a fatty meal
  - Reduced micelle formation in the small intestine
  - Decreased carbohydrate digestion in the small intestine
  - Reduced protein absorption in the small intestine (some protein absorption still does occur)

Clearly explain why all of these are observed.

2. In liver cirrhosis, clearly explain why the following would be observed:
  - Edema (ascites)
  - Personality changes
  - Bruising and bleeding
  - Jaundice

3. Clearly explain why lactose intolerance would lead to diarrhea as well as flatulence.

4. Which of the following are released by the liver:

Plasma proteins

HCl

Bile

Angiotensinogen

Digestive enzymes

Digestive hormones

Sodium Bicarb solution

5. Which of the following are released by the pancreas:

Insulin

Glucagon

Enzymes involved in fat digestion

Enzymes involved in protein digestion

Enzymes involved in carbohydrate digestion

Trypsin

Secretin

CCK

Sodium Bicarb solution

HCl

Bile

6. Clearly explain the absorption of glucose, fat and water across the intestinal epithelium.