

The background is a smooth blue gradient, transitioning from a lighter blue at the top to a darker blue at the bottom. A bright sun flare is visible on the left side, creating a white and yellow glow that fades into the blue. The text 'DKA' is centered in the middle of the image.

DKA

# Classification of Diabetes Ketoacidosis

	<b>Normal</b>	<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
(O <sub>2</sub> (mEq/L,venous)	*20-28	16-20	10-15	<10
pH (venous)*	7.35-7.45	7.25-7.35	7.15-7.25	<7.15
Clinical	No Change	Oriented, alert but fatigued	Kussmaul respiration; oriented but sleepy; arousable	Kussmaul or depressed respiration sleepy to depressed sensorium to coma

\* CO<sub>2</sub> and pH measurement are method dependent; normal ranges may vary  
 \* Sever hypermatremia (corrected Na > 150mEq/L would also be classified as severe  
 DKA

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# Diabetes Ketoacidosis (DKA) Treatment Protocol

Time	Therapy	Comments
1 <sup>st</sup> hour	10-20 ml/kg IV bolus 0.9% NaCl or LR insulin drip at 0.05 to 0.10 $\mu$ /kg/hr	Quick volume expansion may be repeated NPO monitor I/O, neurologic status. See flow sheet. Have mannitol at based; 1g/kg IV push for cerebral edema
2 <sup>nd</sup> hour until DKA resolution	0.45% NaCl: plus continue insulin drip 20mEq/L Kphos and 20 mEq/L KAc 5% glucose if blood sugar <250mg/dL (14mmol/L)	85mL/kg+maintenance -bolus IV rate= _____ 23 hrs
Variable	Oral intake	

Diabetes Mellitus is a chronic metabolic syndrome characterized by hyperglycemia as a cardinal biochemical feature

Type 1- deficiency of insulin secretion

Type 2- Insulin resistance & various degree of B-cell impairment

# Diabetes Ketoacidosis

- \* End result of metabolic abnormalities resulting from a severe deficiency of insulin or insulin effectiveness
- \* Occur 20-40% of children



# Diabetes Keto Acidosis

- \* Hyperglycemia
- \* Ketosis & Ketouria
- \* PH ↓
- \* Elevated effective serum abnormality
- \* Hypertonic dehydration

# Investigations:

- \* Blood Sugar
- \* Ketones
- \* S. Electrolytes
- \* Blood gases



# Patient is out of DKA

- \* PH > 7.35

- \* HCOs > 15

- \* Na 135-145

- \* No vomiting

# Complications:

- \* Cerebral Oedema

- \* Hypoglycemia

- \* Hypokalcemia

# Acute Management of DKA

- \* Water & sodium replacement
- \* Potassium replacement
- \* Correction of acid-base imbalance
- \* Insulin administration
- \* Prevention of treatment complication



# Management of Diabetes

- \* Insulin

- \* Diet

- \* Exercise / education

- \* Adequate growth / associated diseases

- \* Long term complication

