



PHYSICIAN ORDERS

FOR

**Initial Management of Suspected
PEDIATRIC DIABETIC KETOACIDOSIS in the
EMERGENCY DEPARTMENT**

Page 1 of 2

Patient Identification

Weight: _____ kg Height: _____ cm Allergies: _____

Refer to [TREKK's Pediatric DKA Algorithm](#)

To activate an order, initial on blank line preceding order

DIET: _____ NPO _____ Ice chips

VITAL SIGNS/MONITORING:

- Cardiorespiratory monitor, HR, RR, BP, Neuro VS including headache assessment q1h
- Administer oxygen 10-15 L/min by non-rebreather mask (if signs of shock or severe DKA)
- Strict Ins & Outs

_____ Other: _____

INITIAL INVESTIGATIONS:

- Blood glucose, venous blood gas, Na, K, Cl, (Ca, PO4, if available), urea, creatinine, osmolality, serum or urine ketones
- POC urinalysis OR serum beta-hydroxybutyrate
- If new onset diabetes: HbA1c, TSH, thyroid antibodies (*if available*)

_____ Other: _____

ONGOING INVESTIGATIONS:

- Bedside glucose q1h, and at initiation of insulin infusion, and 1 hour after any change in insulin dose (if required)
- Fluid balance q1h
- Serum glucose, electrolytes, urea, creatinine, venous blood gas q2h
- POC urinalysis q4h

IV FLUID RATES (HOURS 0 – 12):

A) Initial Fluids

- NS or RL bolus of _____ mL (20 mL/kg, MAX 1000 mL) IV over 20 minutes (rapid push over 5 – 10 min if hypotensive), **THEN**
_____ Repeat NS or RL bolus of _____ mL (20 mL/kg, MAX 1000 mL) IV over 20 minutes if signs of hypoperfusion (capillary refill time ≥3 sec, cool extremities), **THEN**

B) Ongoing IV Fluids (for patients with signs of cerebral injury, see Page 2)

| Rehydration Table: Ongoing IV Fluids | | | | |
|--------------------------------------|-------------|--------------|--------------|-------------------|
| Weight | 5 to <10 kg | 10 to <20 kg | 20 to <40 kg | ≥40 kg |
| mL/kg/hr | 6.5 | 6 | 5 | 4 (MAX 500 mL/hr) |

_____ NS at _____ mL/hr IV (per Rehydration Table) **OR**
_____ RL at _____ mL/hr IV (per Rehydration Table)

***** Continued on Page 2. Ensure nurse is aware of Page 2 at the time of completion. *****

| | | |
|------------------------------|----------------------------------|----------------------|
| _____ PHYSICIAN SIGNATURE | _____ PRINT NAME OF PHYSICIAN | _____ DATE & TIME |
| _____ NURSE SIGNATURE | _____ PRINT NAME OF NURSE | _____ DATE & TIME |



PHYSICIAN ORDERS

FOR

Initial Management of Suspected PEDIATRIC DIABETIC KETOACIDOSIS in the EMERGENCY DEPARTMENT

Page 2 of 2

Patient Identification

Weight: _____ kg Height: _____ cm Allergies: _____

... Continued from Page 1

- Add 40 mmol/L KCl to initial fluids once serum K is less than 5.5 mmol/L
_____ NS with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table) OR
_____ RL with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table)
If blood glucose is less than 17 mmol/L OR decreases by more than 5 mmol/L per hour after insulin infusion is started, change fluids to:
_____ D5 NS with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table) OR
_____ D5 RL with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table) OR
_____ D10 NS with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table) OR
_____ D10 RL with 40 mmol/L KCl at _____ mL/hr IV (per Rehydration Table)

INSULIN

- Start insulin infusion 1 hour after IV fluids have been started (not before 1 hour and always before 2 hours; delay insulin if serum K is less than 3.5 mmol/L)
_____ Insulin regular 1 unit/mL at _____ units/hr (0.1 units/kg/hr) IV

CONSULT:

- Pediatric diabetes specialist
_____ PICU or Pediatric Referral Centre or Transport Team (if pH <7.1, age <5 years, hypotension, and/or suspected cerebral injury)

FOR SUSPECTED CEREBRAL INJURY

(GCS ≤13, severe headache, irritability in pre-verbal child, and/or Cushing's triad (↑BP, ↓HR, abnormal breathing))

- Move to Resuscitation area
Nurse in continuous attendance of patient
Raise head of the bed to 30° and keep in midline
_____ NS or RL bolus of _____ mL (20 mL/kg, MAX 1000 mL) IV over 20 minutes if signs of hypoperfusion (capillary refill time ≥3 sec, cool extremities)
_____ 3% NaCl _____ mL (5 mL/kg/dose, MAX 250 mL) IV over 10 minutes OR
_____ Mannitol _____ g (0.5-1 g/kg/dose, MAX 100 g) IV over 15 minutes
* May repeat hyperosmolar agent x 1 PRN after 30 min or use the alternate agent (3% NaCl or mannitol)
After initial fluid resuscitation, decrease IV fluids to 75% of ongoing rate (per Rehydration Table)
Change current IV fluid rate to _____ mL/hr IV

PHYSICIAN SIGNATURE

PRINT NAME OF PHYSICIAN

DATE & TIME

NURSE SIGNATURE

PRINT NAME OF NURSE

DATE & TIME