

ALERT

Type 1 diabetes is on the rise!

REMEMBER THE FOUR MAIN SYMPTOMS:

POLYDIPSIA • POLYURIA

WEIGHT LOSS

ENURESIS (recent onset)

Other signs or symptoms that may be present are:

Flu-like Symptoms

Dehydration (In spite of good fluid intake!)

Extreme Thirst • Vomiting

Frequent Urination (In spite of dehydration)

Bedwetting • Deep Breathing

Lethargy • Fruity Odor to Breath

Yeast Infections • Blurred Vision

A simple urine dipstick could easily differentiate diabetes from other illnesses. Most deaths in new-onset cases now occur because the diagnosis was missed at the time of an earlier clinic/ED visit.

Childhood or Type 1 (Insulin-Dependent) Diabetes Mellitus

1) REMEMBER THE SYMPTOMS: Polyuria, Polydipsia, Weight Loss, Enuresis (recent onset).

When ketones are present symptoms may resemble the flu (nausea and vomiting). The breath may have a fruity odor. (A simple urine dipstick test or meter-glucose test could save a life. 85% of deaths in children with diabetes are secondary to severe DKA.)

2) SEVERE DKA:

- i) Venous (or arterial) pH <7.10
- ii) $\text{HCO}_3^- < 8 \text{ mEq/L}$
- iii) Usually large urine ketones on dipstick
- iv) Breath may have “fruity” odor
- v) Often Kussmaul respirations
- vi) Treat at facility with pediatric ICU

3) TREATMENT OF DKA:

- i) Rehydration: 10-20 ml/kg bolus in first 1-2 hours (NS or LR)
- ii) NPO if vomiting
- iii) Insulin drip: 0.1 U/kg per hour IV
- iv) If still dehydrated after 1-2 hours: can repeat bolus of 10-20 ml/kg NS or LR over 1-2 hours — MAXIMUM IV FLUIDS MUST BE $\leq 40 \text{ ml/kg}$ in the first four hours; then fluids (0.45NS) at 1.5 times maintenance. Give no more than 4L of fluid/m²/24 hours (including initial bolus)
- v) Add potassium(K⁺) when pH >7.1 and serum K⁺ known to be normal or low (may use 20mEq/L KPO₄ and 20 mEq/L KAc [or KCl])
- vi) Aim for glucose fall of 100 mg/dl per hour
- vii) Add 5% dextrose to IV when blood glucose falls to 200-250 mg/dl
- viii) Repeat electrolytes and venous pH hourly until pH >7.1; then repeat every 2 hours until >7.2 and then every 4 hours until >7.3. A falling serum Na⁺ is a danger sign related to cerebral edema.

4) CEREBRAL EDEMA: A CLINICAL EMERGENCY!

- Suspect if bad headache, excessive lethargy, or any deterioration in mental status
- Dilated or non-responsive pupils are often the first sign
- Treatment:
 - i) Mannitol, 1-2 gm/kg IV over 30 minutes — if patient improves and later worsens it may need to be repeated, (give immediately upon suspecting cerebral edema)
 - ii) Reduce fluids (<70cc/kg per day)
 - iii) Elevate head of bed
 - iv) Hyperventilation until pCO₂=25 to 27 mm Hg

5) IF YOU NEED HELP, CALL YOUR AREA DIABETES CENTER: _____.

FOR THE ROCKY MOUNTAIN AREA, CALL THE BARBARA DAVIS CENTER FOR DIABETES - UNIVERSITY OF COLORADO AT DENVER AND HEALTH SCIENCES CENTER (DAYTIME: 303-724-2323 • AFTER HOURS: 303-388-2626).

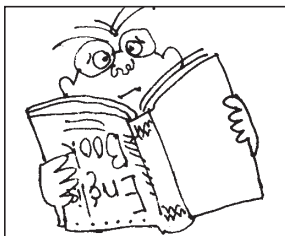
DIABETES

LOW BLOOD SUGAR

This is also called hypoglycemia or an insulin reaction! Affects diagnosed students only. Children do not always recognize that they are low! One or more of these symptoms may indicate low blood sugar.



