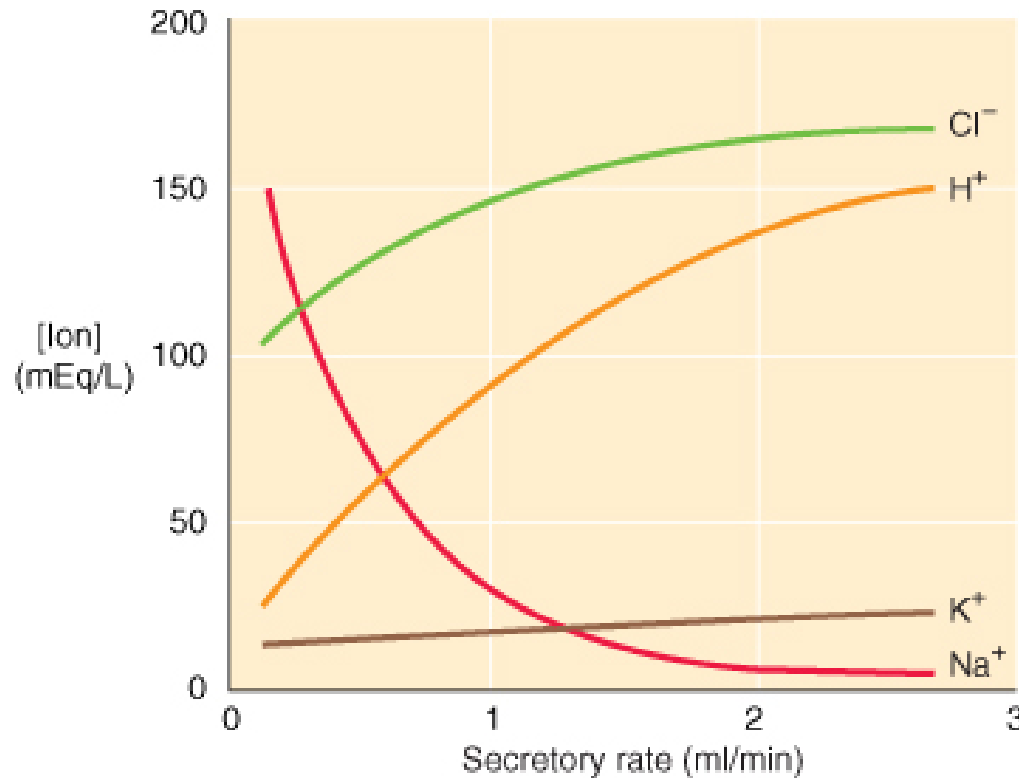
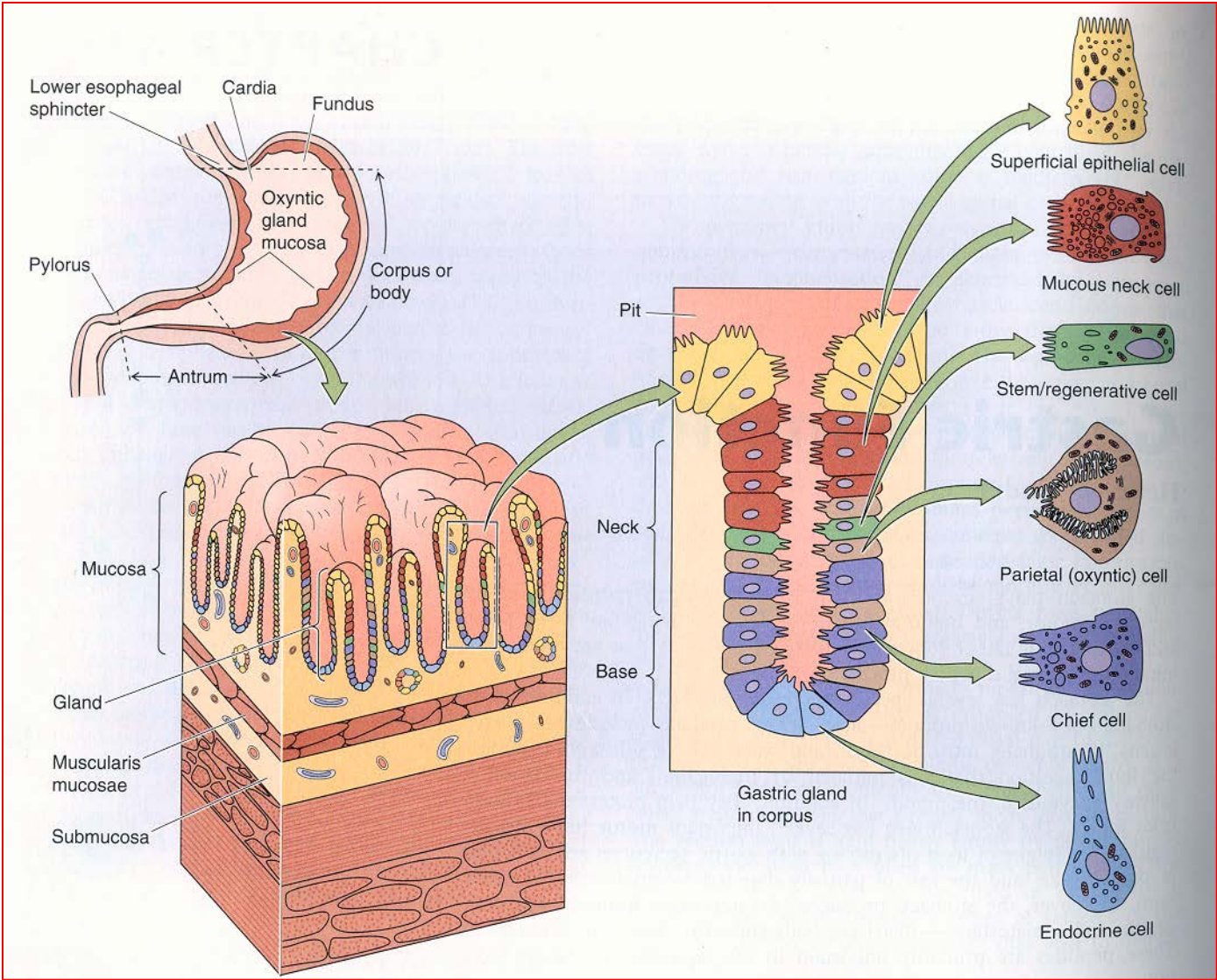


SECREÇÃO

GÁSTRICA

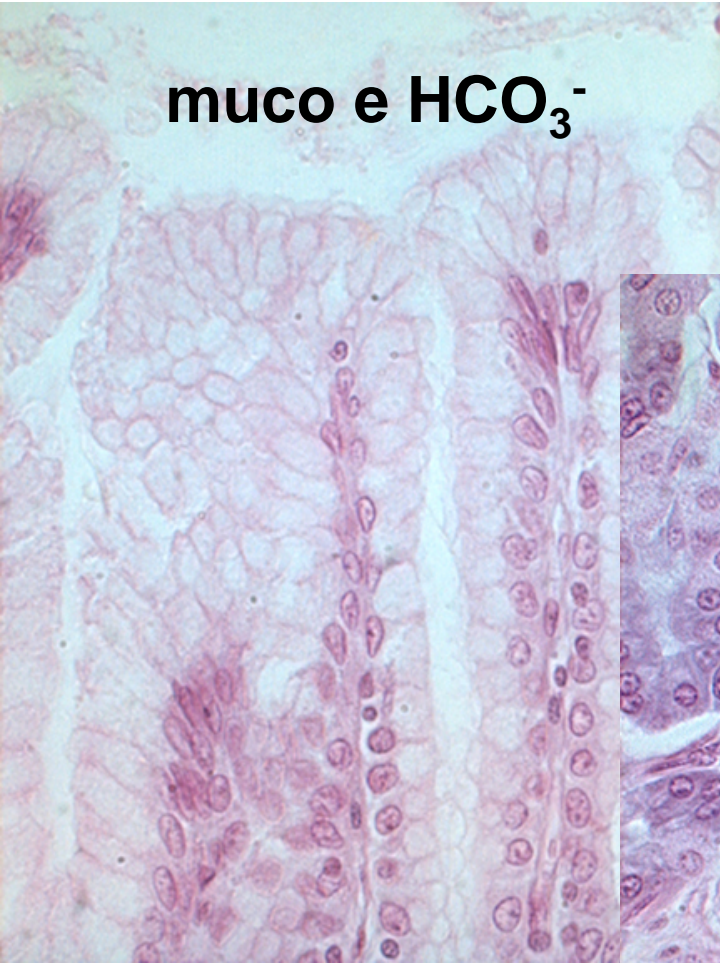
*Dois tipos de secreção gástrica:
Não Parietal
e
Parietal*



