

Fill in What you know about the following with a partner or group:

Gastrin:

- Produced in gastric mucosa cells
- Functions: stimulate acid secretion by the stomach and growth of cell lining

Secretin:

- Presence of chyme and acid in duodenum stimulate secretin secretions
- Functions: inhibit acid secretions, Stimulate bicarbonate production

Cholecystokinin (CCK):

- Presence of chyme and acid in duodenum stimulate CCK secretion
- Functions: regulate gastric emptying, stimulate pancreatic and gallbladder secretions, key hormone regulating feed intake

Gastric Inhibitory Peptide (GIP):

- Secreted from duodenum in response to high glucose concentrations
- Functions: inhibits stomach motility and emptying
- MAJOR function: Stimulates insulin release

Somatostatin: Inhibits release of CCK, Gastrin, and Secretin

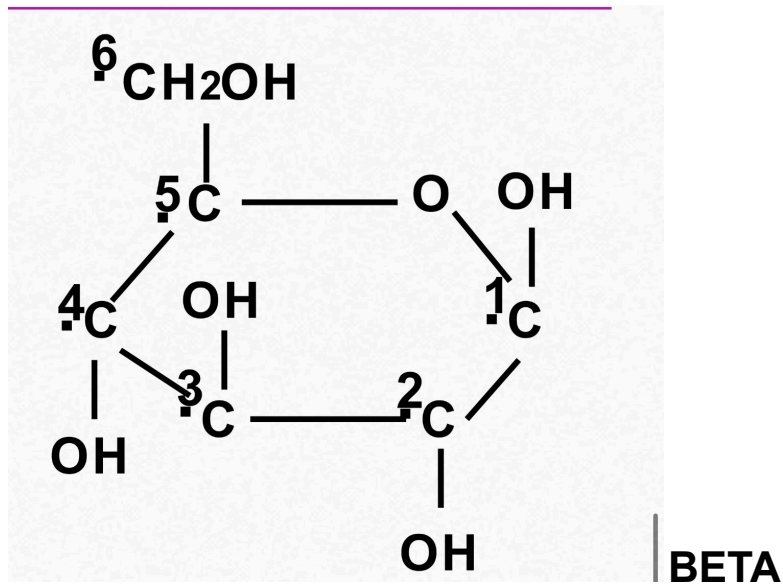
Ghrelin:

- New hormone produced by special cells in stomach
- Regulates Growth Hormone release
- Increases food intake and weight gain
- High during negative energy balance

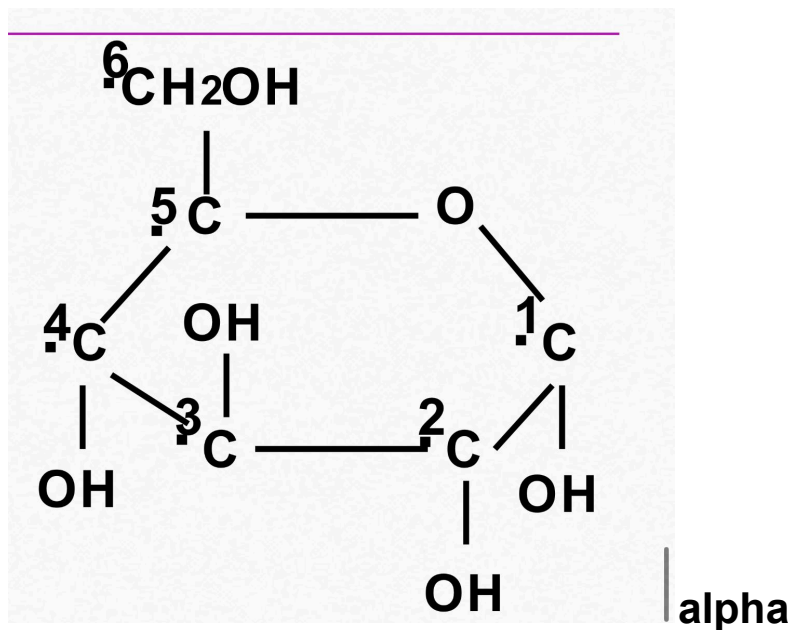
Hypothalamus: is what releases somatistatin

Alpha VS Beta bonds

Beta or Alpha ?



