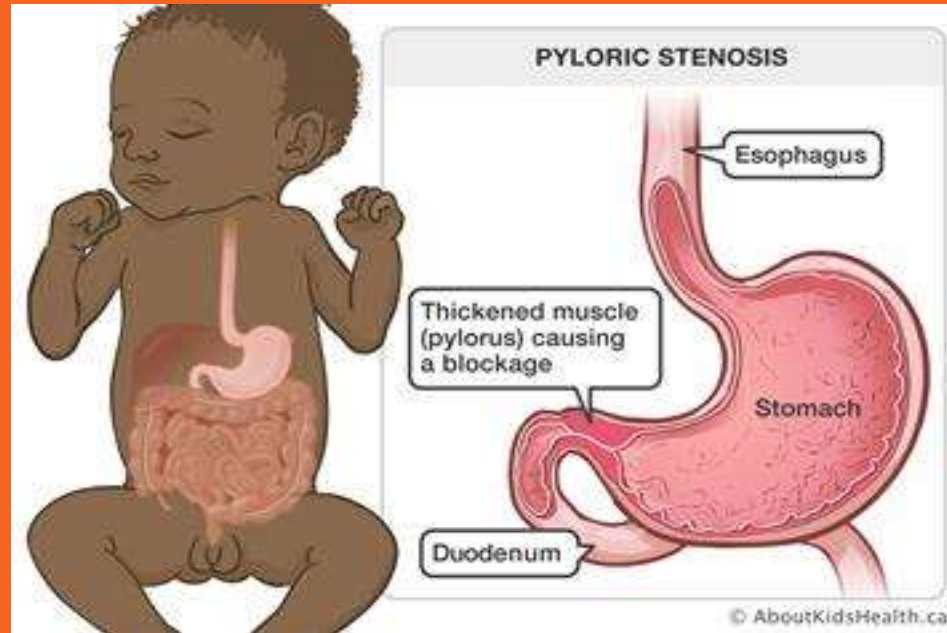


---

# Pyloric Stenosis

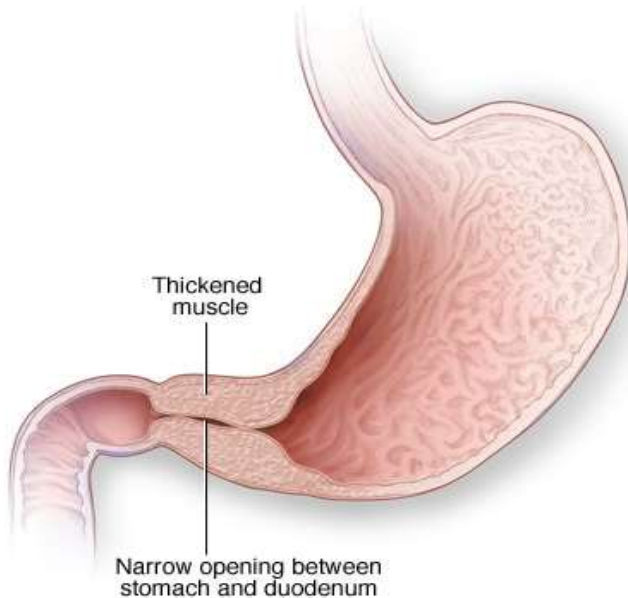


Irene Boakye PA-S

---

---

# What Is Pyloric Stenosis?



- It is an acquired condition or congenital malformation disorder where the pylorus muscle is hypertrophied.
- The exact pathogenesis is unknown, but it is believed to be due to genetic and environmental factors.
- This disorder is most common in infants ages 2 weeks to 8 weeks of age

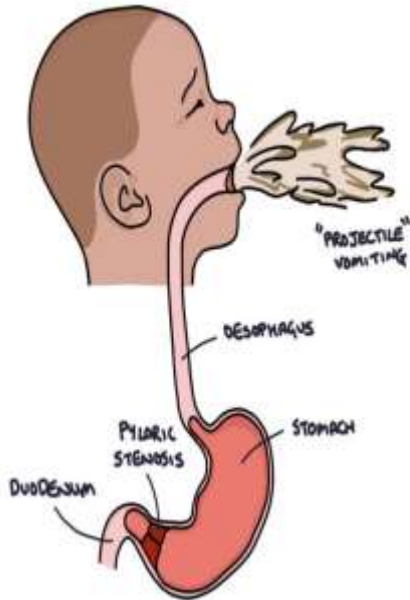
---

# Risk Factors

- Inheritance of APOA1 gene
  - Male sex
  - Maternal smoking
  - Premature birth
  - First born children
  - Macrolide antibiotic use before 2 weeks old; erythromycin
  - Infants born to younger mothers
-

---

# Symptoms



- Forceful, non-bilious projectile vomiting that occurs right after feeding
  - The infant desires to be refeed immediately after vomiting; hungry vomiter
  - Can be well nourished and well hydrated with early presentation
  - Late presentation of the disorder include malnourishment; inability to gain weight or weight loss, irritability, lethargy, and dehydration; dry skin, tongue, and lips, fast breathing, fewer wet diapers, tearless crying
-

---

# Signs



- Palpable olive-like mass in the right upper quadrant; most common
- Peristaltic wave in the left upper quadrant
- May have jaundice or scleral icterus

Figure 4. Visible peristalsis in a patient with hypertrophic pyloric stenosis.

