

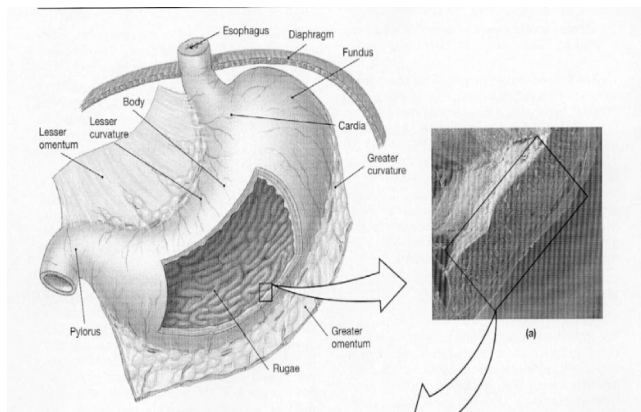
Syresekresjonen

FRM2041 03.05.06, Arild Chr. Rustan

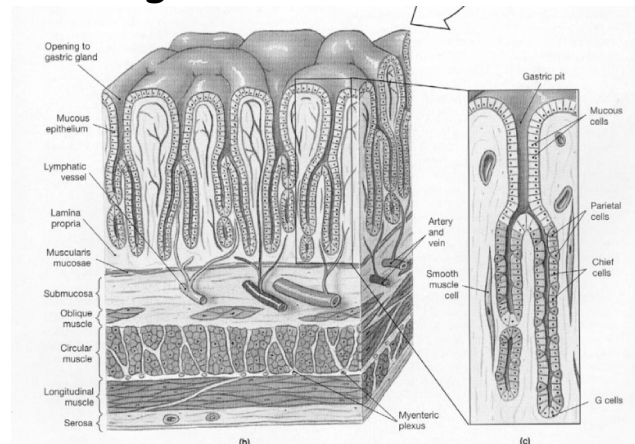
Fordøyelsesorganer - magesår

- Fysiologi og anatomi
 - Magesekken (ventrikkel)
 - Regulering av syresekresjonen
- Medikamentell behandling av magesår
 - Syresekresjonshemmere og antacida
 - Andre legemidler mot ulcus og reflukssykdom

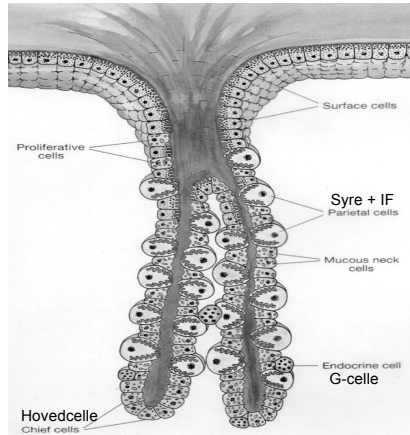
Magesekken - anatomi



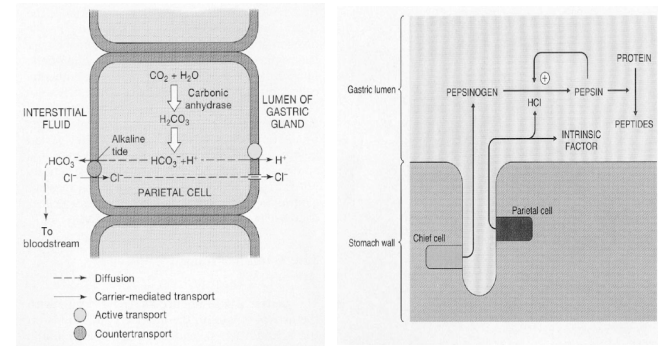
Magesekken - struktur



Ventrikkel - rørkjertel



Saltsyre og pepsin



Bikarbonat "tide"

Ventrikkel lumen pH = 1.5 - 2

Syresekresjon (H⁺Cl⁻)

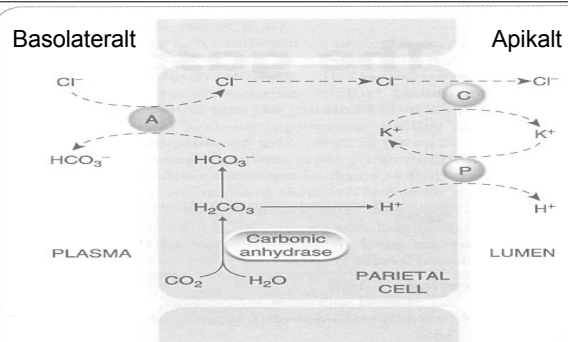
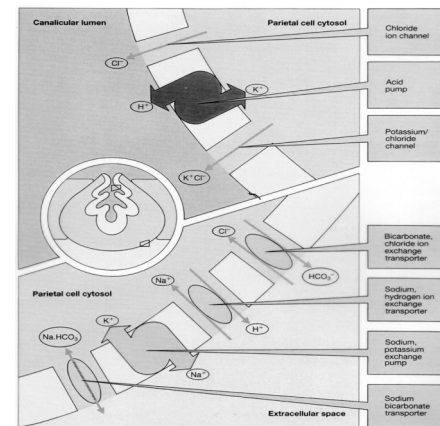


