## Amylase (Serum)

### Description
Amylase is both a pancreatic and salivary enzyme used in digestion of carbohydrates. It can be released when cells of the pancreas are damaged or when the pancreatic duct is blocked (either by gallstones or more rarely pancreatic malignancy).

### Indication
Diagnosis of acute pancreatitis

### Additional Info
Amylase level reflects both pancreatic and salivary amylase levels.

Amylase may also be raised in acute abdominal disorders, biliary tract disease, DKA, renal failure, ruptured ectopic pregnancy, pancreatic pseudocyst, salivary gland inflammation (mumps), lung and ovarian cancer, due to drugs and from macroamylasaemia.

If levels remain high for a prolonged period of time, consider macroamylasaemia or a pancreatic pseudocyst. A urine amylase:creatinine ratio may be useful in such cases (serum amylase remains elevated and urine amylase low/normal).

### Concurrent Tests
LDH, AST and glucose in acute pancreatitis

### Dietary Requirements
N/A

### Interpretation
In acute pancreatitis, levels will generally exceed 3x ULN in 90% of cases. The rise occurs within 2-12 hours post pain, peaks at 24-48 hours and can remain elevated for 3-7 days. Levels will generally be normal in chronic pancreatitis.

The magnitude of rise is not proportional to the severity of the attack.

Levels which remain high or rise again, suggest pancreatic pseudocysts or abscess formation.

In renal failure, levels are increased due to reduced clearance, but generally do not exceed 2-3x ULN.

Moderately elevated levels are seen in many conditions including perforated peptic ulcer, acute biliary obstruction, acute peritonitis and DKA.

### Collection Conditions

### Frequency of testing