

By Will Stahl-Timmins



Child with any of:

Nausea/vomiting

Abdominal pain

Hyperventilation

Dehydration

Reduced level of consciousness



Those taking insulin may develop DKA with normal glucose levels

Known to have diabetes

No known history of diabetes

Other symptoms that may suggest DKA:

Increased thirst

Recent weight loss

Unexplained

Excessive tiredness

Polyuria

Measure blood ketones

Blood ketones test unavailable

Measure capillary blood glucose

Below 0.5 mmol/L

0.5–3.0 mmol/L

Above 3.0 mmol/L

Above 11.0 mmol/L

Below 11.0 mmol/L

No DKA

Manage according to presenting symptoms

Sick day rules

Use the sick day rules of the local diabetes service

Suspect DKA

Send immediately to hospital with acute paediatric facilities

No DKA

Manage according to presenting symptoms



Rehydration should be attempted only by experienced paediatric teams

## Fluid therapy

### Fluid deficit

Blood pH  
7.1 or above > 5%  
Below 7.1 > 10%

Fluids needed over 48 hours\*

50 mL/kg  
100 mL/kg

Total fluids

Fluid deficit

+

Maintenance volume

### Fluid maintenance volume

Child's weight

Under 10 kg > 2 mL/kg/h  
10–40 kg > 1 mL/kg/h  
Over 40 kg > 40 mL/h

96 mL/kg  
48 mL/kg  
1920 mL

## Insulin therapy

Soluble insulin

0.05–0.10 units/kg/h

Do not give bolus doses of intravenous insulin

\* Rehydration should be attempted over 48 hours, as large fluid volumes carry an increased risk of cerebral oedema