



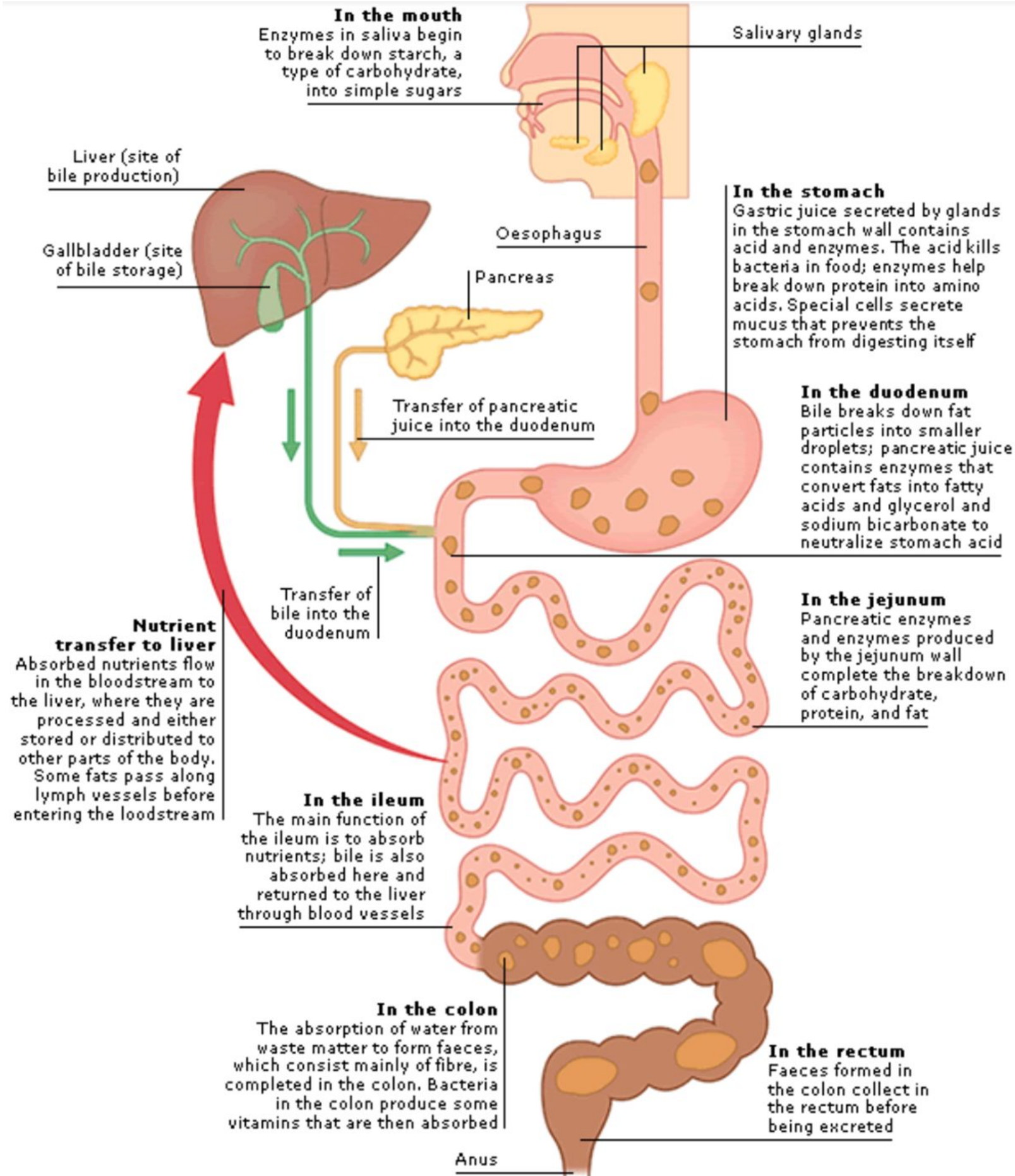
HOW THE BODY WORKS

UNDERSTANDING HOW FUNCTION IMPROVES HEALTH

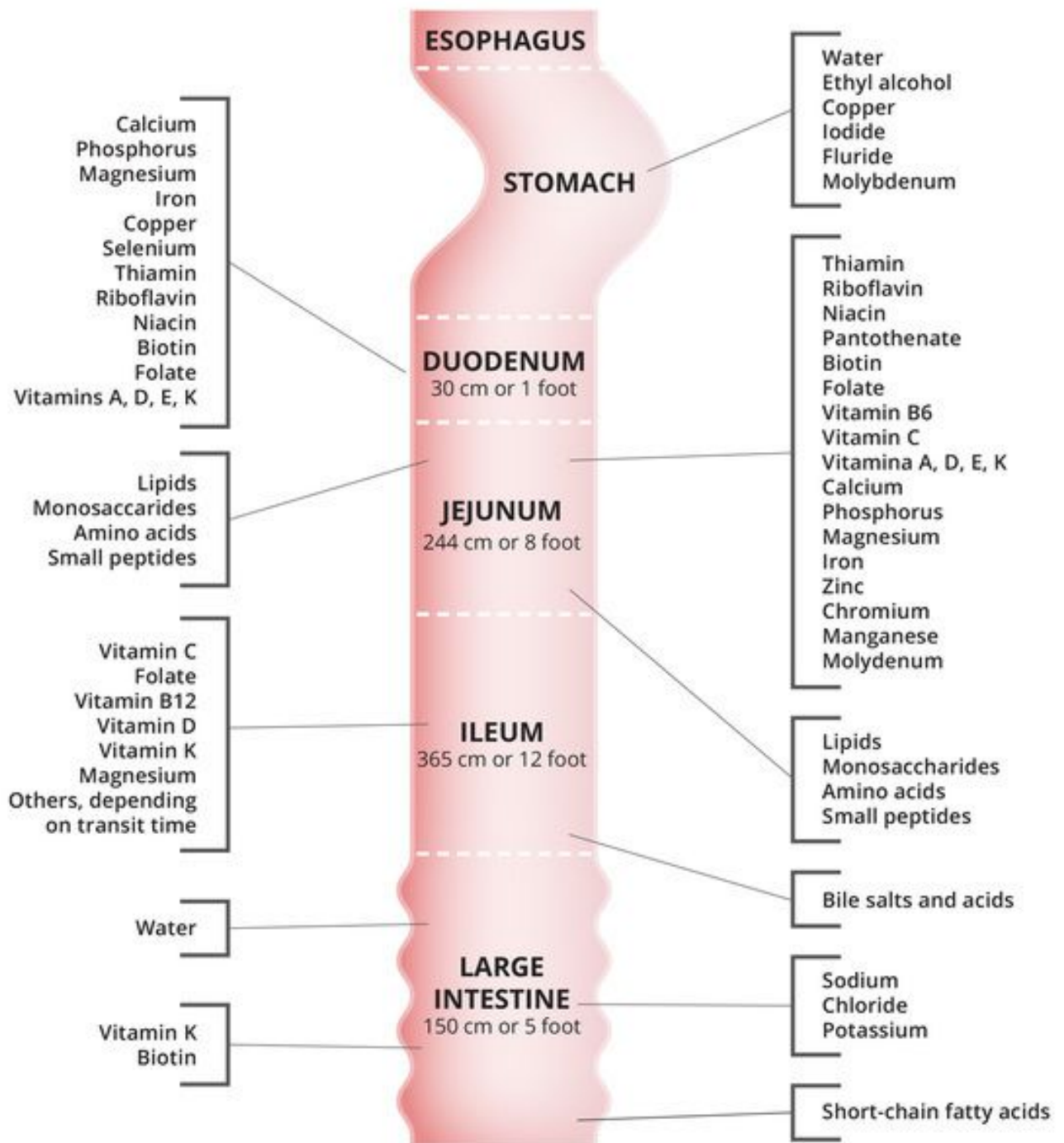
Digestion

- Chewing and saliva – this is where digestion starts
 - Carb pre-digestion
 - Dehydration can reduce saliva and enzymes
 - Bacteria can overgrow in the mouth
- Stomach acid
 - Aids in protein digestion
 - Keeps our chyme acidic to signal other digestive processes to function
- Small intestine
 - Does not contain many bacteria
 - Has 3 parts, the duodenum, the jejunum, the ileum
 - After the work of the stomach is complete, food continues to be digested with the help of bile and pancreatic enzymes
 - The Migrating Motor Complex is what pushes our food along the digestive tract at a speed that supports nutrient absorption
 - Where are nutrients absorbed?
- Large intestine
 - Filled with beneficial bacteria
 - Works to remove toxins





WHERE ARE NUTRIENTS ABSORBED AS THEY TRAVEL THROUGH YOUR ENTIRE DIGESTIVE TRACT?



Note: The duodenum, jejunum and ileum make up the small intestine.

Hydration

- **Key Facts:**

- ❖ The total amount of water in our body is found in three main locations: within our cells (two-thirds of the water), in the space between our cells and our blood (one-third of the water).
- ❖ The amount of water a body contains varies according to certain contexts: *The body of a newborn is composed of more water (75%) than that of an elderly person (50%).*
- ❖ The body holds onto water when you don't have enough or gets rid of it if you have too much. If your pee is very light yellow, you are well hydrated. When your pee is very dark yellow, it's probably time to drink up.
- ❖ Water acts as a lubricant to organs, remove waste, regulate body temperature, and aid the body in nutrient absorption.
