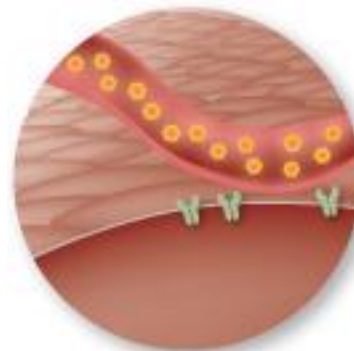


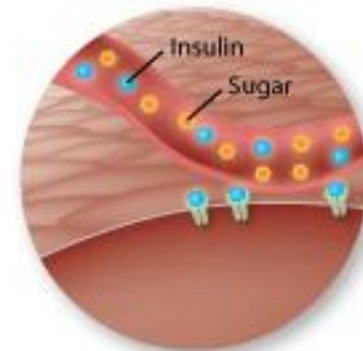


Reverse Diabetes-Causes of Diabetes

Poor diets
Inactivity
Obesity
genetics

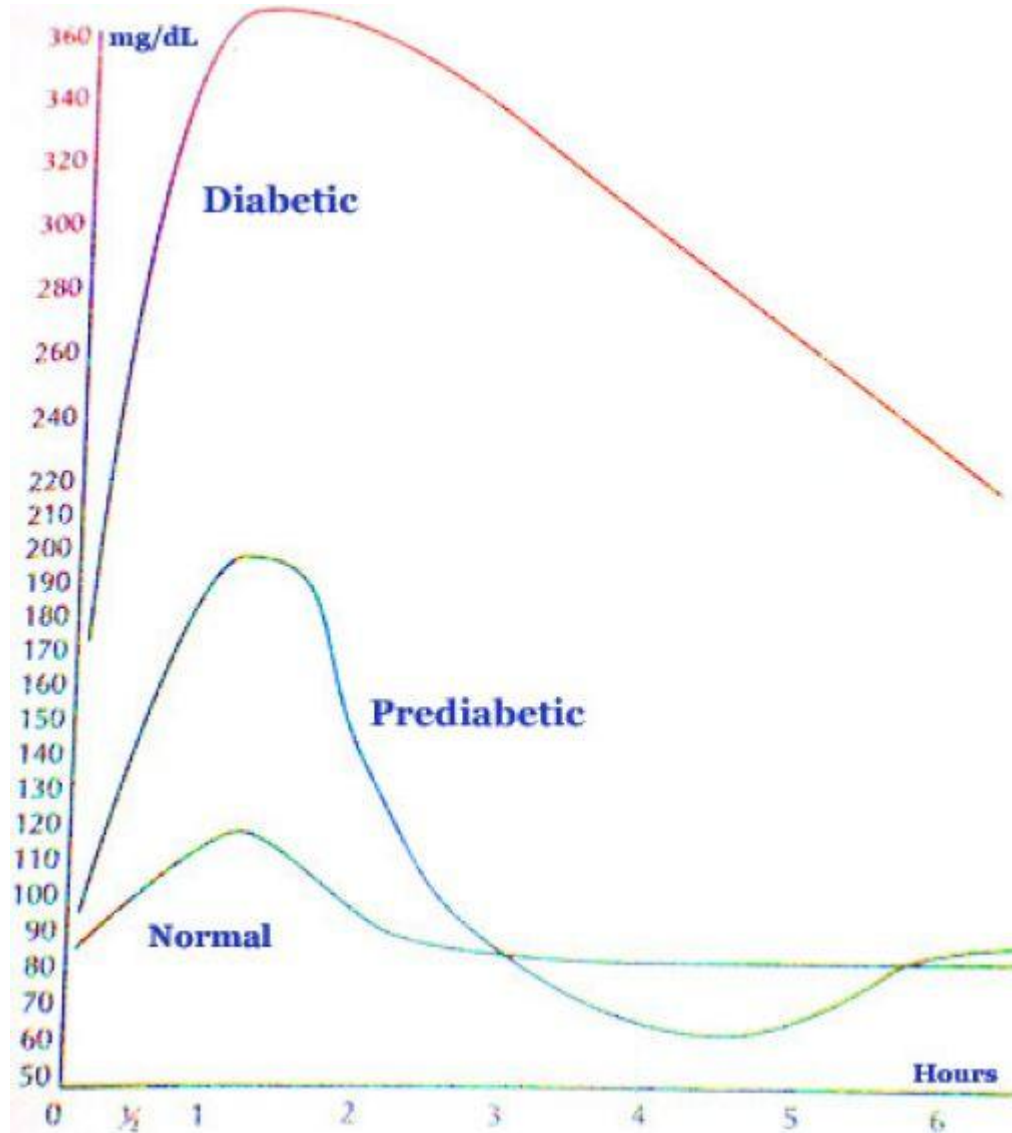


Type I Diabetes
No insulin signal



Type II Diabetes
No response

Diabetes is too much sugar in the blood

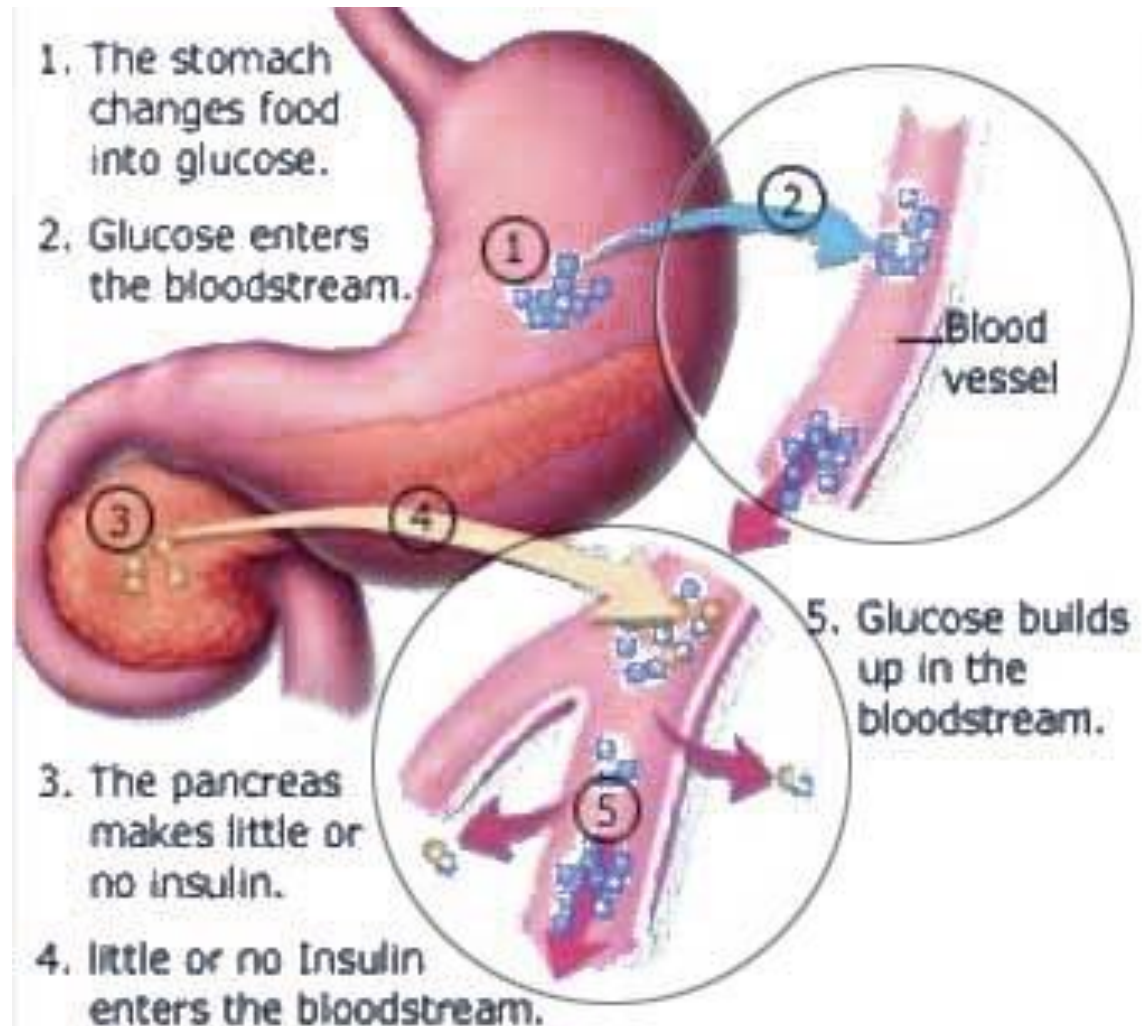