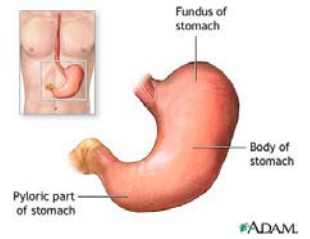


células mucosas

muco e HCO_3^-



SECREÇÕES EXÓCRINAS



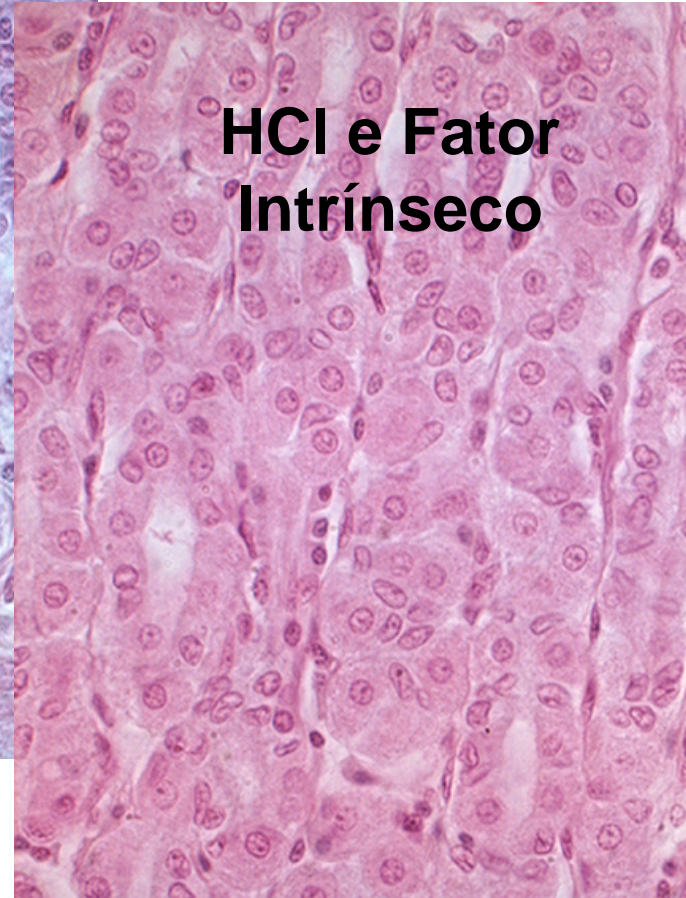
células principais

pepsinogênio

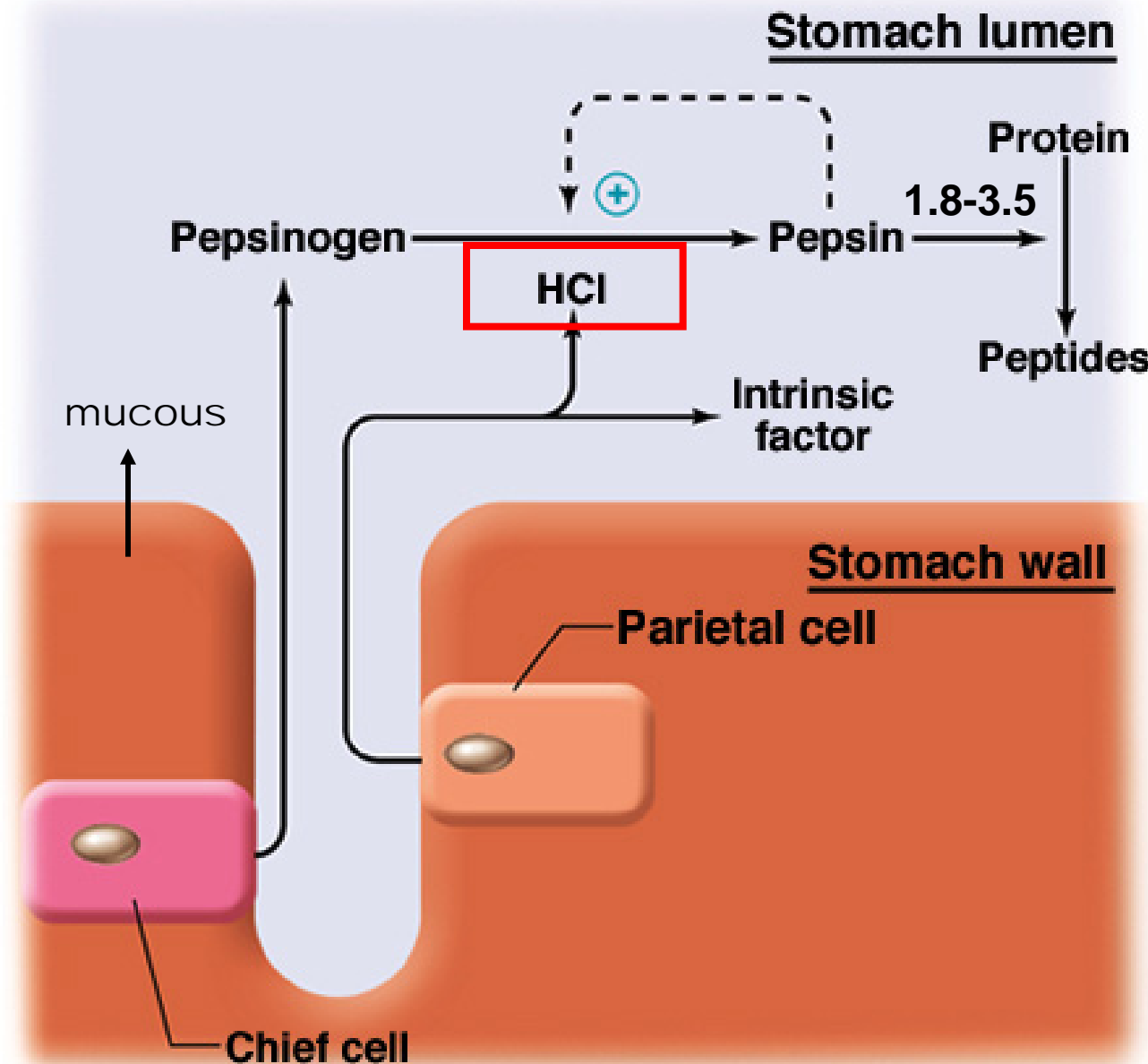
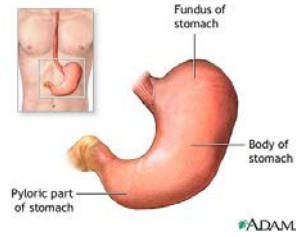


células parietais

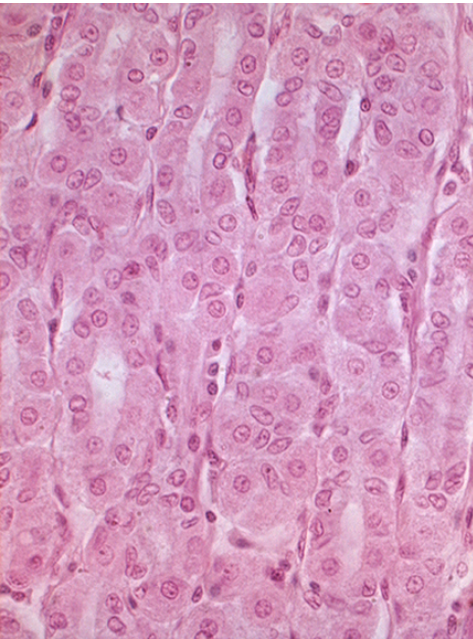
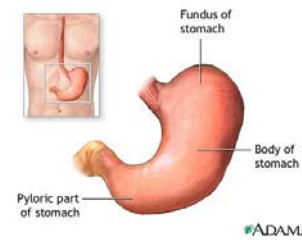
HCl e Fator Intrínseco



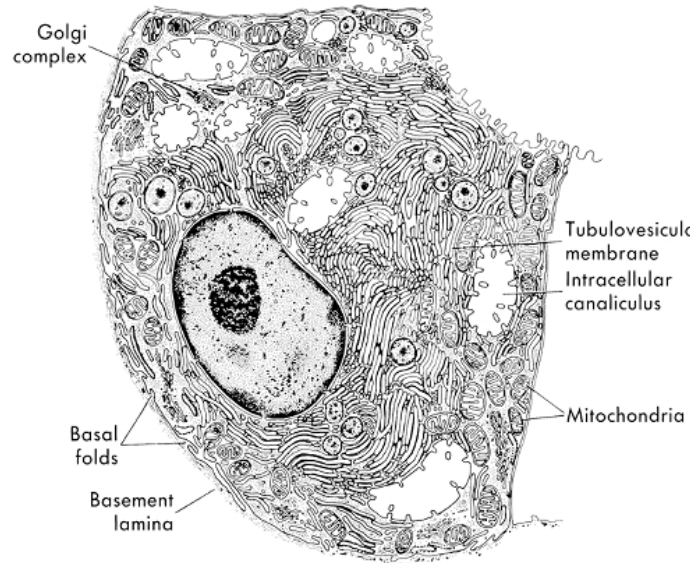
Interações das secreções gástricas



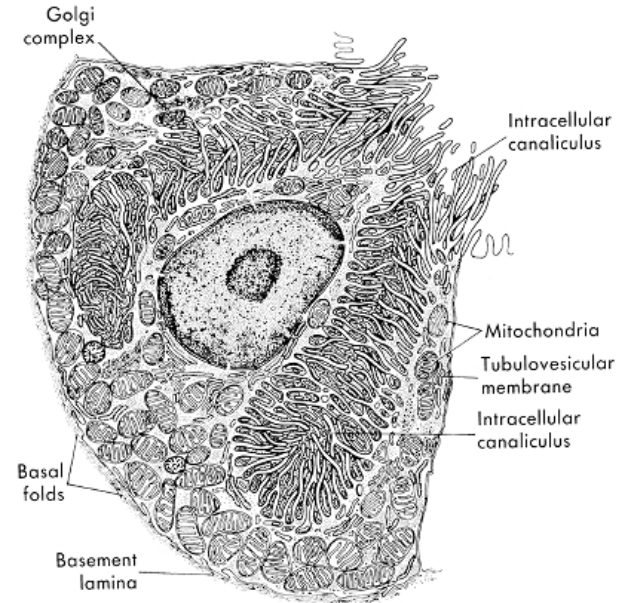
Secreção ácida gástrica: a célula parietal



