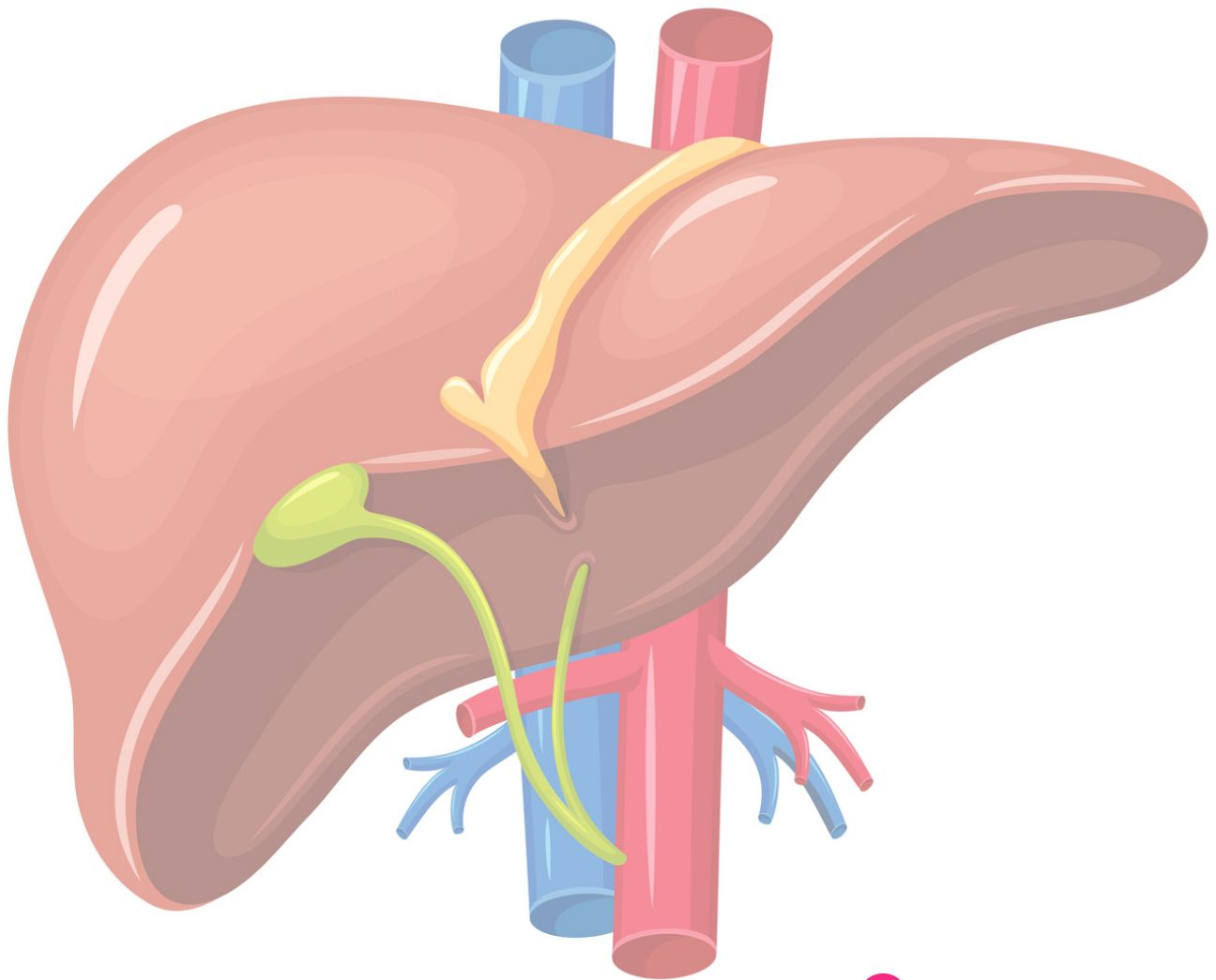
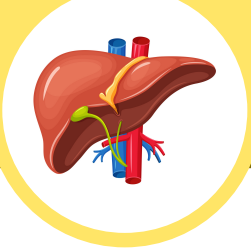


