

Blood Glucose Levels Demonstration “Blood Baggies” Recipe

Materials needed:

1. Tomato PASTE (usually 1 large can or 2 small cans)
2. Vinegar (1 bottle of white vinegar)
3. Three sandwich sized (or quart-sized) zip lock bags. Recommend the kind in which the seal changes color when you close it.
4. Set of measuring cups & spoons (to measure the tomato paste & vinegar)
5. Sharpie Marker (to label the bags)
6. 1 spoon (to scoop out the tomato paste)
7. Airtight container for storage and transport

Steps:

1. Label each of the baggies according to the recipe card below (100 mg/dl or ‘normal blood glucose’, 200 mg/dl, and 400 mg/dl)
2. Scoop tomato paste and measure it according to the recipe card below
3. Transfer the tomato paste to the appropriate labeled zip lock bag
4. Next pour in the measured amount of vinegar and mix together
5. Repeat steps 2-3 for all the glucose examples. Be sure that there is a distinct difference in the ‘thickness’ of the 3 mixtures. You may have to adjust slightly.
6. Finally, refrigerate. It will last longer, and may be good for a couple of weeks, or until it starts smelly ‘funky’! (Storing and transporting in an airtight container is recommended.)

	RECIPE CARD	
GLUCOSE LEVEL	VINEGAR	TOMATO PASTE
Normal Blood Glucose (~100 mg/dl)	1 Cup	¼ Cup
200 mg/dl	¼ Cup + 2 Tbsp	½ Cup
400 mg/dl	3 Tbsp	½ Cup

*** Remember, this is a demonstration, and blood may not really look like this at these glucose levels, but it represents the increasing level of blood glucose values, demonstrates that red blood cells are the

'carriers' of glucose in the body, and that *"Diabetes is not just a 'sugar disease'...it's a vessel disease."* It impacts all body systems fed by blood, and in particular, the very small vessels in the eyes, kidneys, heart, brain, peripheral vascular system, etc, all of which are the organs where the complications of diabetes can occur.

*** Helpful in demonstrating the following:

1. What diabetes is and what it does in the body – emphasize cardiometabolic risks/microvascular risks
2. Signs and symptoms of diabetes/high blood sugar – increasing glucose, pulls water from tissues -- > s/s of DM
3. Hemoglobin A1C -- 3 month value; RBCs last 3 months and glucose is attached to the RBCs
4. Complications of diabetes – again, macrovascular and microvascular complications, nervous system, etc.

*** Helpful for those with vision impairment, as they can see and FEEL the difference in the baggies, and levels of blood glucose. Also good for anyone, as multi-sensory teaching tools are a valuable method of getting across the message.