em “repouso”



em atividade secretora

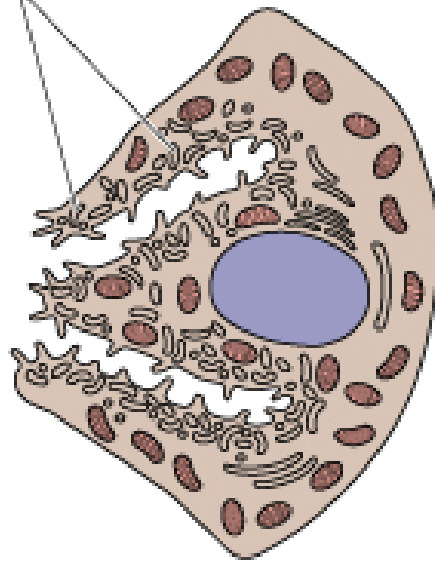


(A) Drawing of a resting parietal cell with cytoplasm full of tubulovesicles and an internalized intracellular canaliculus.

(B) An acid-secreting parietal cell. Tubulovesicles have fused with the membrane of the intracellular canaliculus, which is now open to the lumen of the gland and lined with abundant, long microvilli. (From Ito S: In Johnson RL, editor: Physiology of the gastrointestinal tract, New York, 1981, Raven Press.)