Diabetes is too much sugar in the blood

- Diabetes is a disease in which your blood glucose, or sugar, levels are too high caused by body's inability to produce enough insulin or the body ignores the insulin.
- Too much glucose can lead to serious health problems.
- Chronic diabetes conditions include type 1 diabetes and type 2 diabetes.

Risk factors for type 1 diabetes

- Genetics
- Viral disease
- Dietary factors
- Race...



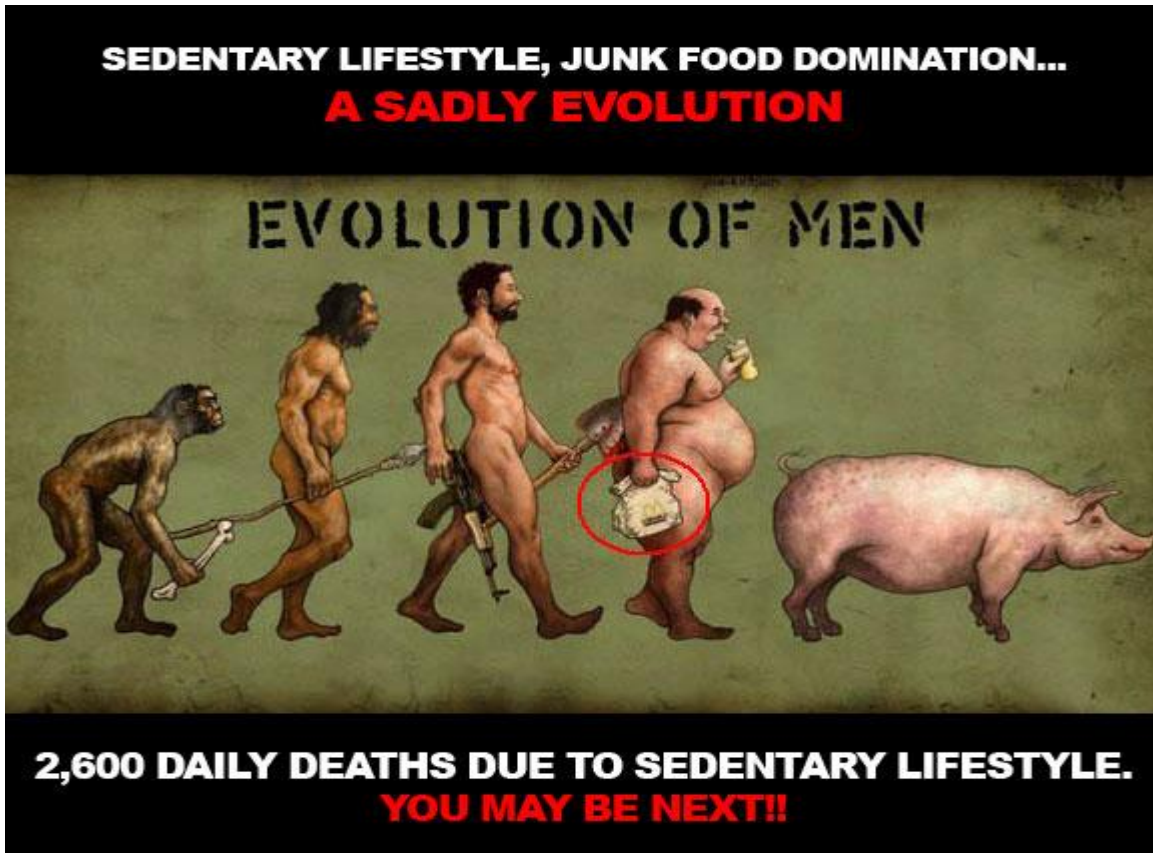
Risk factors for type 2 diabetes

- 80% of type 2 diabetics are overweight or obese;
- Apple shaped obesity and insulin resistance are related-released more FFA;
- Age related loss of insulin sensitivity;
- Since ancient times, diabetes has been a lifestyle disease;

