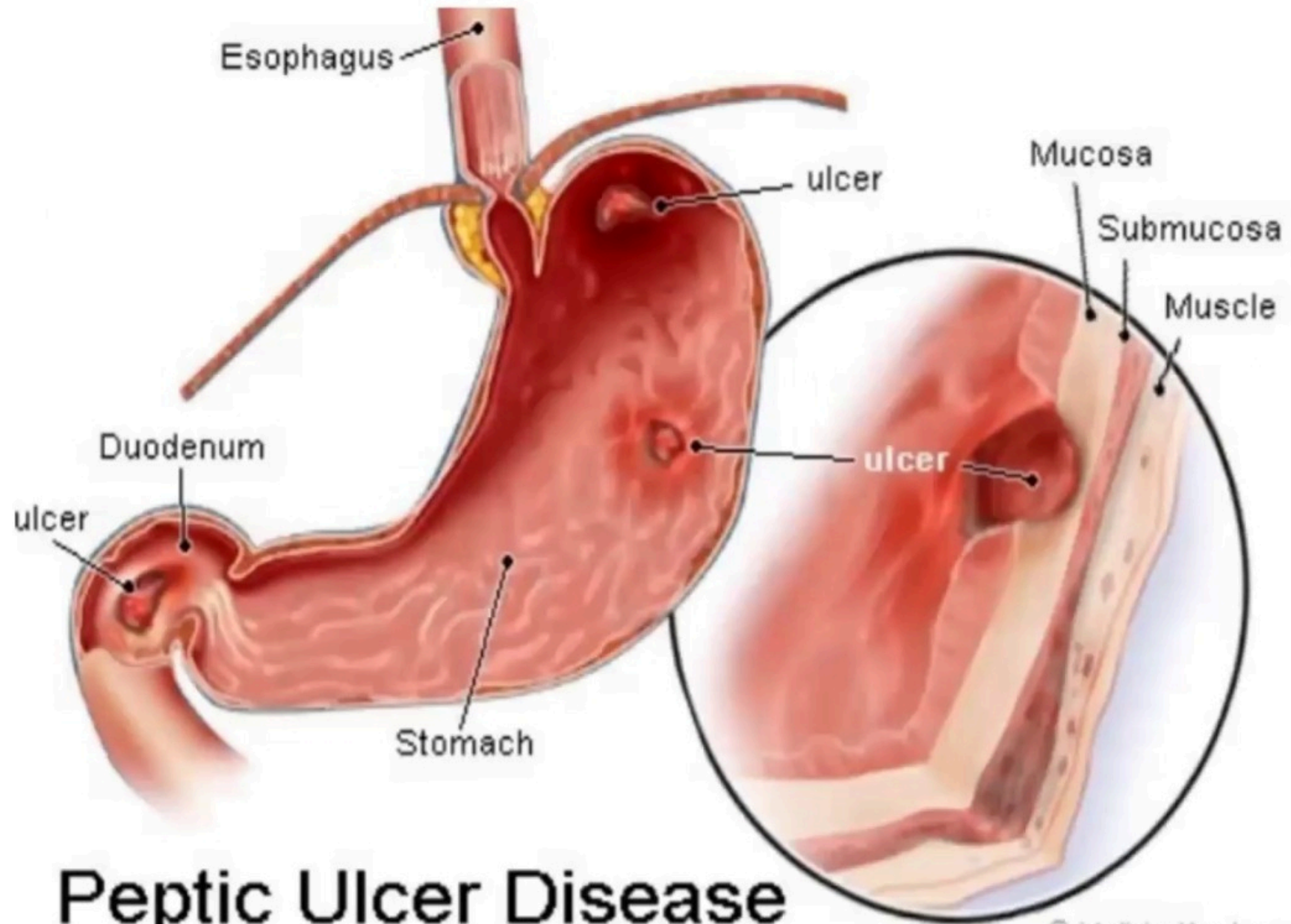


Treatment of portal hypertension and variceal bleeding and PUD

EO

Peptic Ulcer Disease



Peptic Ulcer Disease

Associated factors

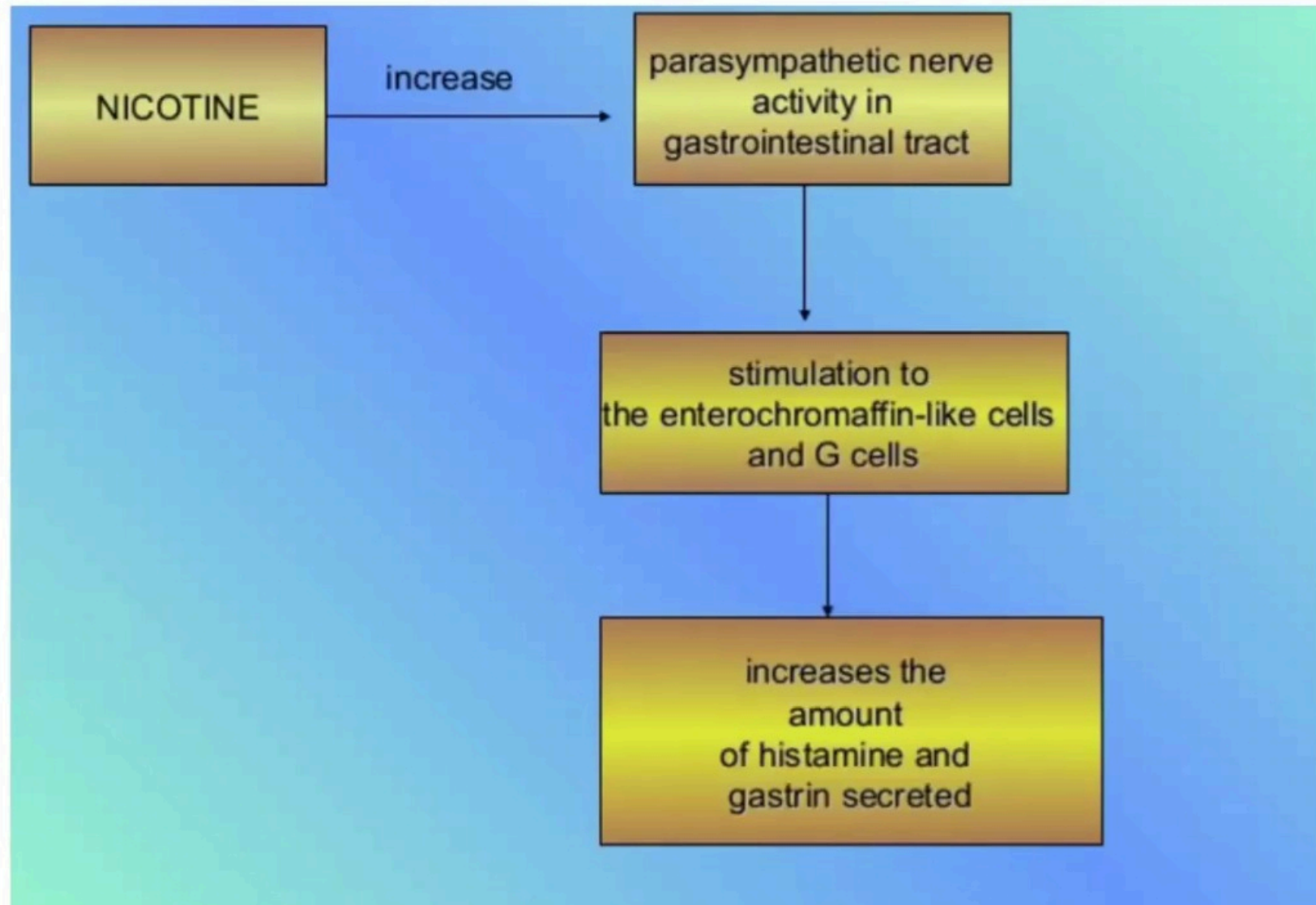
Helicobacter pylori, a bacteria that is frequently found in the stomach

Nonsteroidal anti-inflammatory drugs (NSAIDs) such as **ibuprofen**

In addition, smoking and certain other genetic and environmental factors (such as medications) may influence the course of peptic ulcer disease.

Psychological stress and dietary factors were once thought to be the cause of ulcers, although these factors are no longer thought have a major role.

Smoking Increases Risk of PUD



Drugs for Treatment of Peptic Ulcer Disease

- Antibiotics for eradication of *H. pylori*, if present (amoxicillin, clarithromycin)
- Antacids (magnesium hydroxide, aluminum hydroxide)
- H₂ receptor antagonists (ranitidine, cimetidine)
- Proton-pump inhibitors (omeprazole)
- Mucosal protective agents (bismuth, sucralfate)

Portal hypertension

- Consequent to chronic liver disease
- Increased blood flow within the portal venous system
- Increased resistance to portal flow within the liver
- Splanchnic blood flow increased in patient with cirrhosis due to low arteriolar resistance mediated by increased circulating vasodilators and decreased sensitivity to vasoconstrictors

- Intra-hepatic resistance to blood flow in cirrhosis is increased due to fixed fibrosis within the space of Disse and hepatic vein +
- Reversible vasoconstriction of hepatic sinusoids and venules

Consequences

- Ascites
- Hepatic encephalopathy
- Porto-systemic collaterals - gastric and oesophageal varices

Somatostatin and its analogues