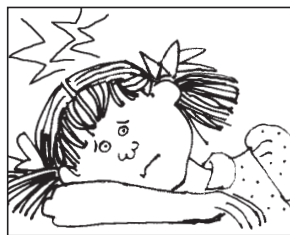
• Hungry, irritable



• Incoherent, spacey



• Mood changes



• Inattentive, drowsy, headache



• Glassy eyes, dilated pupils



• Sweaty, shaky, clammy, pale

HOW TO MANAGE LOW BLOOD SUGAR: DO NOT LEAVE ALONE, USE BUDDY SYSTEM!

What to do:

- 1) Eat 15 grams of glucose
OR 1 tablespoon of sugar, honey, or corn syrup
- 2) Wait 15 minutes & repeat blood sugar check
- 3) Repeat steps 1 & 2 until blood sugar is within range.

**IF SEVERE REACTION — SEIZURE OR UNCONSCIOUS, CALL 911
DO NOT GIVE INSULIN!**

HELP A CHILD!

KNOW THE SIGNS OF HYPERGLYCEMIA!

HIGH BLOOD SUGAR

(Can affect either diagnosed or undiagnosed students)

- **EXTREME THIRST**
- **FREQUENT URINATION**
- **BEDWETTING**
(Previously controlled)
- **WEIGHT LOSS**
- **IRRITABILITY**

(Changes in personality or behavior; cries easily, etc.)

WHAT TO DO:

1. Contact school nurse and parent.
2. Refer child to doctor.

For diagnosed student, check to see if insulin has been taken.
Allow bathroom and drinking privileges. Do not force physical activity.



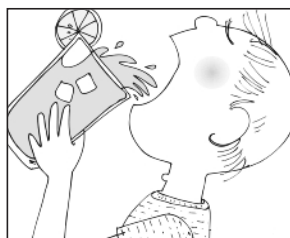
For more information or to request additional copies of this card contact:

Children's Diabetes Foundation
4380 South Syracuse Street, Suite 430
Denver, CO 80237
Office: 303-863-1200 or 800-695-2873
Fax: 888-296-1050
www.ChildrensDiabetesFoundation.org

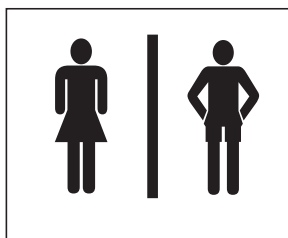
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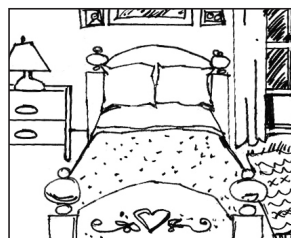
KNOW THE SYMPTOMS!



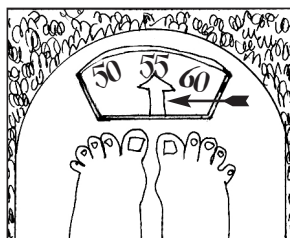
- Extreme thirst



- Frequent urination



- Bedwetting
(Previously controlled)



- Weight loss,
stomach pain



- Fatigue
(Changes in personality or
behavior; cries easily, etc.)

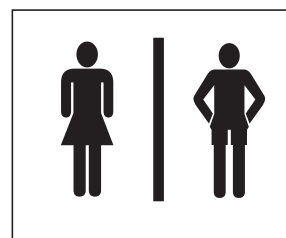
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CONOZCA LOS SÍNTOMAS



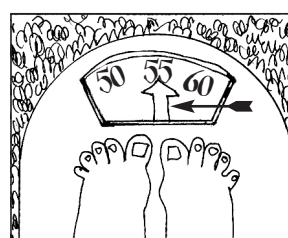
- Sed excesiva



- Orinar con
frecuencia



- Orinar la cama
(Que ya se había controlado)



- Pérdida de peso,
dolor de estómago



- Fatiga
(Cambios en la personalidad
o en el comportamiento;
llora con facilidad, etc.)

QUE HACER:

Busque atención médica, inmediatamente.

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