THE IMPACT OF H. PYLORI INFECTION ON IRON, VITAMIN B12, AND MINERAL LEVELS





## Overview

- HELICOBACTER PYLORI (H. PYLORI): A COMMON BACTERIAL INFECTION OF THE STOMACH LINING • ASSOCIATED WITH VARIOUS GASTROINTESTINAL
- ISSUES INCLUDING GASTRITIS AND PEPTIC ULCERS
- IMPACT ON NUTRIENT ABSORPTION AND SYSTEMIC HEALTH

## H. pylori and Iron Deficiency

- IMPACT ON IRON LEVELS
  - H. PYLORI INFECTION LINKED TO LOWER SERUM IRON LEVELS
- MECHANISMS:
  - CHRONIC GASTRITIS REDUCES GASTRIC ACID SECRETION, IMPAIRING IRON ABSORPTION
  - ERADICATION THERAPY IMPROVES SERUM IRON LEVELS
- SOURCE: STUDY FROM INTECHOPEN (INTECHOPEN OPEN SCIENCE OPEN MINDS)



## H. pylori and Vitamin B12 Deficiency

- IMPACT ON VITAMIN B12 LEVELS
  - H. PYLORI INFECTION ASSOCIATED WITH REDUCED VITAMIN B12 ABSORPTION
- MECHANISMS:
  - DECREASED INTRINSIC FACTOR SECRETION DUE TO CHRONIC GASTRITIS
  - REDUCED GASTRIC ACID PRODUCTION AFFECTS B12 ABSORPTION
  - ERADICATION THERAPY RESTORES VITAMIN B12 LEVELS
- **SOURCE:** STUDY ACADEMIC.OUP.COM (<u>MDPI</u>)

## Broader Nutrient Deficiencies

- OTHER AFFECTED NUTRIENTS
  - VITAMIN C, FOLATE, AND VITAMIN D ALSO IMPACTED BY H. PYLORI
  - CHRONIC INFECTION CAUSES SYSTEMIC INFLAMMATION AFFECTING NUTRIENT ABSORPTION
- SOURCE: META-ANALYSIS FROM JOURNAL OF CLINICAL GASTROENTEROLOGY (FRONTIERS)

### O IMPACTED BY H. PYLORI NFLAMMATION AFFECTING

## Mechanisms of Nutrient Absorption Disruption

- GASTRIC PHYSIOLOGY CHANGES
  - NON-ATROPHIC GASTRITIS: EXCESSIVE ACID PRODUCTION
  - ATROPHIC GASTRITIS: REDUCED OR ABSENT ACID SECRETION
  - $\circ$  BOTH CONDITIONS DISRUPT NORMAL DIGESTIVE PROCESSES
- SOURCE: INTECHOPEN (INTECHOPEN OPEN SCIENCE OPEN MINDS)

### CID PRODUCTION AT ACID SECRETION ESTIVE PROCESSES SCIENCE OPEN MINDS)

## Systemic Health Effects

- BROADER HEALTH IMPLICATIONS
  - LINKS TO METABOLIC SYNDROME, DIABETES, AND CARDIOVASCULAR DISEASES
  - CHRONIC INFLAMMATION FROM H. PYLORI CONTRIBUTES TO THESE CONDITIONS
- SOURCE: STUDIES FROM MDPI AND CLINICAL GASTROENTEROLOGY (BIOMED CENTRAL) (OXFORD ACADEMIC)



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# ES, AND CARDIOVASCULAR I CONTRIBUTES TO THESE GASTROENTEROLOGY

# 66 thank you ...