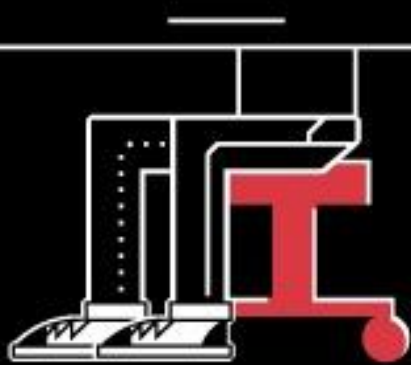


Inactivity and obesity

Sedentary lifestyles and obesity work together resulting in: insulin resistance, high blood sugar, high blood insulin, and diabetes



Sedentary lifestyles shut off fat burning mechanisms



**WHEN YOU SIT
DOWN AT YOUR
COMPUTER:**



The electrical activity in your legs shuts off. Fat-reducing enzymes **drop by 90%**



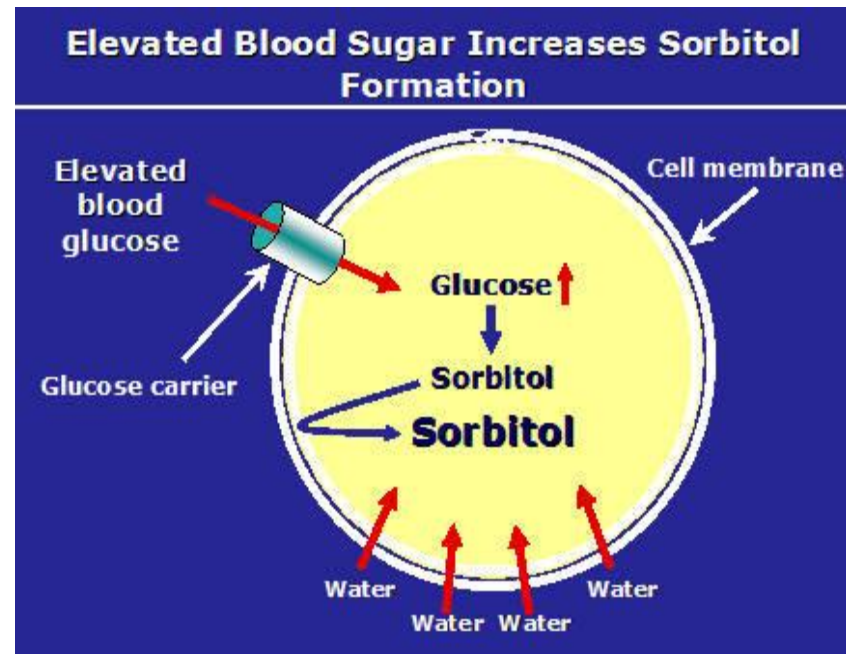
Calorie burning slows to **1 calorie per minute**



People who sit down all day have **twice the rate of cardiovascular disease** than people who stand

