9.6 – Absorption Process

Intermediate 2 Biology

Learning Intentions 15th Jan

Everyone should complete:

- 1-Absorption Model
- 2-Visking Tube Experiment
- 3-Small Intestine

Most people will complete:

- The Check Test for 9.6
- The Home Practice for 9.6

Some people might start:

Problem solving
 Torrance Intermediate 2 Biology textbook
 p 240 'Applying Your Knowledge'

1 - Absorption

- The alimentary canal (or gut) is a long tube inside the body
- Any food in the alimentary canal is still outside the cells of the body
- To get inside the molecules of the food have to be able to pass through the wall of the alimentary canal

Now try the 'Model Absorption' kit!

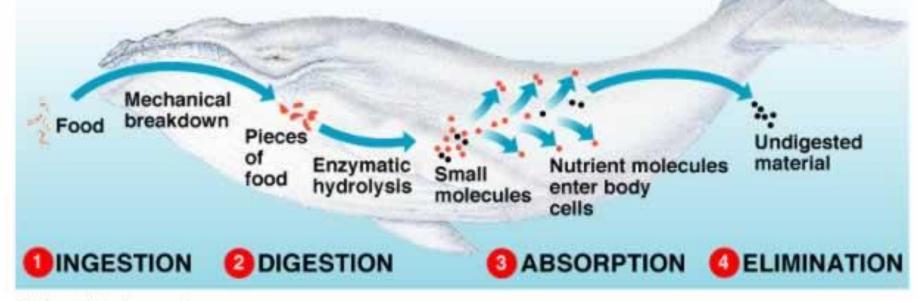
Think.....

- What does the piece of tube in the model represent?
- Why can the food molecules inside the tube still be regarded as 'outside' the body?
- Which food molecules in the model were able to pass through the wall of the tube most easily? Why was this?
- Why were the protein molecules in the model unable to pass through the wall of the tube?

Now complete the 'Notes'!!!

Absorption

'The passage of small food molecules through the wall of the alimentary canal and into vessels that can transport them within the body'



2 - Visking Tubing Experiment

- a diagram of the experiment when set up
- what the visking tubing was being used to represent
- how you tested for starch and glucose and a table of your results
- an explanation of the results in terms of size of the food molecules involved

3 – Small Intestine

 Small, soluble food molecules are absorbed through the wall of the small intestine

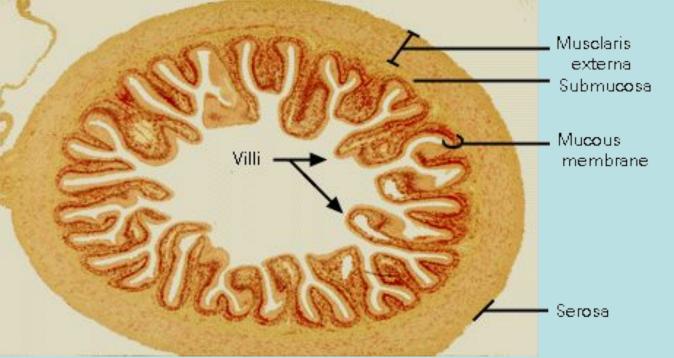
 To absorb food molecules efficiently the small intestine has three main adaptations......

1. A Large Surface Area

small intestine

The small intestine is very long
 -6m long

- The inner surface on the intestine is folded
 covered with many finger like projections
 - -covered with many finger-like projections called villi
 - -greatly increase the surface area in contact with digested food





Villi

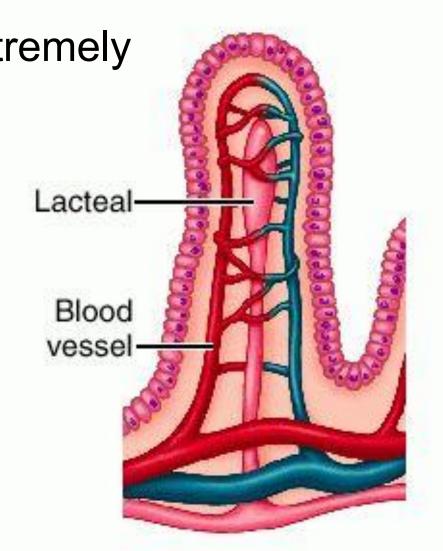
'finger-like folds in the surface of the small intestine'

(Singular – villus)

2. Thin Wall

 Each villus has an extremely thin wall

- -only one cell thick
- -rapid absorption



3. Good Blood Supply

- Each villus is supplied with blood vessels to receive the absorbed foods
 - -glucose/amino acids/vitamins/minerals are absorbed into blood capillaries
 - -products of fat digestion absorbed into lacteal

Now complete the 'Notes'!!

http://kitses.com/animation/swfs/digestion.
 swf

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