DIABETES

NURSING SERVICES
ECISD
--Instructions--

- This is the online training for front office staff and others who will be assisting school nurses care for diabetic students at ECISD.

- Please read every slide and then take the test at the end of the presentation. Follow the prompts to submit your name to Technology for purposes of record keeping.

- When you complete this training please meet with your school nurse for individual coaching.

- Thank you for helping our diabetic students!
In this training you will learn...

- What is Diabetes?
- What is Insulin?
- What are the 2 types of Diabetes?
- What is Hypo- and Hyperglycemia?
- What does the Law, HB984, say?
- How do I test for sugar in the blood?
- How do I draw up and give insulin?
- What is a Diabetic Medical Management Plan?
What Is Diabetes?

- A disorder of the pancreas
  - The pancreas stops making insulin, an essential hormone in the body.
- Insulin is the key that allows glucose to enter the cells.
- Glucose is used by every cell in the body for energy
Without insulin, glucose cannot enter the cell. Glucose stays in the bloodstream, creating high levels of blood sugar.
Without insulin, glucose cannot give us energy; we need glucose to maintain internal organs like the heart, lungs, brain, etc.
Hypoglycemia = too little sugar in the blood
Hyperglycemia = too much sugar in the blood

- There are 2 types- Type 1 and Type 2 Diabetes
- Type 1 - need daily insulin shots, can’t produce insulin
- Type 2 - managed by pills, diet, exercise
- You will mostly help with Type 1 students
TYPE 1 DIABETES

- Usually comes on at early age
- Needs insulin everyday
- In children, more common than Type 2
- Cause - could be inherited or not
- Requires constant monitoring
Signs and symptoms of Type 1

- Tired
- Thirsty
- Hungry
- Weight loss
- Urinating frequently
- Blurred vision
TYPE 2 DIABETES

- Another type of diabetes
- Not enough insulin produced by pancreas
- Mostly in adults but now, in children
- Due to inactivity/overweight/obesity
- Could cause -- high blood pressure, heart problems, stroke, Type I diabetes
Signs and symptoms of Type 2

- Tired
- Thirsty
- Hungry
- Urinating frequently
- Children might have Acanthosis Nigricans = dark lines behind neck, early in disease
Type 1 and Type 2 Diabetic Students Can Have:

- LOW Hypoglycemia
- OR
- HIGH Hyperglycemia
Hypoglycemia

(Low Blood Sugar)

- Most likely to occur:
  - When meals or snacks are missed or delayed
  - When strenuous activity occurs just before lunch
  - During a lengthy field trip or field day activity.
SYMPTOMS OF LOW BLOOD SUGAR

- Weakness or tiredness
- Shaking
- Headache
- Anxious, Pale
Students with Hypoglycemia will:

- Need to test blood sugar; if blood sugar level **below 80mg**, student is hypoglycemic.
- Need treatment depending on type of reaction and individual plan for student.

Three levels of reactions:

1. Conscious and able to swallow
2. Conscious but uncooperative or disoriented
3. Unconscious or having a seizure
Treatment of Hypoglycemia

1. **Conscious and able to swallow:**
   - Glucose tablets -- start with 2
   - Juice
   - Regular soda pop (not diet)
   - Milk

   - Symptoms should improve within 15-20 minutes. If not, repeat.
   - If longer than 1 hour until next meal or snack, give small snack containing protein (cheese crackers or milk)
Treatment of Hypoglycemia

2. **Conscious, but uncooperative, or disoriented**
   - Give glucose gel, tube of clear frosting or packet of honey
   - Lay student on side and squeeze into pocket of the cheek
Treatment of Hypoglycemia

3. Unconscious or having a seizure

- Call 911 immediately
- Give nothing by mouth
- Notify parents
- Call school nurse
Treatment of Hypoglycemia

Some students have special individual medical instructions on how to treat severe hypoglycemia – check with your nurse about this. You might need to give a special shot with glucose called GLUCAGON. Here are examples.
Hyperglycemia

May occur if student:
- Is becoming ill
- Eats too much
- Misses insulin dose
- Is under a lot of stress

(High Blood Sugar Is **NOT** A Medical Emergency)
Symptoms of Hyperglycemia

- Extreme thirst
- Frequent urination
- Dry skin
- Hunger
- Drowsiness
- Nausea
- Blurred vision
Treatment of Hyperglycemia

- Test blood sugar
- Check Diabetes Care Plan
- Notify parents if over 250mg/dL or per diabetes plan
- Exercise
- Drink water
- Insulin
Diabetic Students...

- Need to **AVOID** hypo- and hyperglycemia.
- Need to balance meals, meds, and exercise.
- Might need help understanding what to eat.
- Need to understand CARBOHYDRATES--
  - CARBS are what give us sugar or glucose in food we eat- carbs give us energy
  - Each student will have a plan that says how many carbs they can have during the school day
Examples of CARBS

- Carbs are measured in GRAMS
- 8 ounces of canned orange juice = about 24 grams of carbs
- 6 ounces of cola = about 20 grams of carbs
- Usually we leave out the “grams” and just say something has a certain number of “carbs”
Read Labels

- Packaged foods will tell you how many carbs are in the food.
- There are tables of foods and their carbs on the internet.
- Ask your nurse for more information about carbs if needed.
TOO MANY CARBS

Some foods have a large number of carbs! These are usually sugary and very sweet foods. Diabetics need to watch how many carbs they eat. KEY POINT: Get familiar with your student’s individual diabetes plan— it will say how many carbs they can have and when to have the carbs.
Sometimes diabetic students will not eat right, not get enough insulin or forget to take it.