Fig. 24.1 A schematic illustration of the secretion of hydrochloric acid by the gastric parietal cell. Secretion involves a proton pump (P) which is a H⁺/K⁺-ATPase, a symport carrier (C) for K⁺ and Cl⁻, and an antiport (A), which exchanges Cl⁻ and HCO₃⁻. A Na⁺/H⁺ antiport at the interface with the plasma may also have a role (not shown).

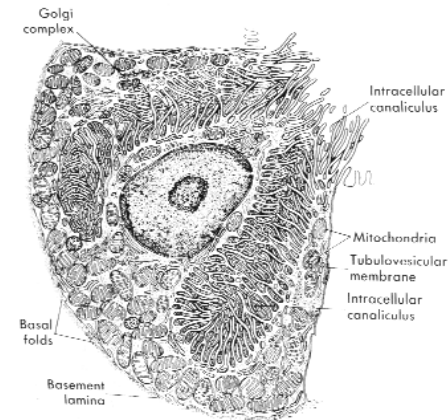
Parietalcellens "pumper"



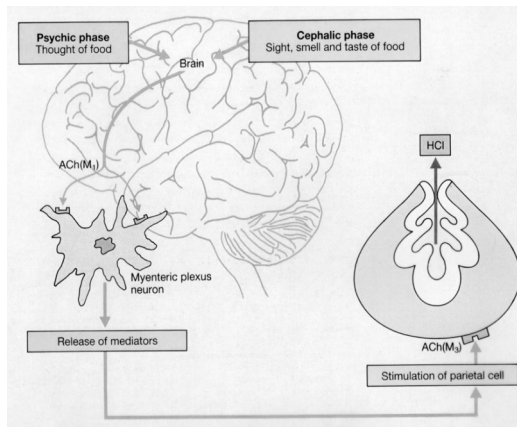
Regulering av syresekresjon

- Reguleres via parietalcellene og protonpumpen
 - K^+/H^+ -ATPase
 - Sekretoriske canaliculus (apikalt lokalisert)
- Parietalcellene stimuleres av:
 - Gastrin
 - GR: $IP_3 / \uparrow Ca^{2+} \Rightarrow \uparrow$ syresekr., \uparrow pepsinogen sekr., \uparrow blodflyt, \uparrow bevegelse, $pH > 2,5$
 - Acetylkolin (Ach)
 - MR2 og MR3: $IP_3 / \uparrow Ca^{2+}$
 - Histamin
 - H_2R : Gs, AC/ \uparrow cAMP)
- Parietalcellene inhiberes av:
 - Prostaglandiner (PGE_2 og PGI_2)
 - EP_3 : Gi, AC/ \downarrow cAMP)

Parietalcellen



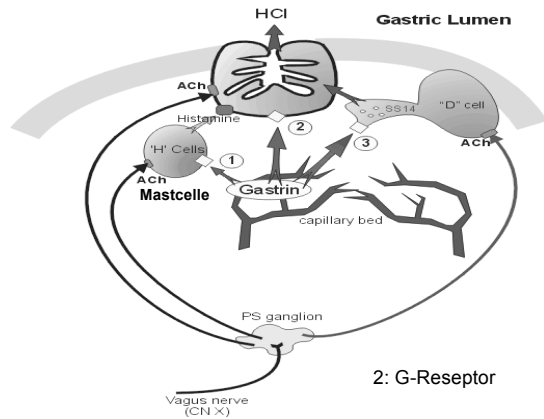
Acetylkolin (Ach)