# STUDY GUIDE

## CROHN'S DISEASE





# CROHN'S DISEASE

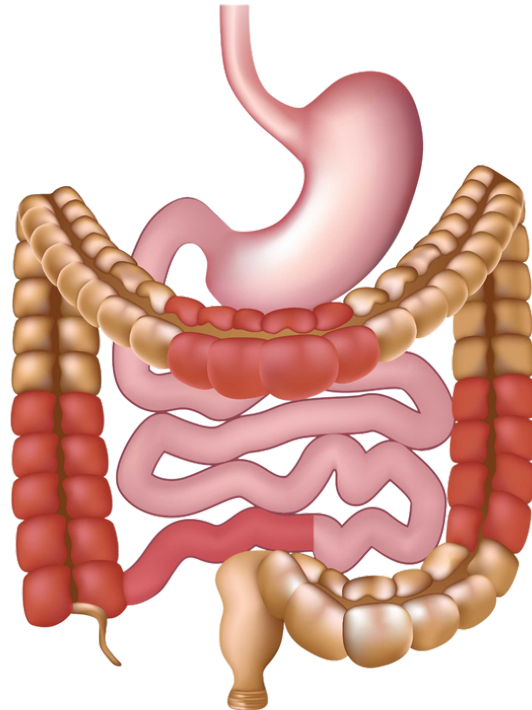
## STUDY GUIDE

### DEFINITION

When you think Crohn's disease, the first thing that should come to mind is inflammation. There is a lot of inflammation inside the GI tract, and it mostly affects the later part of the small intestine, called the ileum, and the colon.

Typically, they will have periods where it gets better and their symptoms improve, followed by periods where it gets worse.

There is no cure for Crohn's disease. The patient may have surgery to remove parts of the bowel and help decrease flare-ups in that section of the GI tract, but inflammation may return later in a different section of the bowel.



*Image of Crohn's Disease*  
*Alila Medical Media / stock.adobe.com*

### POSSIBLE CAUSES

- Genetic factors
- Type of gut bacteria
- Environment
- Diet
- Immune response

## **PATHOPHYSIOLOGY**

### ***Step 1: The Immune System is Triggered***

The body's immune response gets kicked into high gear, and doesn't stop.

Typically, your immune cells have checks and balances, so they can't just cause inflammation all throughout your body as they see fit, they have to actually be responding to something, like attacking a pathogen or something.

But during Crohn's disease, the body's immune response is triggered and keeps going unchecked.

### ***Step 2: Redness, Edema, Irritation, Lesions, & Ulcers***

The body's immune system is kicked into high gear and is going non-stop, causing a lot of damage to the bowels. And the lymph nodes around the GI tract can become swollen.

### ***Step 3: Bowel Obstruction or Fistula Formation***

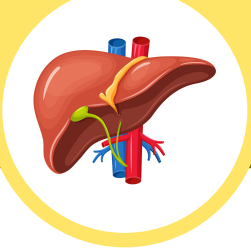
Bowel obstruction occurs when there's so much swelling and inflammation that it keeps narrowing and narrowing until it actually closes off a section of the bowel (so things can't get through).

Fistulas can occur, which are holes in the bowel that connect it to something else around, like connecting the GI tract to the vagina or the bladder.

### ***Step 4: Complications Occur***

After a while, complications from Crohn's disease can arise, such as cancers in the GI tract, and nutritional deficits.

Because there is so much inflammation in the bowel, it can't function as well and absorb nutrients like it should, so the patient may have some nutrient deficits.



# CROHN'S DISEASE

## STUDY GUIDE

### SIGNS AND SYMPTOMS



*These are all related to the GI system being inflamed. The inflammation causes a lack of absorption of nutrients and can lead to GI upset or blockage due to the inflammation.*

#### ***Abdominal Pain***

Abdominal pain occurs because of the presence of lesions and ulcers along the GI tract. It can be crampy and diffuse, or sharp and specific to one area (in some cases more commonly on the right lower quadrant (RLQ) of the abdomen).

#### ***Diarrhea***

Stool can have blood or pus in it as well, but it could also just be loose stool. This is due to the body not absorbing nutrients or working properly (due to the inflammation and ulcerative areas) and the food not being processed correctly by the GI tract.

#### ***Vomiting (Emesis):***

Vomiting may occur in some severe cases where an obstruction has occurred either because of narrowing caused by inflammation and swelling, or from scar tissue that has built up due to chronic inflammation. Emesis may resemble fecal matter if an obstruction or narrowing is present because there is no way for the bowel contents to move past the blockage.

#### ***Fistulas Along GI Tract***

Fistulas may form due to the inflammation, edema, ulcers and lesions along the GI tract, damaging tissues and causing them to inappropriately connect to one another.

#### ***Distended or Tender Abdomen***

With all the inflammation and swelling in the GI tract, the abdomen may be distended or tender.

#### ***Malnourishment***

The small intestines are supposed to take up nutrients and if they are not functioning properly, then there isn't as many nutrients being absorbed. Watch out for signs of dehydration or electrolyte imbalances that can happen with poor oral intake, as well as a lack of nutrient absorption in the GI tract.

## *Decreased Appetite & Dehydration*

The patient may not want to eat or drink if they're having constant abdominal pain and discomfort, and nausea.

## *Lab Value Changes*

Electrolyte levels may be lowered due to decreased nutritional absorption, and their BUN may be increased due to dehydration.

