DKA

Pathophysiology: DKA	Signs & Symptoms	Nursing Care
Risk Factors/ Etiologies: Type I DM + stressful event (*illness) ↓ Fight of flight response triggered ↓ Stress hormones released into circulation (epinephrine, norepinephrine, cortisol) ↓ Stress hormones oppose insulin ↓ Hyperglycemia →	 Elevated serum blood glucose (polyuria, polydipsia, polyphagia)	**Priority Assessments:** 1. Airway (mental status may prevent patient from protecting their airway; if N&V present, aspiration is a risk) 2. Breathing: Breath sounds, O2 sat, RR, ABGs) 3. HR/BP (hypovolemia from osmotic diuresis and N&V) 4. K+ level, ECG (possible dysrhythmias) 5. Body temperature 6. Hourly blood glucose 7. BMP Q4 hours (K+, anion gap, CO2) 8. Hourly Is & Os 9. Neuro checks 10. Daily weights 11. BUN/ Cre+
↓ Body switches to fat metabolism (can't use glucose for energy due to insulin deficiency) ↓ Lipolysis ↓ Breakdown of fat to free fatty acids ↓ Free fatty acids converted to ketones →	Fruity odor to breath, ketonuria	**Priority Interventions:** 1. Volume replacement (0.9% sodium chloride) 2. IV insulin gtt per protocol 3. Hypotonic IVF once volume is corrected with isotonic fluid 4. Add 5% dextrose to IVF to prevent rapid decreases in BG and cerebral edema 5. Add KCL to IVF to prevent hypokalemia 6. **Medications:** Na+Bicarb, Anti-emetics, Anti-pyretics, Antibiotics
↓ Ketones converted to ketoacids →	Metabolic acidosis, Kussmaul respirations, Abdominal pain, N & V, Hyperkalemia, elevated anion gap	***DKA is resolved when BG < 200 mg/dL and anion gap is within normal limits**

KEY POINTS:

- DKA is associated with Type I DM
- Type I diabetics are INSUOLIN DEFICIENCT and are therefore unable to prvent fat breakdown which ultimately leads to acidosis
- HYPOKALEMIA is the most important cause of mortality in DKA patients as IV insulin forces K+ back into the cells and out of the serum
- IVF replacement is the priority intervention; lost fluid volume must be replaced even before the insulin gtt is started.