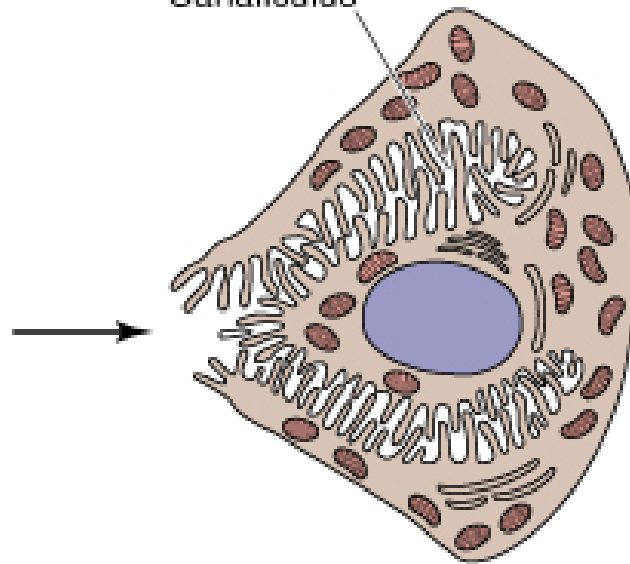
A RESTING

Tubulovesicles

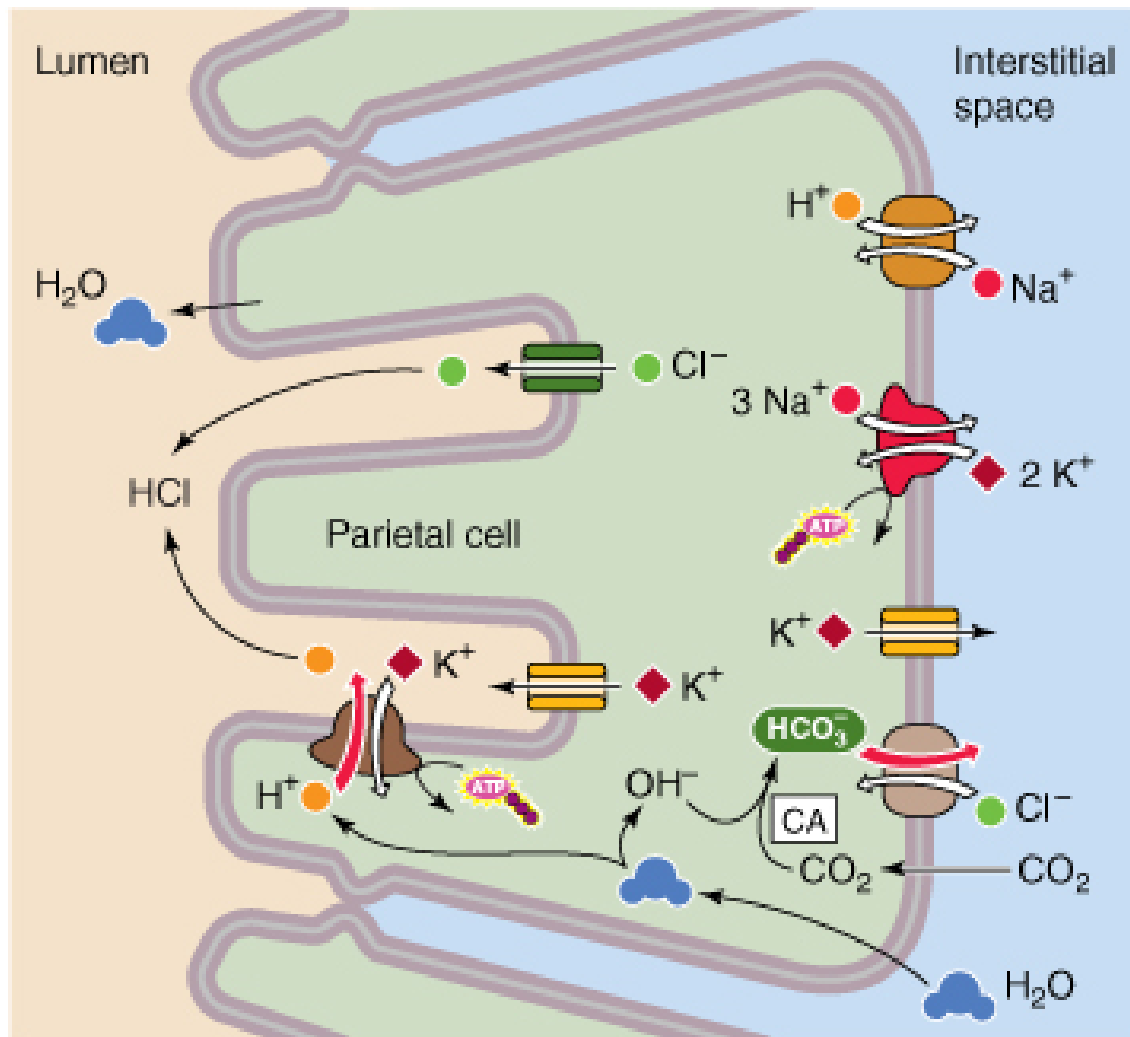


B ACTIVE

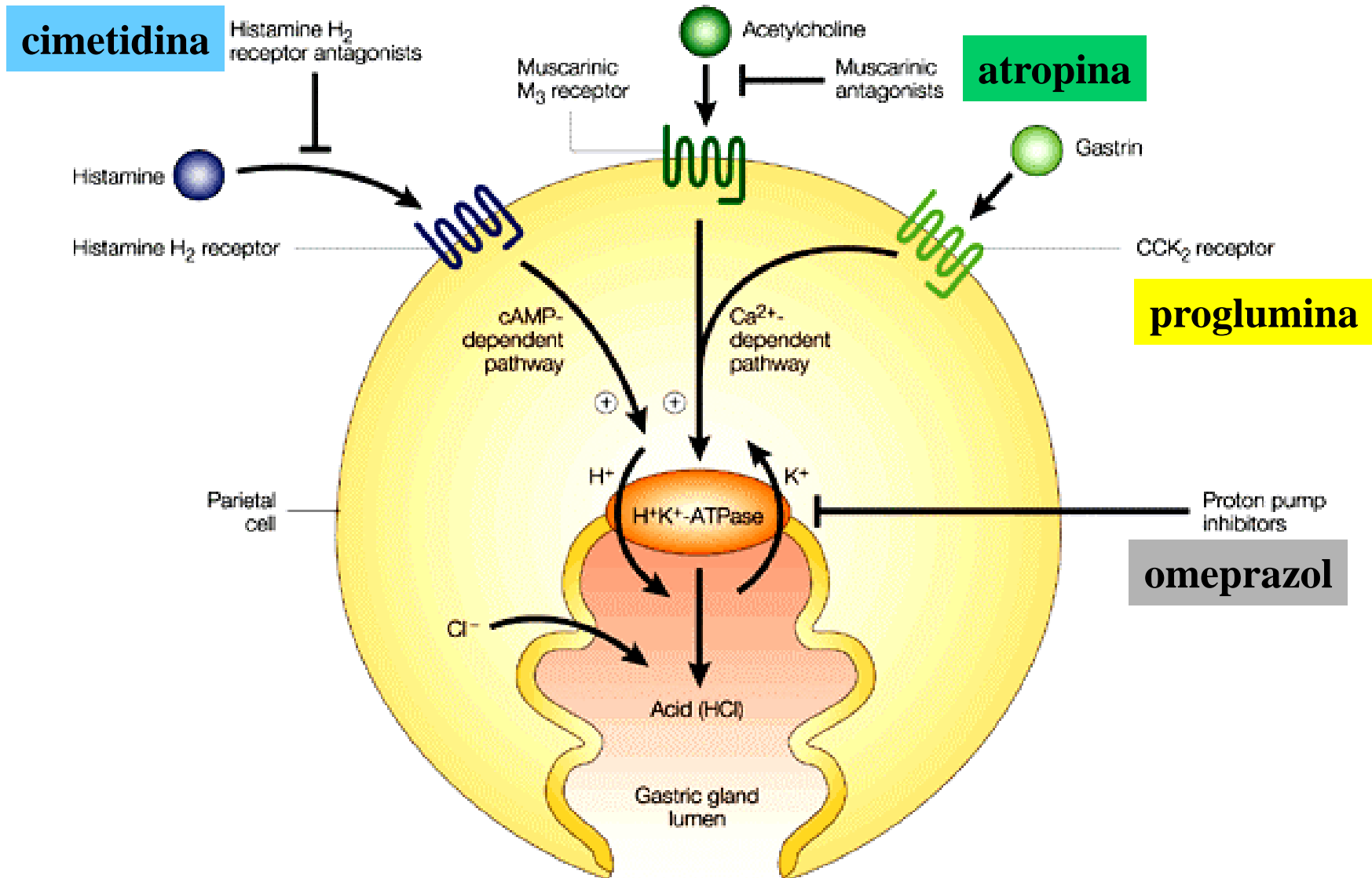
Canaliculus



Mecanismos intracelulares de secreção ácida gástrica (célula parietal)



Bloqueadores da secreção ácida



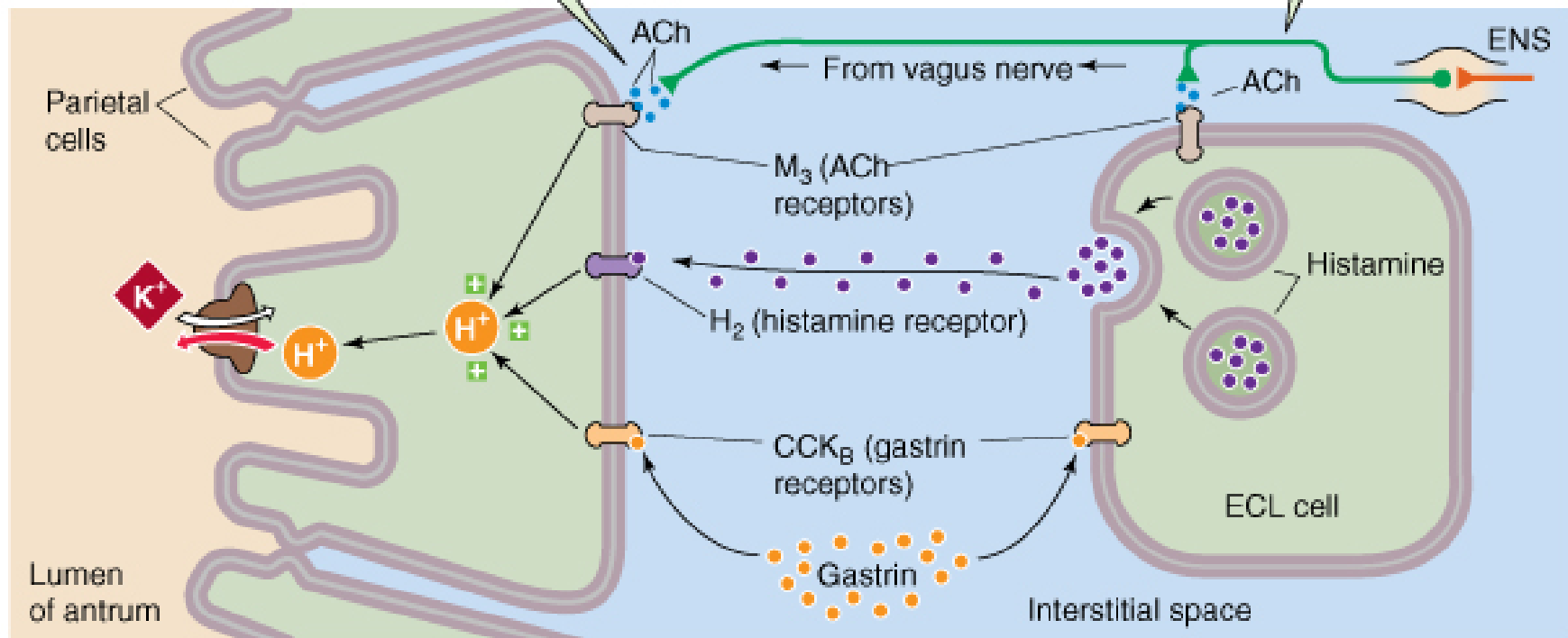
Potencialização da secreção ácida

1

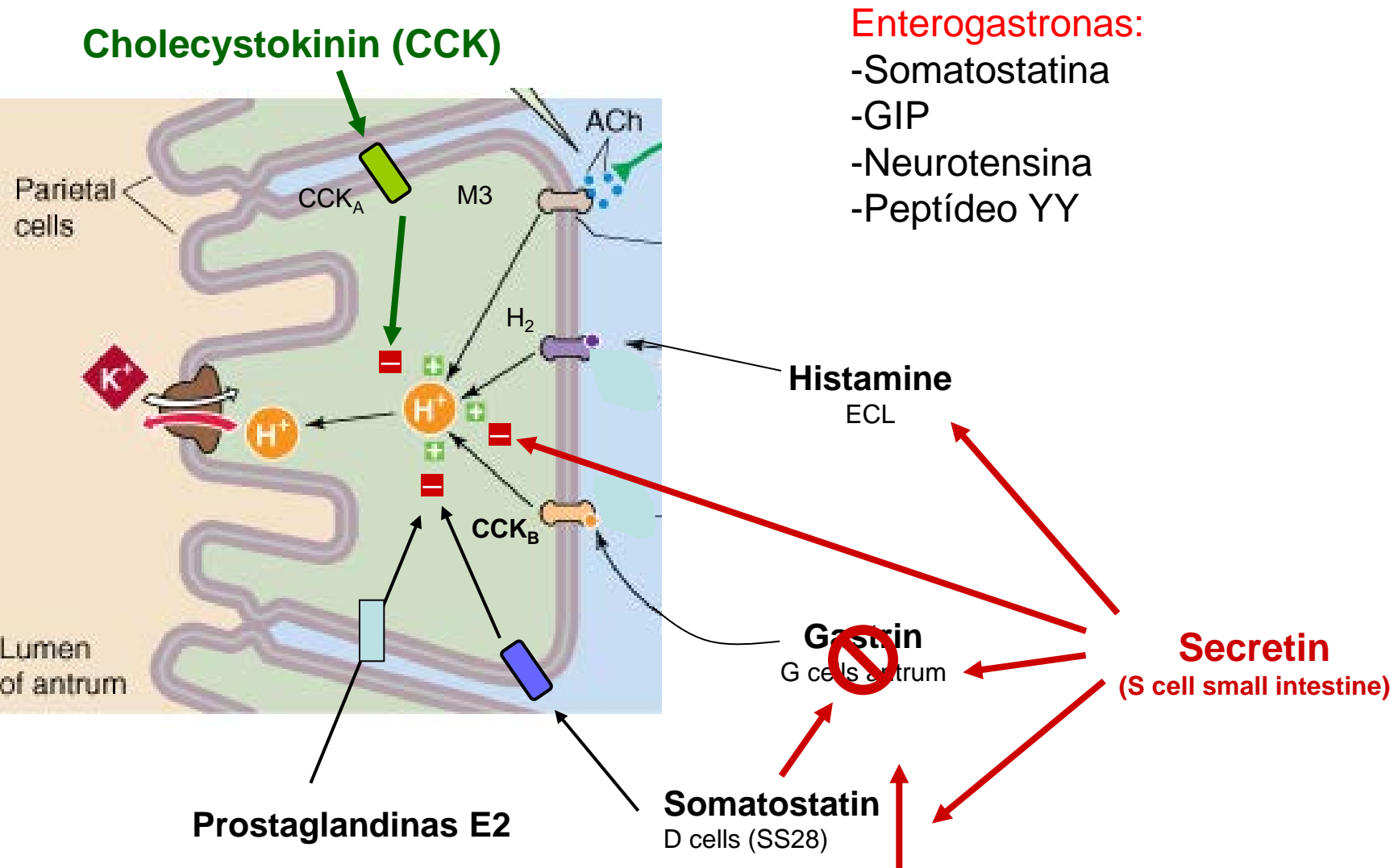
In the direct pathway, acetylcholine, gastrin and histamine stimulate the parietal cell, triggering the secretion of H^+ into the lumen.