- Reduces portal blood flow
- Reduces variceal pressure
- MOA poorly understood
- No direct action on smooth muscle
- May cause alteration of mesenteric blood flow by inhibition of glucagon and other gut neuropeptides

Vasopressin and Terlipressin

- Antidiuretic hormone(Vasopressin)
- Polypeptide secreted by the hypothalamus
- Stored in the posterior pituitary
- Arteriolar vasoconstrictor
- Physiologic role of maintaining osmolality

Vasopressin

- Causes splanchnic vasoconstriction
- Lowers portal pressures
- Angiographic infusion in acute bleed
- Indications- Small and large bowel bleed
 - Diverticulosis

Side effects

- Common
- Vasospasm
- HT, AMI, Mesenteric infarction
- Co- administer with Nitroglycerin
- Nausea ,abdominal cramps, diarrhoea ,
- Antidiuretic effects - fluid retention and hyponatremia, pulmonary oedema

Telipressin

- Analogue with fewer SE s

Beta adrenoceptor blocking agents

- Reduce portal venous blood flow
- Due to decrease CO β_1
- Splanchnic vasoconstriction β_2
- Allowing unopposed systemic effects of α activity
- Which agents would you use?

- Propranolol , nadolol
- Cirrhosis and variceal bleeding
- Reduces incidence of bleeding

Study activity 1

- Review classification of β -adrenoceptor blocking drugs
- Clear note the following distinct differences
 - selective and non-selective agents
 - dual β and α blocking agents
 - those with intrinsic sympathomimetic activity
- What is the unique property of nebivolol

Activity 2

- Which β -adrenoceptor agent would you use in the following conditions
 1. Heart failure
 2. Portal hypertension
 3. Thyrotoxicosis
 4. Essential tremors
- List four major contraindications of β -adrenoceptor prescribing