## *Weight Loss*

The patient may lose weight due to the lack of nutrient absorption and decreased intake.

# **NURSING ASSESSMENT**

## *Full Abdominal Assessment*

Make sure their belly is not getting more distended, their bowel sounds stay regular in all four quadrants, their belly is soft, and make sure there isn't an increase in tenderness upon palpation.

## *Signs of Infection or Sepsis*

Fistulas, ulcers, inflammation, and lesions can increase the patient's risk of bowel contents leaking into the abdominal space and bloodstream, leading to sepsis. Any sign of a fever, increase in abdominal pain, or decrease in bowel sounds should be a signal to look more closely and assess for signs of sepsis.

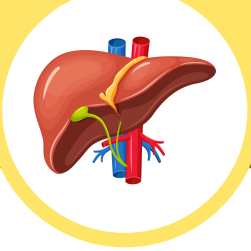


*Leaking of bowel contents into the bloodstream and abdominal space (perforated bowel) is a **MEDICAL EMERGENCY** and should be treated immediately. This can very quickly lead to sepsis.*

## *Bowel Habits*

Assess their bowel habits by asking specific questions:

1. How frequently do you have a bowel movement?
2. How much stool is typically excreted?
3. Do you have pain during bowel movements?
4. What's the stool consistency?
5. What's the typical color of the stool?
6. Does the stool have any particular smell?



# CROHN'S DISEASE

## STUDY GUIDE

### *Triggers for Flare-ups*

Ask if there are any foods, environments, or stressors that cause a flare up. These are all things to monitor closely, and make sure the patient is aware of what they should be looking for and tracking to help decrease symptoms.

### *Abdominal Girth*

Tracking their abdominal girth may be ordered to monitor the size distension of the abdomen more closely.



*If the patient's abdominal girth suddenly increases, it could indicate severe inflammation and swelling and possible leaking of GI contents into the abdominal space. This would be a medical emergency and should be treated immediately.*

### *Intake & Output*

Document their intake and output to make sure there aren't any blockages or obstructions forming or any excess fluid leaking into the interstitial fluid causing edema. Make sure they aren't holding onto too much fluid.

### *Daily Weights*

Weight is the most sensitive indicator for fluid status, and can help you track if they are holding onto (or getting rid of) too much fluid.

### *Lab Values*

Check their electrolyte and hematocrit and hemoglobin levels to assess for malnutrition and anemia. If their GI tract isn't able to take up as many nutrients, particularly iron, they may develop anemia and have a lowered hematocrit and hemoglobin level. Their blood urea nitrogen level (or BUN) may be higher due to dehydration.

## **NURSING INTERVENTIONS**

### *Give Medications as Prescribed*

#### Steroid Medications

These can help to reduce inflammation but might not be used for prolonged periods of time (and might only be prescribed for flare-ups).

## Immune Suppressors

These are used to help suppress the inflammatory response and decrease inflammation. Some common immune suppressors are:

1. Infliximab (Remicade)
2. Methotrexate (Trexall)
3. Azathioprine (Imuran)

## Antibiotics

These are also sometimes given to help heal infections that can occur because of the ulcers and lesions. Some common antibiotics are:

1. Ciprofloxacin (or Cipro)
2. Metronidazole (or Flagyl)

## Acetaminophen

These can be used as a pain reliever but NSAIDs (like ibuprofen and aspirin) should be avoided because they are super harsh on the GI tract and may increase flare-ups and symptoms.

## Vitamin Supplements & Electrolytes

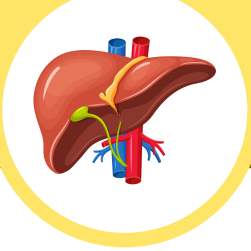
These may be prescribed, since the GI tract isn't able to absorb as many nutrients when it's damaged.

## ***Education on Controlling Flare-ups***

Limiting foods that are hard to digest and high in fiber or cause inflammation

Possible foods to avoid:

- High fiber foods
- Nuts
- Raw fruits
- Raw vegetables
- Grains
- Beans
- Oats
- Dairy
- Gluten
- Wheat



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- Spicy foods
- Fish or red meat
- Alcohol
- Fried foods

### *Nutrition & Diet Education*

During a flare up it is especially important to avoid ALL trigger foods and eat a diet very LOW in fiber that is very easy to digest. Staying hydrated will help your body heal the inflammation inside GI tract as well.

### *Give Total Parenteral Nutrition (TPN) as Prescribed*

Some patients may be placed on total parenteral nutrition (TPN) in order to give the GI tract a rest to heal while still nourishing their body.

### *Care for Ostomy*

Some patients may require surgery and an ostomy if the inflammation was severe enough and caused damage that could not be repaired.