---

---

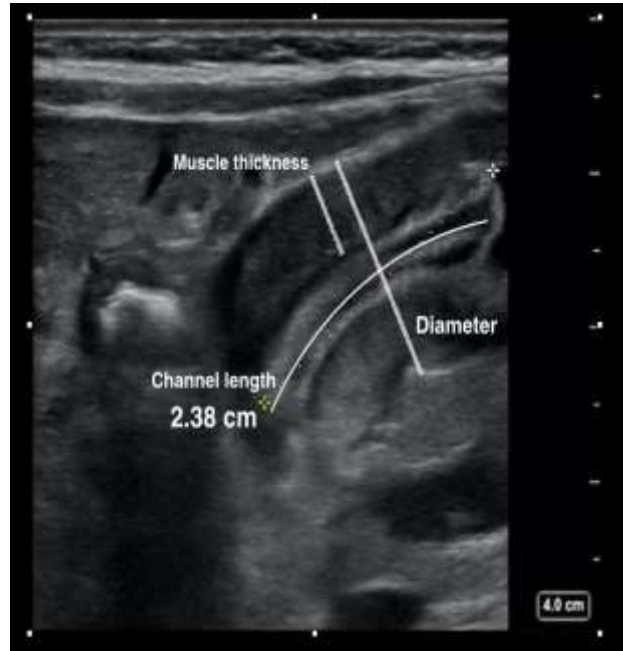
# Diagnostic Imaging Tests



- Plain abdominal x-ray may show an enlarged stomach with diminished or absent gas in the small intestine

---

## Diagnostic Imaging Tests (Cont'd)



- Ultrasound (gold standard) will show an elongated pylorus greater than 14 mm in length, and thickened pylorus greater than 4 mm in width
- Target sign, slit sign

---

# Laboratory Tests



## Comprehensive Metabolic Panel "CMP"

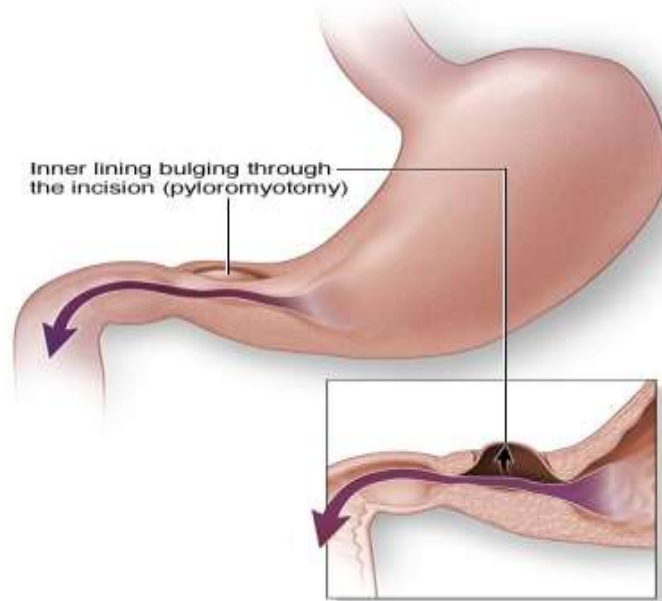
- |              |                 |
|--------------|-----------------|
| ✓ Glucose    | ✓ ALP           |
| ✓ Calcium    | ✓ AST           |
| ✓ Sodium     | ✓ ALT           |
| ✓ Chloride   | ✓ Bilirubin     |
| ✓ Potassium  | ✓ Total Protein |
| ✓ CO2        | ✓ Albumin       |
| ✓ BUN        | ✓ Globulin      |
| ✓ Creatinine |                 |
- Plus →

- Due to loss of gastric acid during vomiting, laboratory studies including comprehensive metabolic panel (CMP), will show hypochloremic, hypokalemic, metabolic alkalosis
- Increased pH
- Elevated blood urea nitrogen
- Elevated serum unconjugated bilirubin



---

# Treatment



- Supportive; fluids, treat electrolyte abnormalities
- Definitive treatment: surgery; pyloromyotomy

---

# References

1. Garfield K, Sergent SR. Pyloric Stenosis. [Updated 2022 May 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555931/>
  2. Søreide K. Pylorusstenose hos spedbarn [Pyloric stenosis in infants]. *Tidsskr Nor Laegeforen*. 2018;138(7):10.4045/tidsskr.18.0242. Published 2018 Apr 17. doi:10.4045/tidsskr.18.0242
  3. Vinycomb T, Vanhaltren K, Pacilli M, Ditchfield M, Nataraja RM. Evaluating the validity of ultrasound in diagnosing hypertrophic pyloric stenosis: a cross-sectional diagnostic accuracy study. *ANZ J Surg*. 2021;91(11):2507-2513. doi:10.1111/ans.17247
-