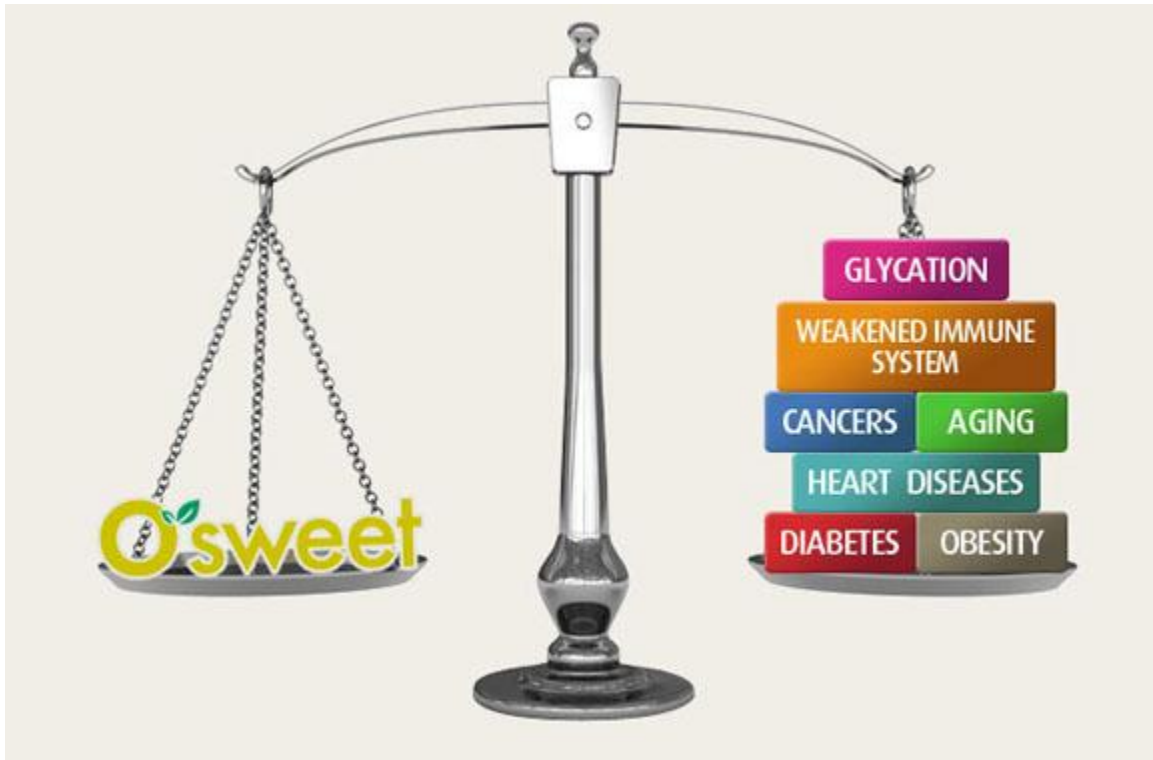
Sugar is poisonous

- Sorbitol is a naturally made sugar from blood glucose;
- The body has no carrier for sorbitol;
- High blood sugar leads to sorbitol accumulation in the tissues, especially in the lens of the eye and in nerves;
- This is a problem;
- The rise in cellular sorbitol pulls increasing amounts of water into cells and this is damaging.



sugar depresses the immune system.

Too much Sugar causes many problems



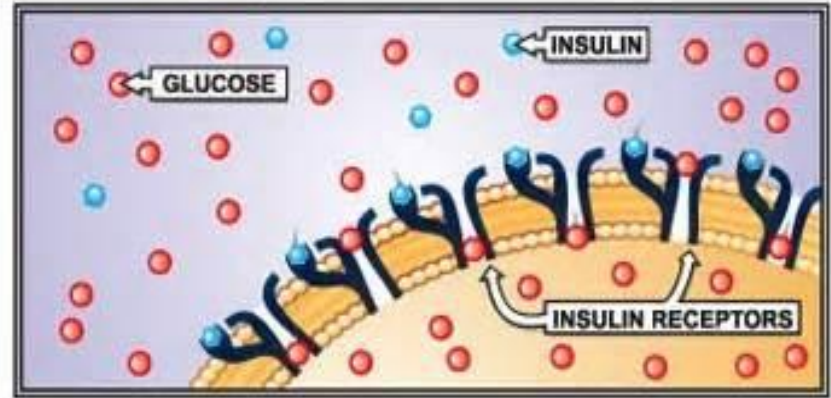
Insulin resistance is a center factor of type 2 diabetes

- Becoming resistant to insulin one of the signs of aging, though can be faster or slower.
- Insulin resistance is the common link between diabetes, obesity, high blood pressure, high triglycerides and cholesterol disorder;
- It is generally accepted as the root cause of type 2 diabetes;

