

facts about...

# THE HEALTHY GUT

## THE HEALTHY GUT

### What is the digestive System?

The digestive system (or gut) is a tube that goes from the mouth through the chest and abdomen to the back passage. It is divided into several segments each of which has a specialised function. Two other organs are intimately involved in digestion, the liver and pancreas. They are attached to the gut by small tubes which carry bile and enzymes to mix with food. Food, fluid and finally waste products are pushed along the gut by muscular contractions in the wall which are called peristalsis. The time taken for food to go from the mouth to the anus varies from 12 to 48 hours depending on the type of food eaten.

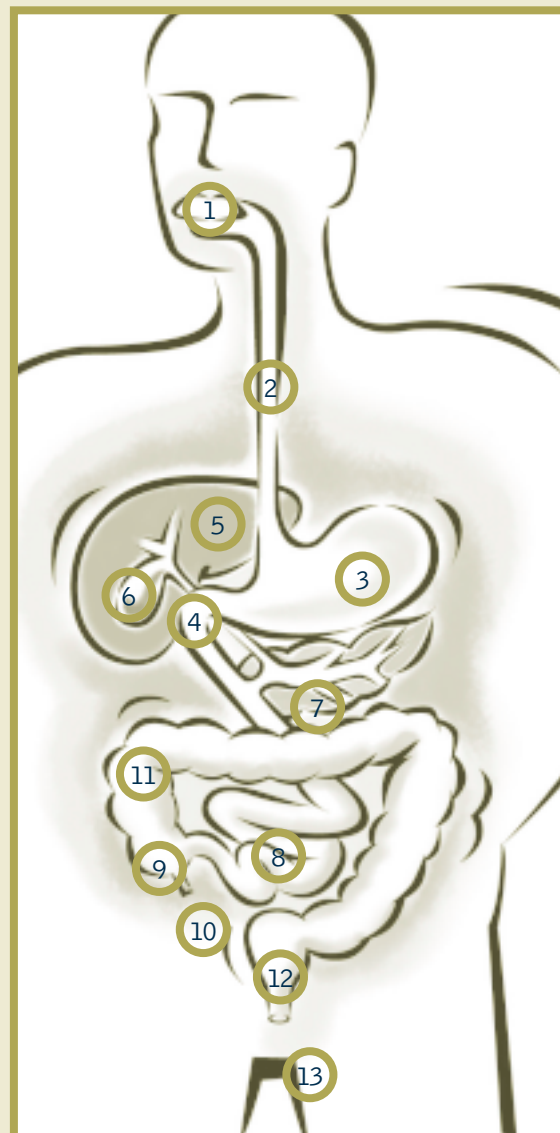
THE TIME TAKEN FOR FOOD  
to go from the mouth  
to the anus varies from  
12 to 48 hours depending on  
the type of food eaten.

### The Parts of the Gut

#### 1. The Mouth

Some people have difficulty chewing and swallowing food because of the poor state of their teeth or because they have a very dry mouth that doesn't produce saliva.

#### 2. The Oesophagus



- |               |                    |                     |
|---------------|--------------------|---------------------|
| 1. Mouth      | 6. Gall Bladder    | 11. Large Intestine |
| 2. Oesophagus | 7. Pancreas        | 12. Rectum          |
| 3. Stomach    | 8. Small Intestine | 13. Anus            |
| 4. Duodenum   | 9. Caecum          |                     |
| 5. Liver      | 10. Appendix       |                     |

The oesophagus is the tube that goes from the mouth to the stomach. Muscle contractions in the oesophagus push food gently down into the stomach. There is a little valve between the oesophagus and the stomach called the lower oesophageal valve. It prevents reflux of acid and food back up into the oesophagus.

### 3. The Stomach

The stomach has several functions. It produces acid which can kill bacteria which can be swallowed in the food or saliva. The thick muscular walls of the stomach contract to mix solid food, liquids, stomach acid and saliva in order to aid digestion. The stomach also makes substances which help absorb iron and vitamins.

### 4. The Duodenum

The duodenum is the first part of the small intestine. It receives bile from the liver and enzymes from the pancreas through small ducts or tubes.

### 5. The Pancreas

This organ makes special enzymes that help digestion and also makes the hormone insulin which controls blood sugar.

### 6. Liver and Gall Bladder

The liver produces bile, which is stored in the gall bladder until it is needed after meals. Bile helps digest fats.

### 7. The Small Intestine

The small bowel is five metres in length in an adult and half that length for a baby. If all the folds were flattened out the surface area would equal that of a doubles tennis court. This allows large amounts of digested nutrients to pass through the lining of the small intestine into the blood stream, which distributes them throughout the body.

### 8. The Large Intestine or Colon

The colon is like a waste treatment works. It contains numerous bacteria which help in this process. In fact the weight of the bacteria in an adult colon is greater than the weight of any organ in the body. It receives liquid waste from the small intestine and processes it into formed bowel motions. Fluid is absorbed through the bowel surface into the blood stream. Peristalsis pushes the motion down into the rectum or back passage. When it is time for a person to empty their bowels the anal sphincter muscle at the very, very end of the gut relaxes and allows the motion to pass through.

#### Tips for a Healthy Diet

A high fibre diet including wholemeal cereals, vegetables and fruit is important for health digestion. Ideally you should have 30g of fibre



per day. A good balanced diet high in fibre has been shown to reduce the risk of bowel cancer, diverticular disease and heart disease. It also helps constipation. It is important to drink six to eight glasses of water, juices or tea per day. Regular exercise can help a sluggish gut.

*This information booklet has been designed by the Digestive Health Foundation as an aid to people who wish to know more about a healthy gut. This is not meant to replace personal advice from your medical practitioner.*

*The Digestive Health Foundation (DHF) is an educational body committed to promoting better health for all Australians by promoting education and community health programs related to the digestive system.*

*The DHF is the educational arm of the Gastroenterological Society of Australia, the professional body representing the Specialty of gastrointestinal and liver disease in Australia. Members of the Society are drawn from physicians, surgeons, scientists and other medical specialties with an interest in GI disorders.*

*Since its establishment in 1990 the DHF has been involved in the development of programs to improve community awareness and the understanding of digestive diseases.*

*Research and education into gastrointestinal disease are essential to contain the effects of these disorders on all Australians.*

*Further information on a wide variety of gastrointestinal conditions is available on our website.*