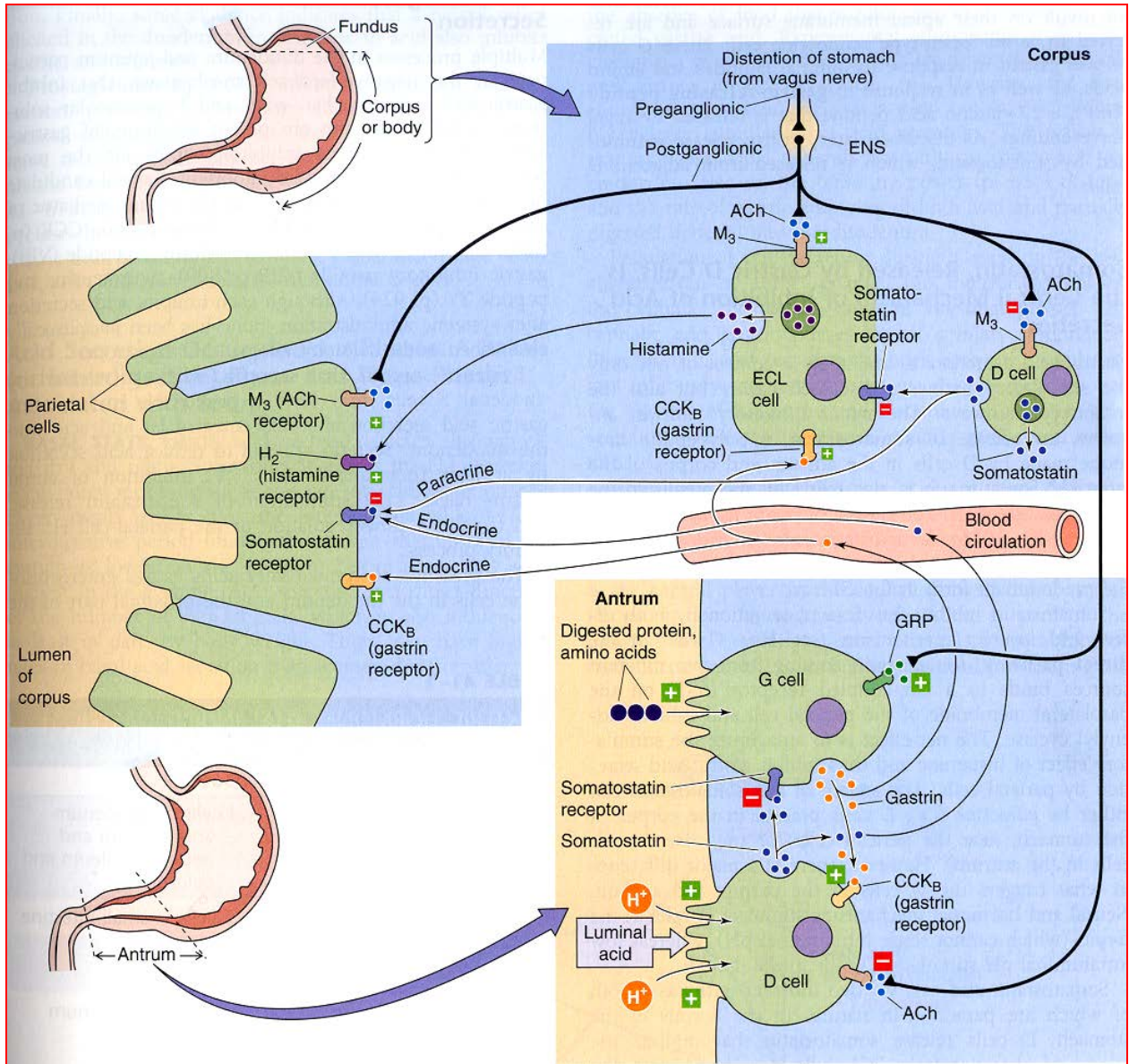
2

In the indirect pathway, acetylcholine and gastrin also stimulate the ECL cell, resulting in secretion of histamine. This histamine then acts on the parietal cell.