- ❖ Water is absorbed into cells via minerals such as sodium and glucose. The basic process is: water is absorbed into the small intestine where it is pumped to the cells and, via active transport, to the extracellular space (this is simplified, but works for what we need to know right now). The water contains traces of sodium and enters the cell and adds to the cell's sodium levels. When the sodium enters the cell, it also brings in hundreds of water molecules (along with some glucose/sugar).
 - So what happens when we don't have the right amounts of sodium and glucose in our bodies? Our cells don't get enough water.
 - This is also the reason that people with diarrhea get dehydrated fast, since the body pumps out the intestines faster than the water/nutrients can be absorbed. In a healthy person, the majority of sodium found in the intestines is absorbed, keeping cells well hydrated. If the level of salt or glucose in your body is low, less water can be absorbed.
 - Fiber in foods will help your body retain water in the intestines, where it is slowly absorbed. This means that instead of just passing through fast, it'll take its time and your body can use all the water it needs.



Elimination

Good elimination is needed for the body to remove toxins and waste. We can learn a lot about how our bodies are functioning through the color of urine and the color and consistency of our stool. It can tell us about hydration, diet, digestion and give us clues for correction.

BRISTOL STOOL CHART



Type 1 Separate hard lumps

SEVERE CONSTIPATION



Type 2 Lumpy and sausage like

MILD CONSTIPATION



Type 3 A sausage shape with cracks in the surface

NORMAL



Type 4 Like a smooth, soft sausage or snake

NORMAL



Type 5 Soft blobs with clear-cut edges

LACKING FIBRE



Type 6 Mushy consistency with ragged edges

MILD DIARRHEA



Type 7 Liquid consistency with no solid pieces

SEVERE DIARRHEA