When this happens they might have KETONES in their urine. Ketones start spilling out into the urine when the body needs energy and it is using ketones instead of glucose. There might be glucose in the blood, but the body can’t use it because it does not have insulin.

If children get sick or are vomiting, their blood sugar may be low and they may have ketones.

Ketones in the urine is a bad WARNING sign. Check the diabetes plan. Call parents and call your nurse.
Testing for Ketones in urine

- If the diabetes plan calls for testing ketones, the student will have test strips.
- Simply get the student to give you a small sample of urine and dip the ketone test strip in the sample of urine.
- Look at the reaction on the test strip and compare it to the colors on the label of the bottle.
Testing for blood sugar level

- Diabetics need to regularly test their blood.
- A simple test will tell them how much sugar or glucose they have in their blood at that time.
- The test will help them decide how many carbs they need to eat and how much insulin to take.
- Blood testing is easy!
Testing Blood

1. Gather supplies - meter, lancet, test strips
2. Wash hands
3. Wear gloves if you will assist
4. Get meter ready
5. Lance the finger
6. Apply blood to strip
7. Wait for results; check manual instructions
Supplies commonly used

- **Glucometer** - meter to test glucose (sugar)
- Uses one drop of blood to tell you how much glucose is currently in the bloodstream
- Examples--
Testing strips

- Are used to place a drop of blood on the strip and into the meter

Note: dispose of strip with blood in sharps box.
Lancets

- Fine needle used to prick fingertip
- Wipe the fingertip down first with alcohol
- Some include a quick action movement
- Examples:

Dispose of lancet in sharps box!!

head twists off
To get the reading...

- Turn on the meter; insert the strip
- Place a drop of blood on the strip
- Wait for results
If insulin is needed...

- The diabetes plan will say when and how much insulin to give, based on the blood test results.
- Most older students take care of their own injections.
- If the student is young, or can’t do everything for themselves, you may need to help them.
- Most likely, you will only need to watch them, or maybe hand them some supplies, to be sure it was done safely and correctly.
Giving insulin

- Check Diabetes Medical Plan for order on how much insulin to give.

This is an insulin syringe; it is different from other types of syringes.
Mixing the insulin

- Gently roll the vial between your hands to mix the insulin
Draw out the units needed

1. Push plunger on syringe to eliminate air inside barrel.
2. Draw back to the level of units needed.
3. Insert that much air into the vial using needle.
4. Pull back on syringe to take out the exact number of units you need.
Measure the units carefully

- Draw up insulin to the line marked; for example if student needs 20 units, go to line marking 20
Administering the insulin

- Wipe the area with alcohol
- Insulin is intended to be given subcutaneously or just below the skin - do not go deep

Whenever possible allow the student to give their own shots

Discard all needles and syringes into sharps box
Other supplies you might see...

- There are a variety of other supplies used by diabetics, here are a few examples. If you need to know about these, you will get further instructions from your nurse.

This is an insulin pump; it is attached to the person and gives them insulin directly.

This is an insulin pen; it is used instead of a syringe.
Documentation

- Record the results of the testing in the student’s file - students will have a place to record the findings
- Record the amount of insulin given
- Call your school nurse with any questions or concerns
Review of skills

- After you finish this training and pass the test, your school nurse will go over the main points of diabetes, symptoms to watch for, and how to give insulin.

- Your school nurse will also go over the diabetic students in your school, the specific supplies being used by your students, and review the individual medical orders and plans for the students.
Students have rights

- We are obligated to help students with diabetes if they want help while at school.
- Older students may take care of everything on their own. We are only expected to help students who ask for help.
- We are obligated to accommodate for learning issues that might be affected by their diabetes.
DIABETES LAW - HB984

✓ In effect since May 2005
✓ Each school with diabetics has Care Assistants - one with full time nurse, three assistants otherwise
✓ Care assistants assigned by Principal, trained by school nurse
✓ Each diabetic wanting care at school has diabetic medical management plan
✓ School creates individual health plan with school input
DIABETES PLAN

✓ Be familiar with specific medical plan for each diabetic student
✓ Contact school nurse with questions
✓ Know where student’s supplies and snacks are stored
✓ Have easy access to emergency contact phone numbers
✓ Notify substitute teacher of location of diabetes care plan
Hints for Success

 ✓ When in doubt, call parents and/or nurse.
 ✓ Follow instructions in the diabetes medical management plan.
 ✓ Notify family early of field trip plans.
 ✓ Notify family of special events that may involve classroom treats or changes in the school lunch schedule.
 ✓ Don’t hesitate to ask questions about care.
THANK YOU!

- You have now finished the slide presentation. You can go over this again if you like.
- Your school nurse is always available; you can also call Nursing Services at 456-8869.
- Talk openly with your principal and school nurse about any concerns you have.
- Next steps: Your school nurse will give you a test to take and check your skills.