

INFORMATION SHEET

Certain drugs, for example aspirin, are known to have an irritant effect on the stomach. This irritation can lead to an ulcer (inflammation) forming in the delicate lining of the stomach. Aspirin can be coated with a substance (an enteric coating) that will dissolve only in the small intestine.

SIMULATIONS IN SCIENCE

Biomedical researchers test how pharmaceutical products interact in the body. These tests often involve **simulations** (representations) of human processes. This allows them to test these products safely.

Enteric coating is a coating applied on oral medication, to help protect the drug from the lower pH (i.e. acidic) of the stomach. Most enteric coatings work by having a surface that is **stable** at the highly acidic pH (found in the stomach), but breaks down rapidly at a higher pH. For example, they will not dissolve in the acidic juices of the stomach (pH 3), but they will dissolve in the alkaline (pH 7 – 9) environment present in the small intestine. Materials used for enteric coatings include fatty acids, waxes, plastics and plant fibres.

Many people take aspirin daily for cardiothoracic/heart disorders.

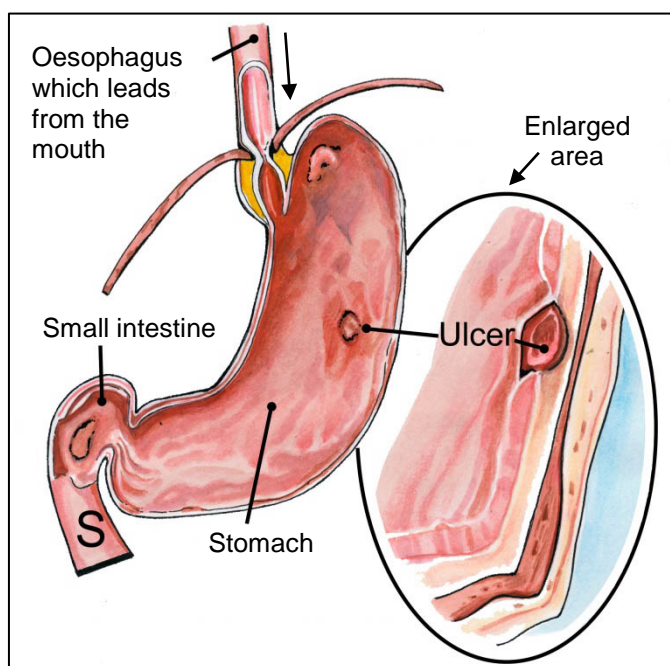
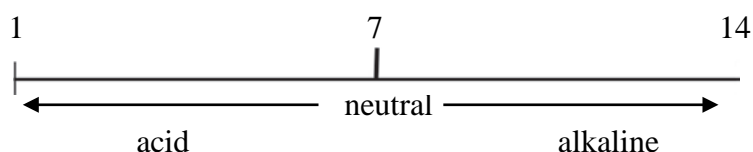


Diagram to show a portion of the human digestive system

TESTING pH

Litmus paper is commonly used to test pH.

pH scale



Changes in colour of litmus paper

- blue litmus paper turns pink
- no colour change
- red/pink litmus paper turns blue