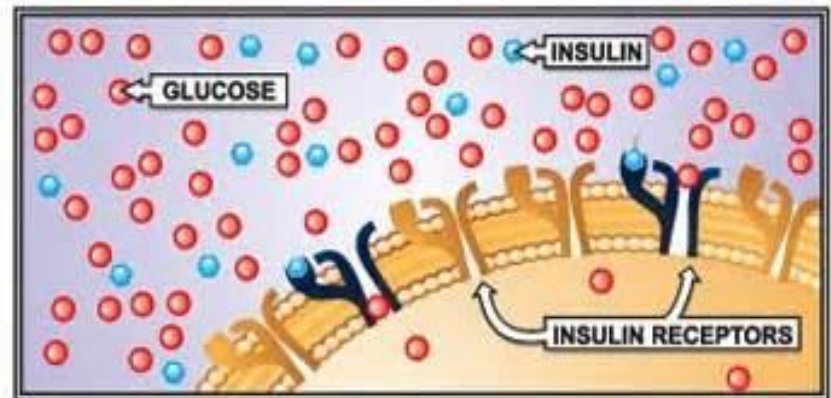
Insulin resistance means decreased sensitivity and number of insulin receptors

- In healthy man up to 20000 insulin receptors are concentrated on the membrane of each muscle cell.
- but in diabetics, the number is as low as 5000.

NORMAL CELL



INSULIN RESISTANT CELL



Obesity,
inheritance
& other factors
leading to
insulin
resistance.



**Muscle unable
to use glucose due
to insulin resistance**

TYPE - 2 DIABETES

Increased
glucose in the
blood
stream



Sufficient
insulin secreted
in the blood stream



Pancreas

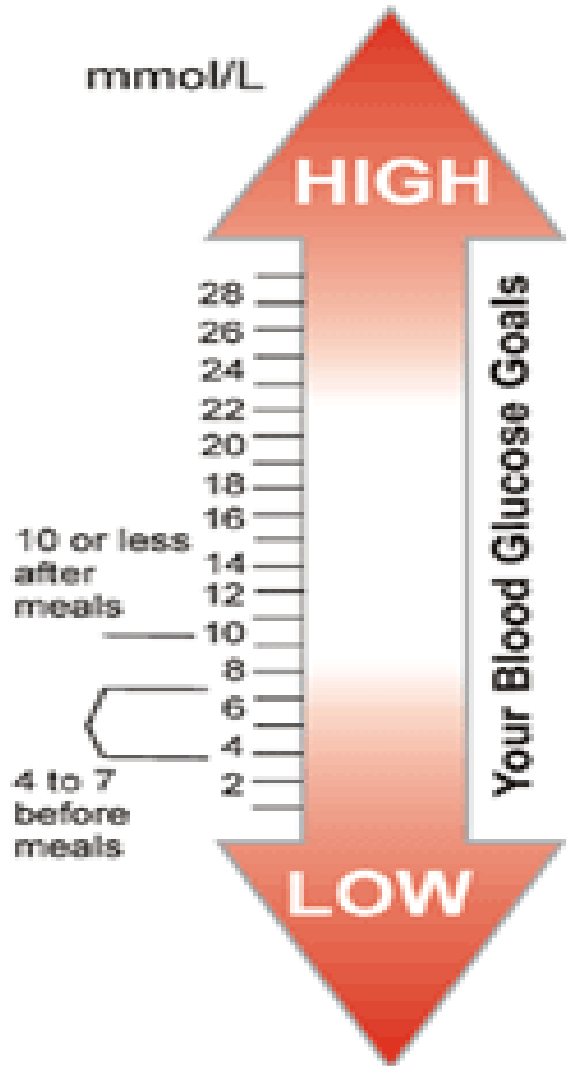
How insulin resistance develop?

- You might think of insulin resistance as like sitting in a smelly room and pretty soon you don't smell it anymore because you get desensitized.
- But if you walk out of the room and come back, the smell is back.
- Thus, the key to re-sensitize the insulin receptor is to decrease the insulin level.

The type of foods is vital

- High carbs and high fat diets causes high insulin, high blood sugar and high triglycerides
- Combination of a high fat foods along with sugar or sweeteners leads to devastating consequences for weight gain and high triglyceride levels.