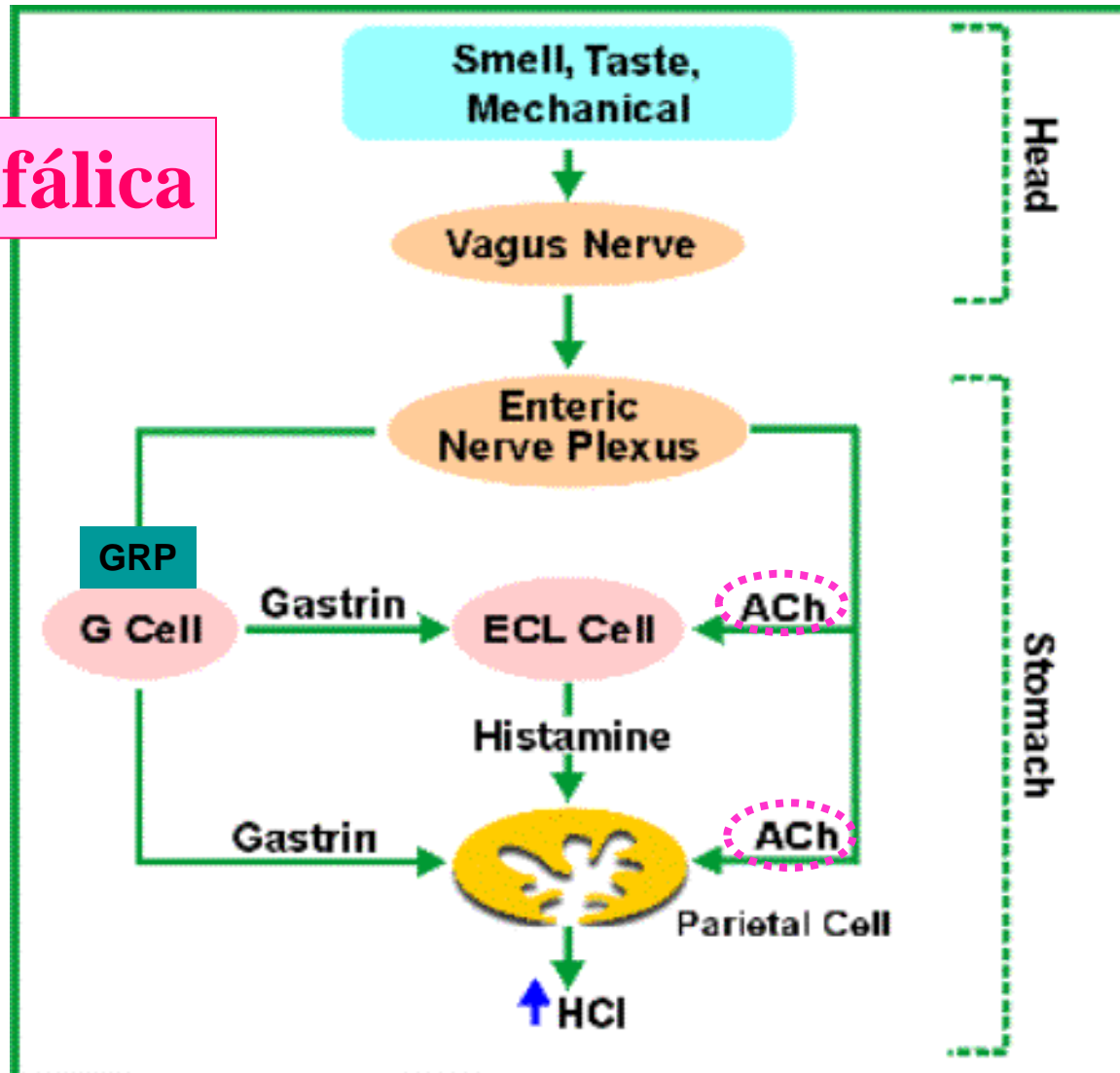
VIAS INIBITÓRIAS DA SECREÇÃO ÁCIDA



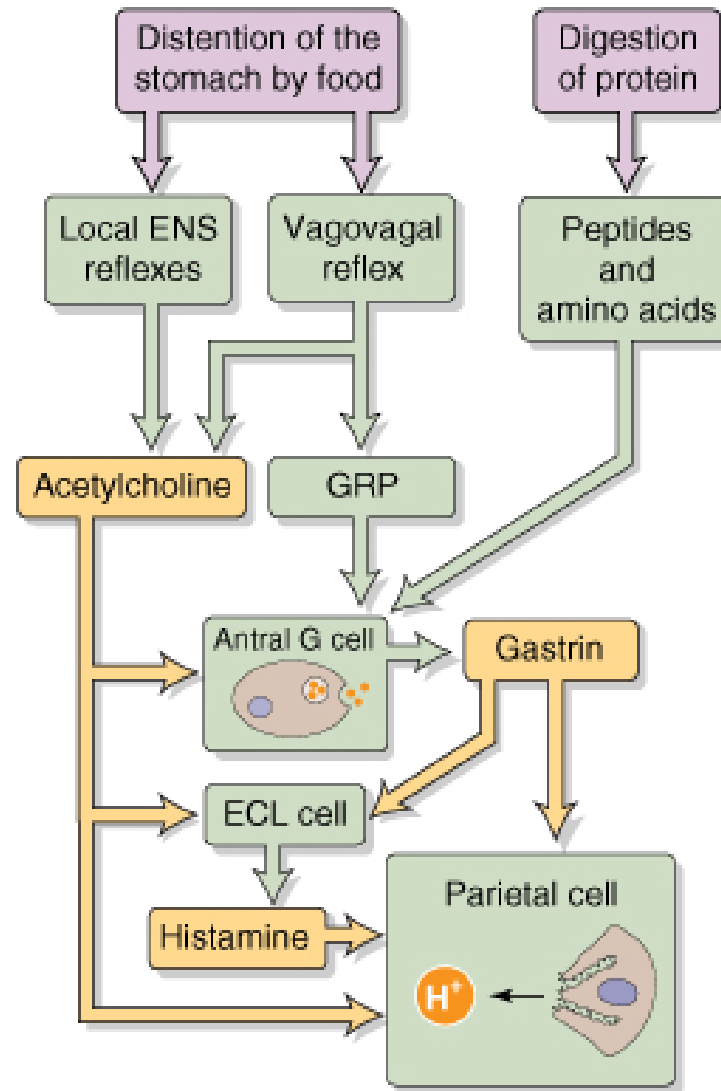


Fases da secreção gástrica

Fase cefálica



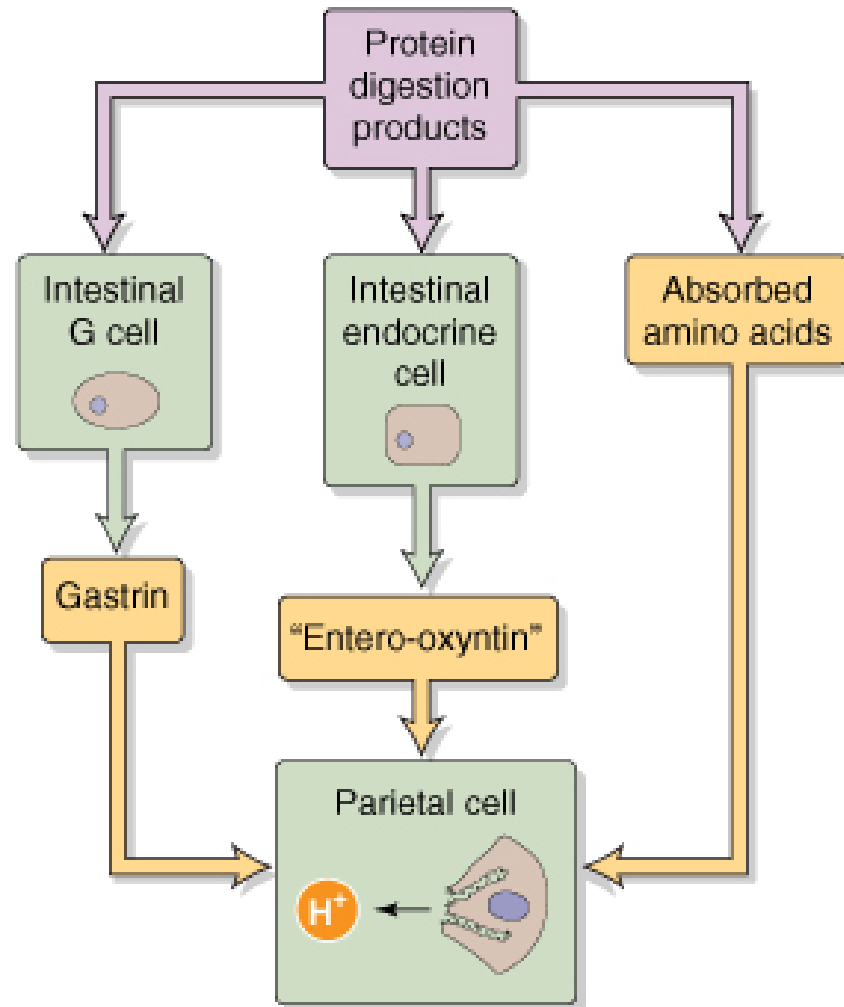
FASE GÁSTRICA



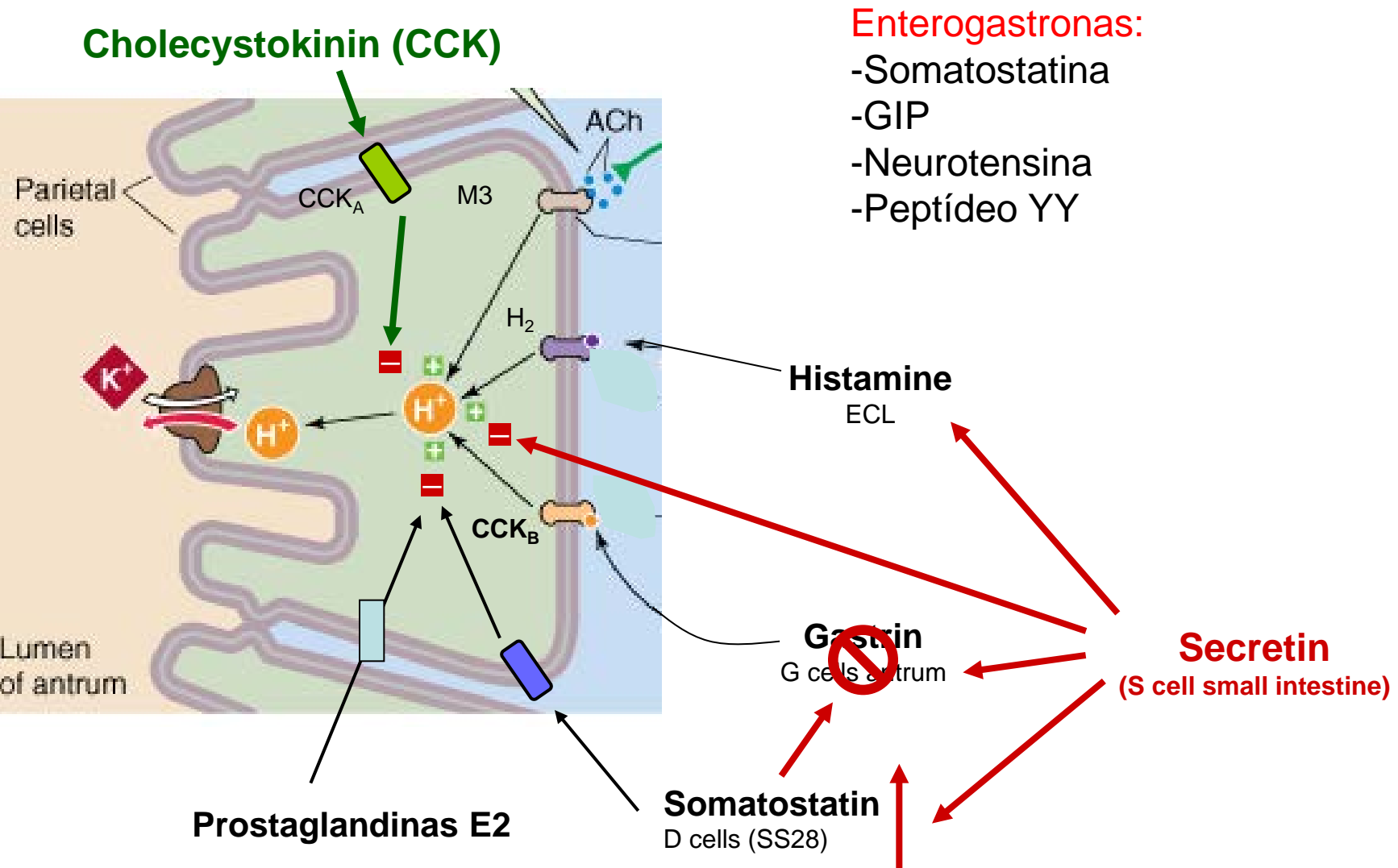
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Via inibitória: acidez gástrica levando ao aumento da SS

FASE INTESTINAL



VIAS INIBITÓRIAS DA SECREÇÃO ÁCIDA



Por que a pepsina não digere o epitélio gástrico ?