Trick to remember: birds fly in the sky (up)



Trick to remember: all fish swim in water (down)

Digestion Coefficient

Given the Numbers set it up and solve:

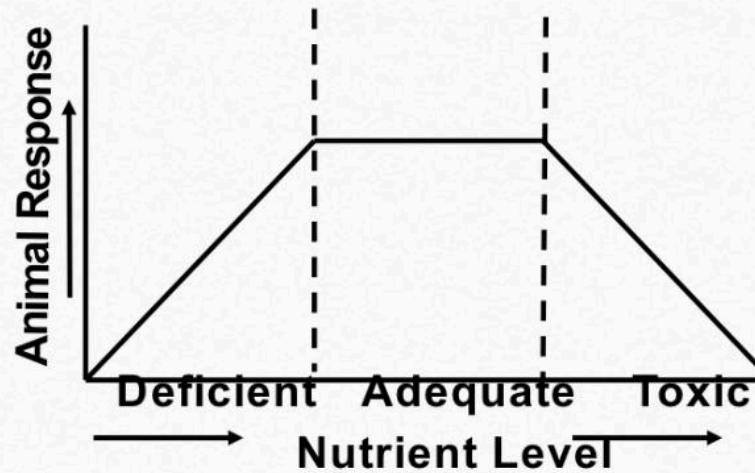
Pig Consumes 400 g feed with 20% crude protein

Pig excretes 200g feces with 15% crude protein

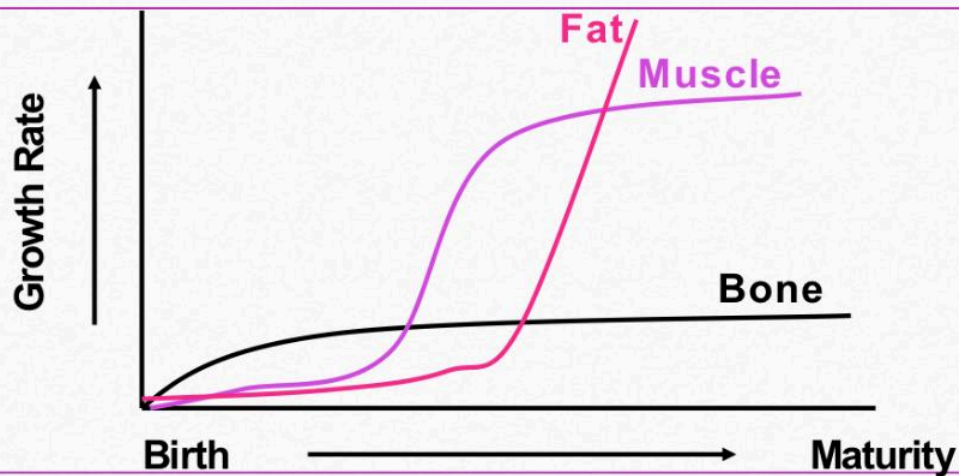
CP digestibility:

$$\frac{(400 \times .20) - (200 \times .15)}{400 \times .20} \times 100 = \frac{80 - 30}{80} = 0.625 \times 100 = 62.5\%$$

Animal Response in Relationship to Intake of an Essential Nutrient



Growth Curves



Define heat increment

Metabolic heat created through digestion and fermentation.

How can heat increment be manipulated: increase roughages during winter

Water is a solvent for: Chemical reactions

Heat losses are greater in: roughages, forages

Total proportion of body water is what percent neonates and what percent mature animals

85 neonate

45 mature animal

Sweat is: body water used for temperature control

Poultry systems for metabolizable energy

Net is used to describe energy for: ruminants because of fermentation