Foods are the main source of blood sugar



Your Blood Glucose Level Changes When You Eat

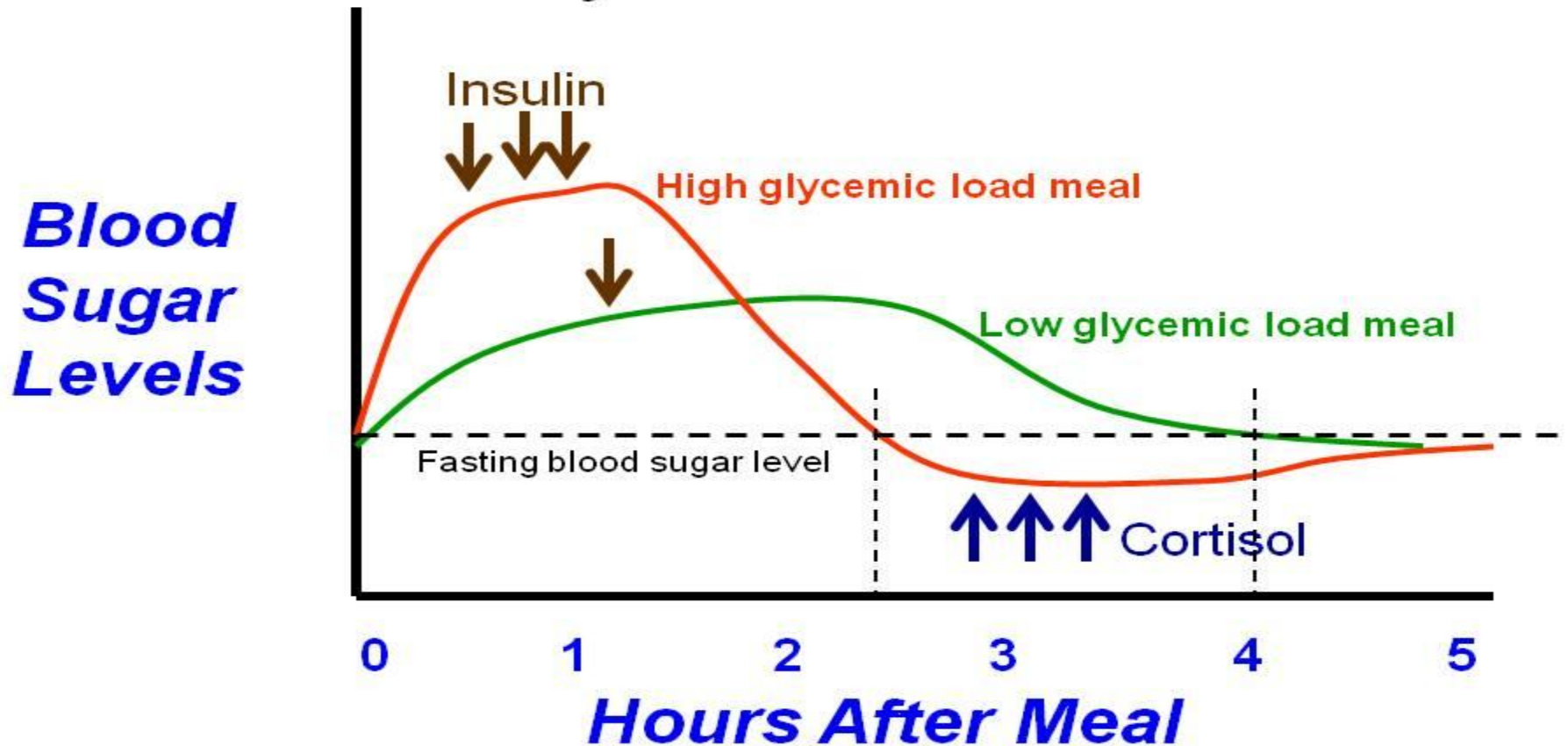


Blood Glucose Levels to Aim for:

