

Let's look at how sugar is stored in our body and what we can do to control the amount of sugar in our blood stream.

Where does all the sugar come from?

- Food: Carbohydrates in food convert to glucose that goes into our bloodstream
- Liver Stores – glucose is stored as Glycogen
 - o Our liver breaks down the glycogen
 - o Hormones can drive glucose out of our liver

Where does blood glucose go?

- Into our cells to get stored as energy
- Muscles are the biggest storehouses for glycogen (muscles store 400-500 gms of glucose)
- Our liver only stores 100 grams glycogen
- Our muscles are the first place that blood glucose goes to get stored
- Only if the muscle stores have been used, is there any room for more blood glucose

When we exercise our muscles, we break down glycogen and make room for more sugar to be stored from our bloodstream into our muscle stores.

As we exercise, we make room for sugar from our blood to refill these muscle stores which have been used up during exercise.

If we don't exercise, where does the blood glucose go when the muscle stores are full?

- Nowhere...the glucose has to stay in the blood
- The liver can suck in the extra sugar.
- But once the liver sugar stores are full, the liver will turn the extra sugar into fat and cholesterol

What does all this mean?

If all the glycogen stores are full in the muscle stores, the glucose has to stay in the blood stream (resulting in higher blood sugars when tested).

If there is room in the liver, some of the sugar can be stored there. Otherwise, the liver stores it as fat and cholesterol.

Do we want to promote fat storage and increased cholesterol?

If the answer is no, the solution is to do some kind of physical activity to empty some muscle glycogen stores, enabling use of some extra sugar in the blood stream to refill the emptied muscle stores.

Walk...use up sugar from blood stream to replace stores in the muscles decreasing blood sugar

Bike...use up sugar from blood stream to replace stores in the muscles decreasing blood sugar

Swim...use up sugar from blood stream to replace stores in the muscles, decreasing blood sugar

Move every day to better control blood sugars.



Visalia Medical Clinic, Inc.

Join us at our First Annual Diabetes Walk at Visalia Medical Clinic on Saturday morning, April 25, in memory of Dr. James Mohs.

Susan Smith, Ph.D., CDE, is a nationally Certified Diabetes Educator (CDE) and a specialist in the field of diabetes since 1988. Since 2002 she has worked with patients individually through all of the internal medicine and family practice providers at Visalia Medical Clinic. Susan also leads the monthly diabetic support groups, Monday, April 13, at 9:00 or 5:30 pm at the clinic with our podiatrists, Dr. Mai and Dr. Reynolds, which are open to all community members and family members.

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