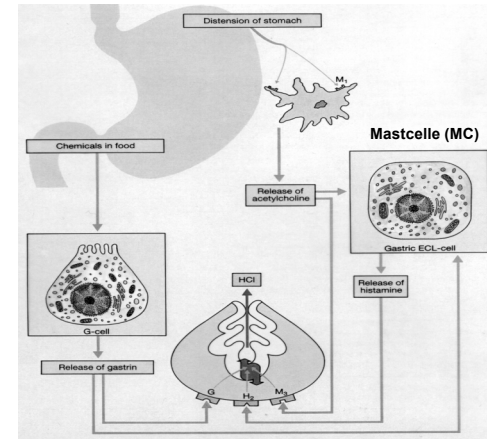
Hormonell kontroll

- Endokrin sekresjon
 - Hovedsakelig peptider produsert av endokrine celler i mukosa
 - **Gastrin** viktigst
- Parakrin sekresjon
 - Lokale hormoner
 - Spesialiserte celler i tarmveggen (MC)
 - **Histamin** viktigst

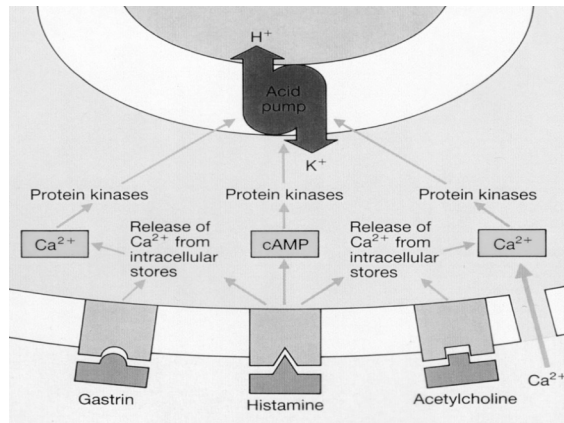
Gastrin



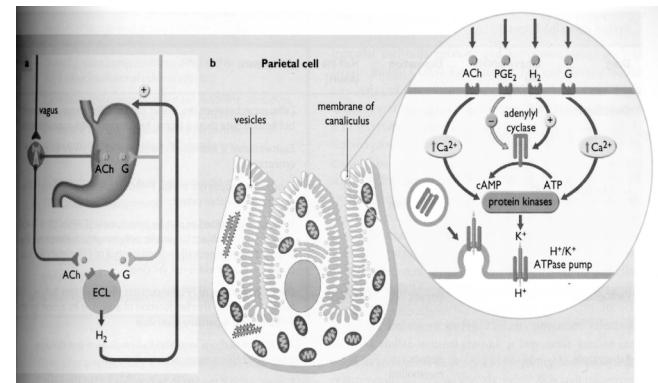
Gastrin og acetylkolin, direkte og via histamin (two-cell hypothesis)



Reseptorer - signalering



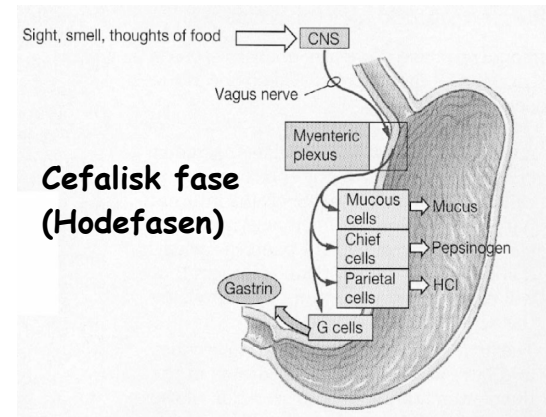
Parietalcellens signalmekanismer for syresekresjon



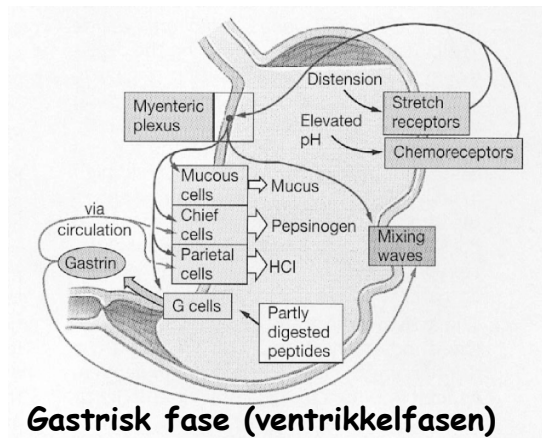
Gastrointestinale faser (ventrikkel) (faser i sekresjons- og motilitetsreguleringen)

- Cefalisk fase (Hodefasen)
- Gastrisk fase (Ventrikkelfasen)
- Intestinal fase (Tarmfasen)

Regulering av gastrisk aktivitet (in vivo regulering)



Regulering av gastrisk aktivitet



Regulering av gastrisk aktivitet