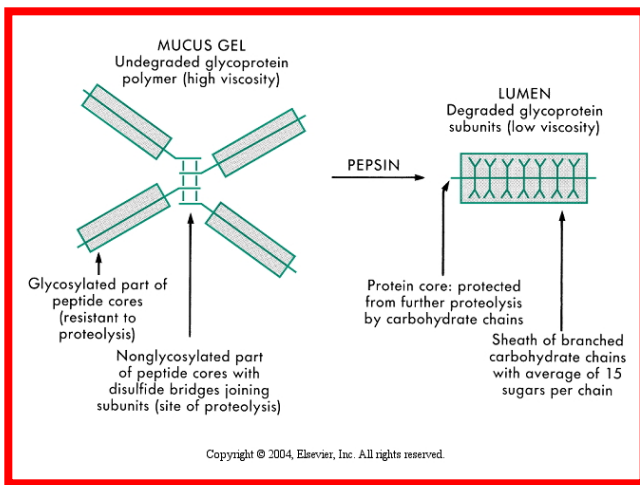
BARREIRA MUCOSA GÁSTRICA:

1-IMPERMEABILIDADE RELATIVA AO ÁCIDO DAS MEMBRANAS APICAIS DAS GLÂNDULAS GÁSTRICAS

2-PRESENÇA DE UMA CAMADA DE GEL-MUCOSO NA SUPERFÍCIE DO EPITÉLIO

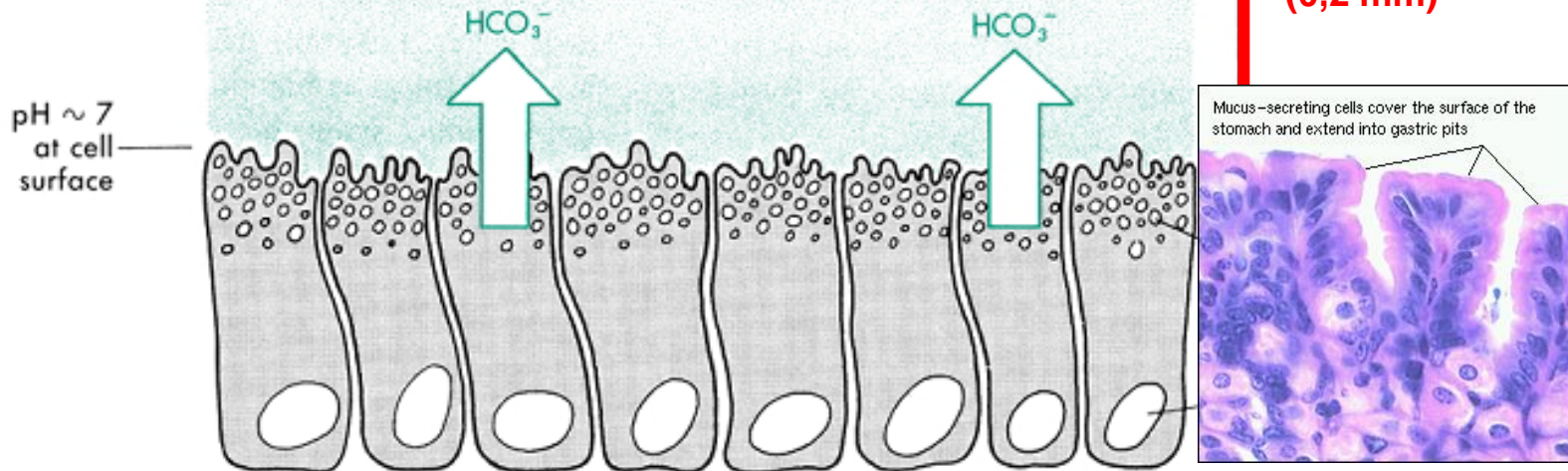
2-ALTA CONCENTRAÇÃO DE BICARBONATO NAS ADJACÊNCIAS DO EPITÉLIO

Proteção mucosa



pH ~ 2 in gastric juice

camada mucosa (0,2 mm)



pH ~ 7 at cell surface

HCO₃⁻

HCO₃⁻

PGE₂
(prostaglandinas são citoprotetoras)

⊕

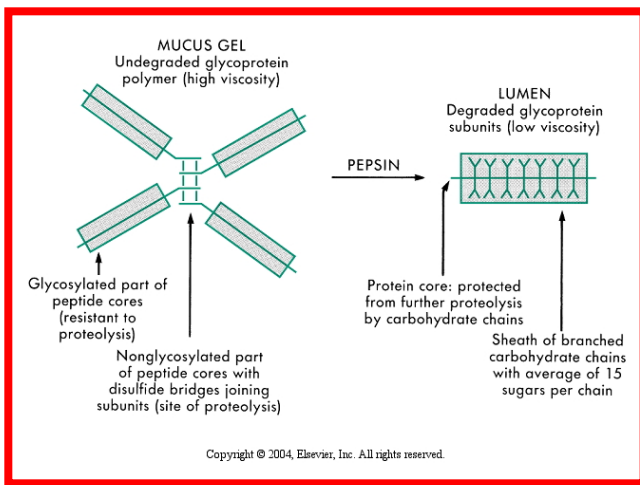
ACh, Food
(PS e SNE)

↑ secreção de muco e HCO₃⁻ pelas células epiteliais e mucosas
↑ fluxo sanguíneo

The protection provided to the mucosal surface of the stomach by the bicarbonate-containing mucus layer is known as the gastric mucosal barrier. In man, the mucus layer is about 0.2 mm thick. Buffering by the bicarbonate-rich secretions of the surface epithelial cells and the restraint to convective mixing caused by the high viscosity of the mucus layer allow the pH at the cell surface to remain near 7, whereas the pH in the gastric juice in the lumen is 1 to 2.

COX1: atividade ciclooxigenase da PGH₂-sintase). Berne et al., 2004 e outros: <http://meds.queensu.ca/medicine/physiol/undergrad/phase2/phase2e/Ph2acid.htm>

Proteção da mucosa

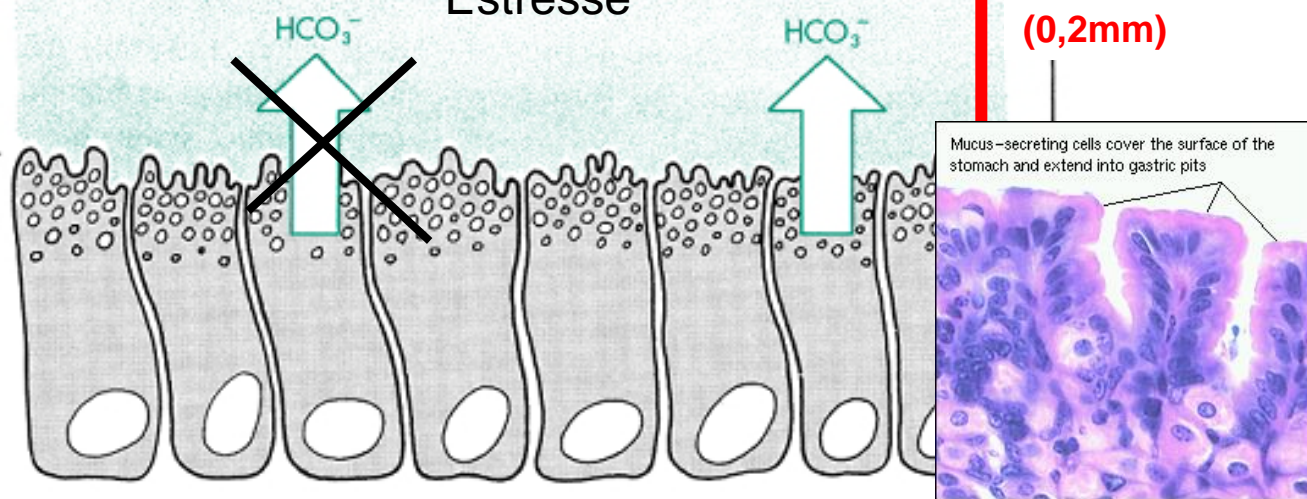


pH ~ 2 in gastric juice

camada mucosa (0,2mm)

Estresse

pH ~ 7 at cell surface



NSAIDs

(drogas antiinflamatórias não-esteróides)

inibição da COX 1 (constitucional)

~~PGE2~~
(prostaglandinas são citoprotetoras)

⊕

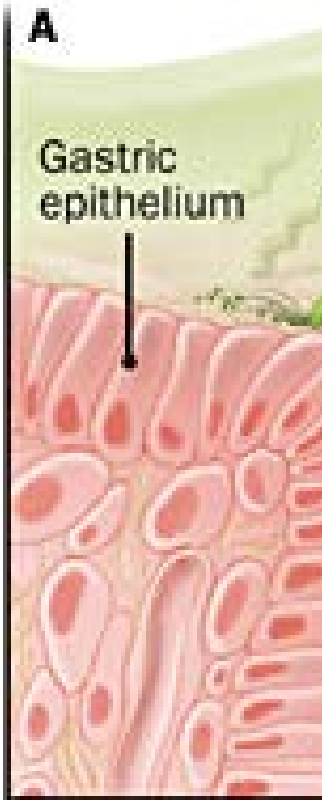
ACh (PS e SNE)

