

## Fistula Causes

A fistula is a connection or passageway formed abnormally between two epithelium-lined vessels or organs. Causes of enterocutaneous fistulas can be summarized by the mnemonic "FRIEND." The "FRIENDs" of a fistula include Foreign body, Radiation, Infection, Epithelialization, Neoplasm, and Distal obstruction.



PLAY PICMONIC

### FRIEND Mnemonic

#### Friends

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#### Foreign Body

##### Foreign Body attached

A common cause for an enterocutaneous fistula is a foreign body within the fistula tract. Extreme examples to help understand this etiology include aorto-esophageal fistula due to a penetrating swallowed fish bone or a vesico-vaginal fistula in a child who inserted a foreign body into the vagina.

#### Radiation

##### Radiation-radio

Patients undergoing radiation therapy or otherwise exposed to large doses of radiation can have radiation enteritis which could lead to perforation, and later, fistula.

#### Inflammation or Infection

##### In-flames with Bacteria-guy

An inflammatory response in a case of Crohn's or ulcerative colitis can be the impetus towards developing a fistula near its origin. Furthermore, infection, such as intra-abdominal sepsis can lead to enterocutaneous fistula development.

#### Epithelialization

##### E-pick at Epithelium-growth

Epithelialization, or the development of epidermis across a wound surface, can definitely be a cause of an enterocutaneous fistula. This can stem from a surgical or traumatic wound.

#### Neoplasm

##### Neanderthal-growth

Neoplasms which are malignant can cause fistula formation. If a malignant tumor penetrates the bowel wall, or if it is accidentally incised during a procedure, it can grow outward to become an enterocutaneous fistula.

## Distal Obstruction

### Dice causing Distal Obstruction

With distal obstruction of the small bowel can lead to an enterocutaneous fistula. This occurs as increased small bowel pressure leads to outpouchings which can eventually epithelialize and communicate to grow abnormal tracts.