

Information sheet for Amylase

Amylase is a small **enzyme** that breaks down starch in the food that we eat to produce **maltose** and **glucose**. It is produced predominantly in the **pancreas** and **salivary glands** (and can be produced in some cancers of the lung and ovary).

In plasma (the liquid part of the blood) we can measure two isoenzymes - the 's' type, salivary and the 'p' type, pancreatic. This is rarely required though.

The commonest reason for measuring amylase is in the patient presenting with acute abdominal pain where **acute pancreatitis** is a possibility.

In the majority of instances, given the appropriate clinical setting, the diagnosis of acute pancreatitis is made by a **plasma amylase activity 4x above normal**.

(Amylase is the most commonly measured enzyme used in the diagnosis of acute pancreatitis. Some hospitals also measure serum lipase and urine trypsinogen 2)

An elevated serum amylase does not always indicate acute pancreatitis.

There are some other causes –

- Perforated peptic ulcer
- Intestinal obstruction
- Intestinal ischaemia
- Ruptured ectopic pregnancy

- Diabetic Ketoacidosis
- Renal failure
- Salivary gland disease
- Tumours
- Macroamylase

Also note that amylase will not give you any indication about the **severity** of acute pancreatitis - does the patient need to be in a critical care setting or general ward? You'll need to use a **prognostic score** to decide on this.