- ↑ secreção de muco e HCO_3^- pelas células epiteliais e mucosas
- ↑ fluxo sangüíneo

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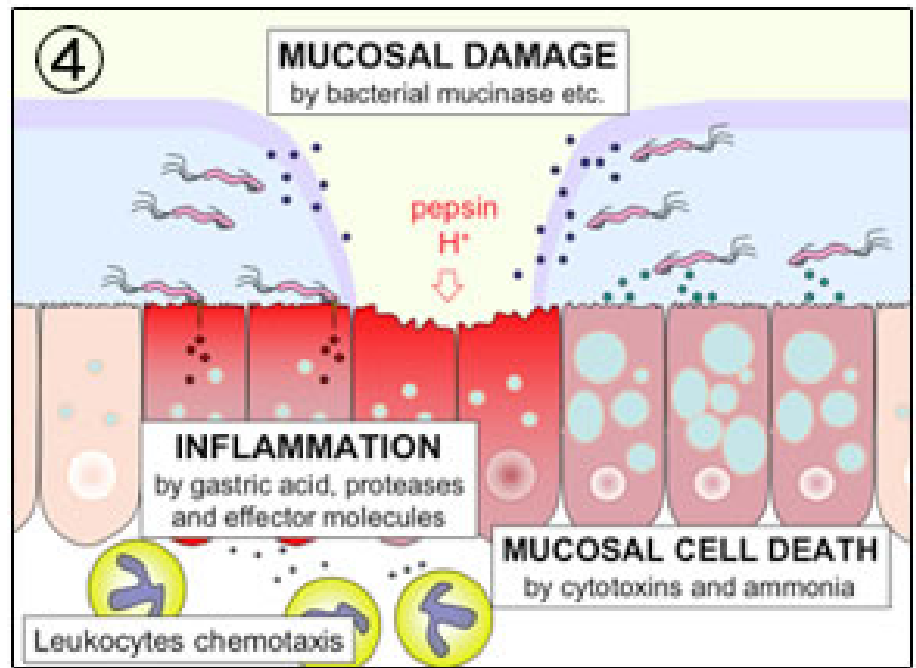
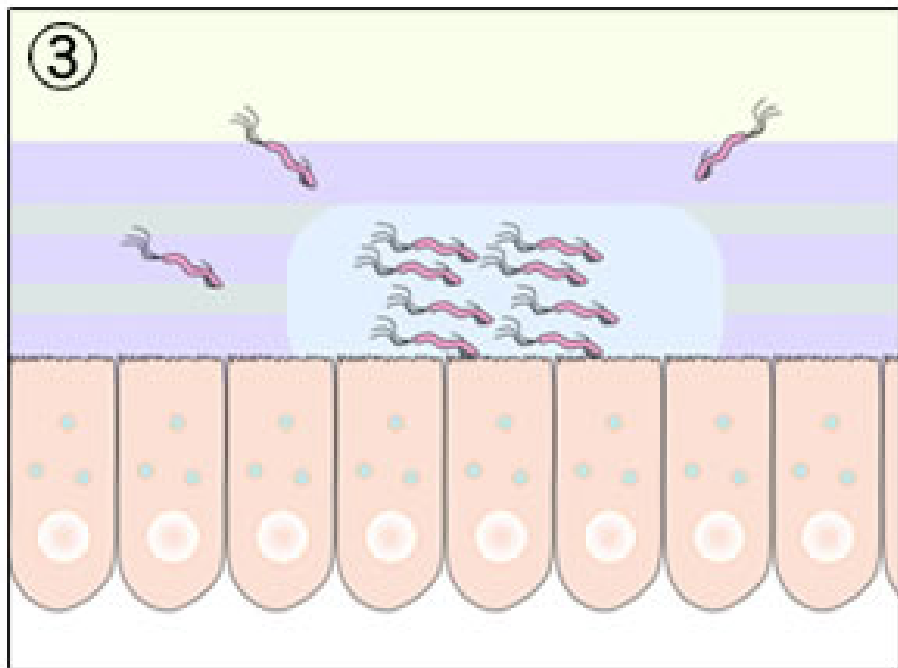
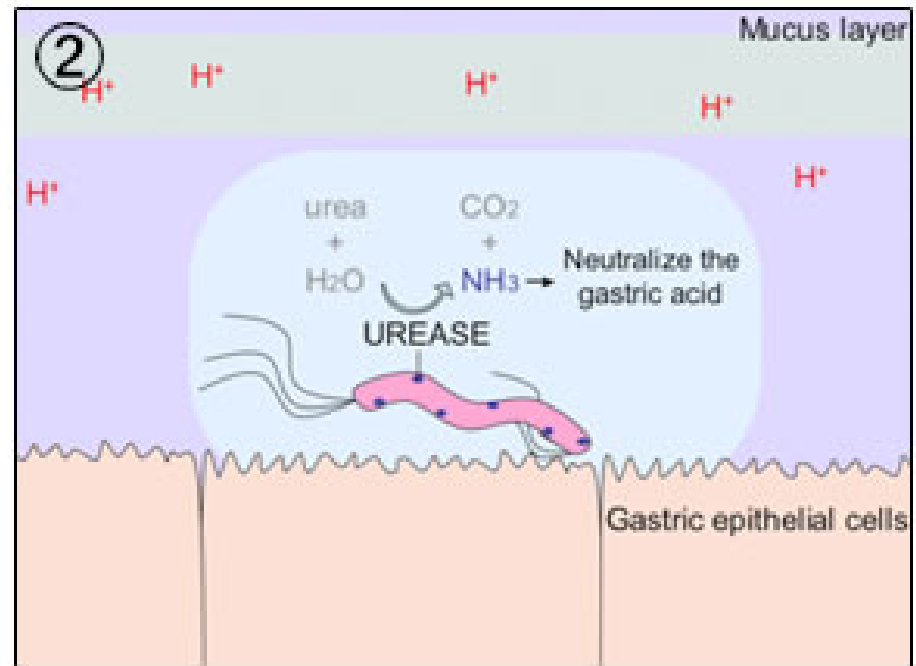
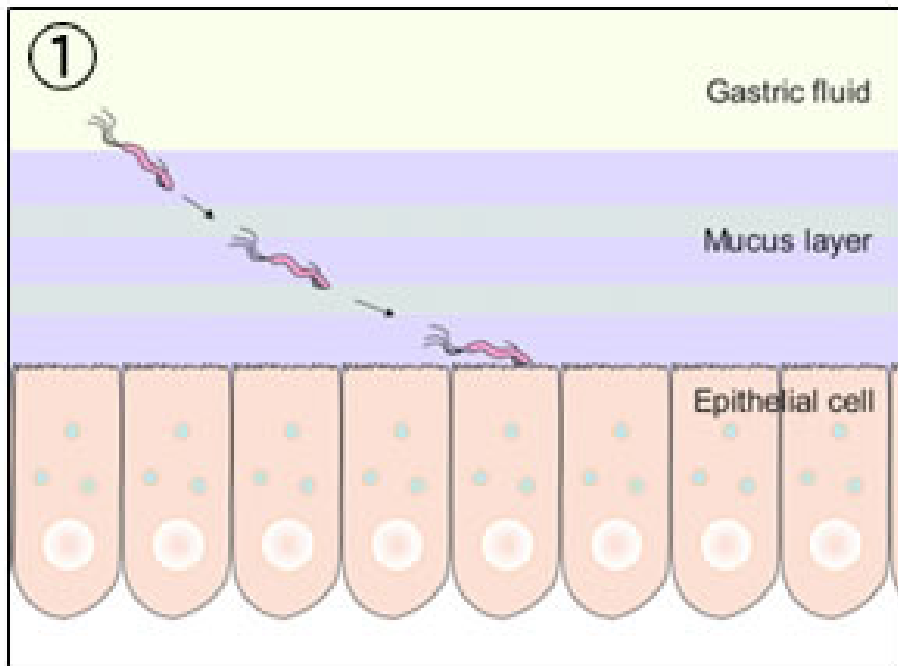
Helicobacter pylori



**The Nobel Prize in Physiology or Medicine for 2005:
jointly to
Barry J. Marshall and J. Robin Warren
(University of Western Australia Nedlands)
for their discovery of
"the bacterium *Helicobacter pylori*
and its role in gastritis and peptic ulcer disease"**

H. pylori is the etiologic agent for many individuals to the development of gastric carcinoma. *H. pylori* colonizes in the human stomach. The method of *H. pylori* transmission is unclear, but seems to be person-to-person spread via a fecal-oral route. The prevalence of *H. pylori* in adults appears to be inversely related to the socioeconomic status. It is also thought that water is a reservoir for transmission of *H. pylori*.

http://hopkins-gi.nts.jhu.edu/pages/latin/templates/index.cfm?pg=disease2&organ=5&disease=16&lang_id=1



A integridade do trato gastrointestinal superior depende do balanço entre fatores “hostis” e “protetores”