- Before any meal 4.0 - 7.0 mmol/L
- 2 hours after any meal 5.0 - 10.0 mmol/L

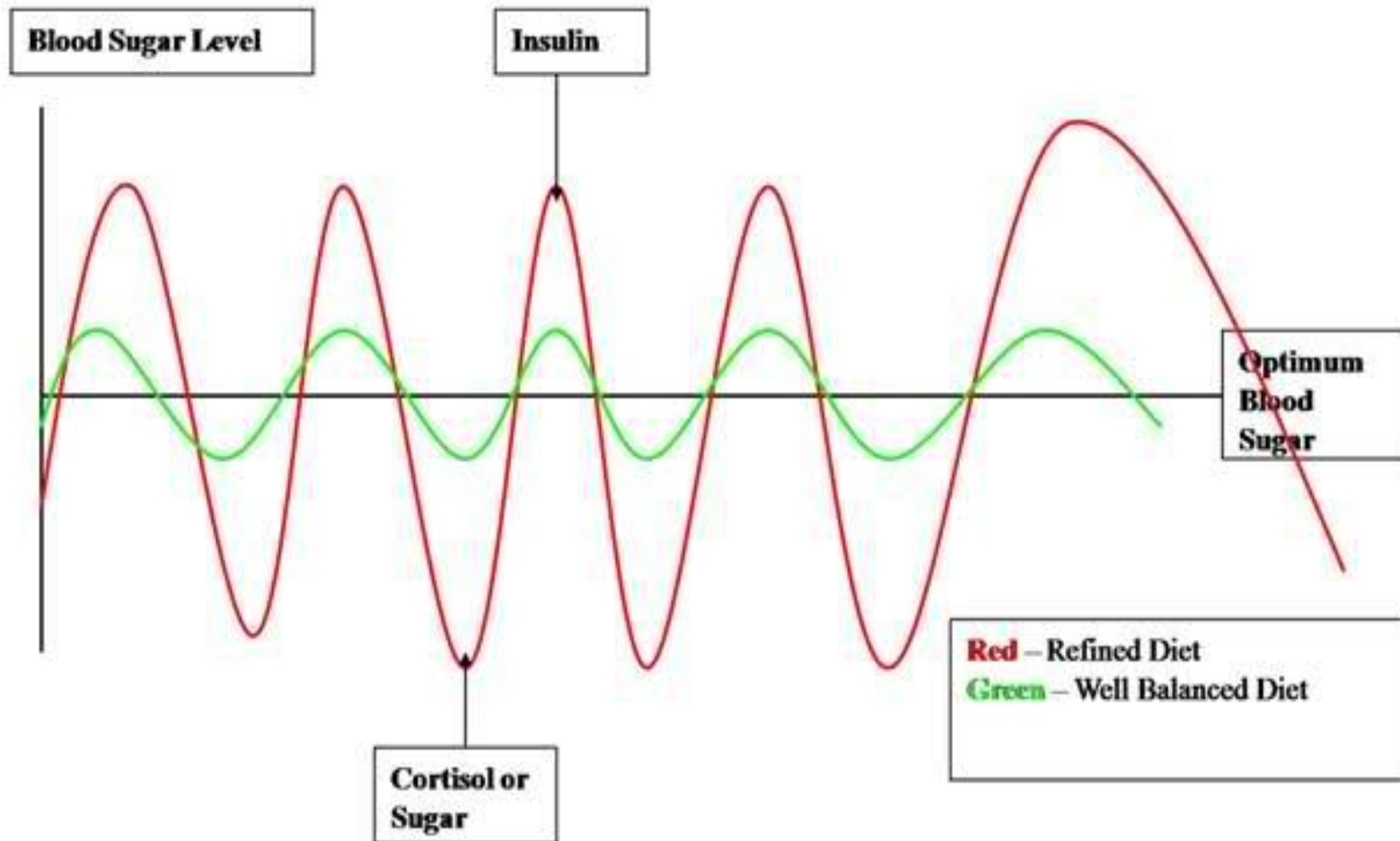
Blood sugar and insulin: like the shadow follows the form

Glycemic Load Effect



Comparisons of a refined diet and a well balanced diet

Figure 1 – Blood Sugar Curve



Type II Diabetes

Stomach
Pancreas

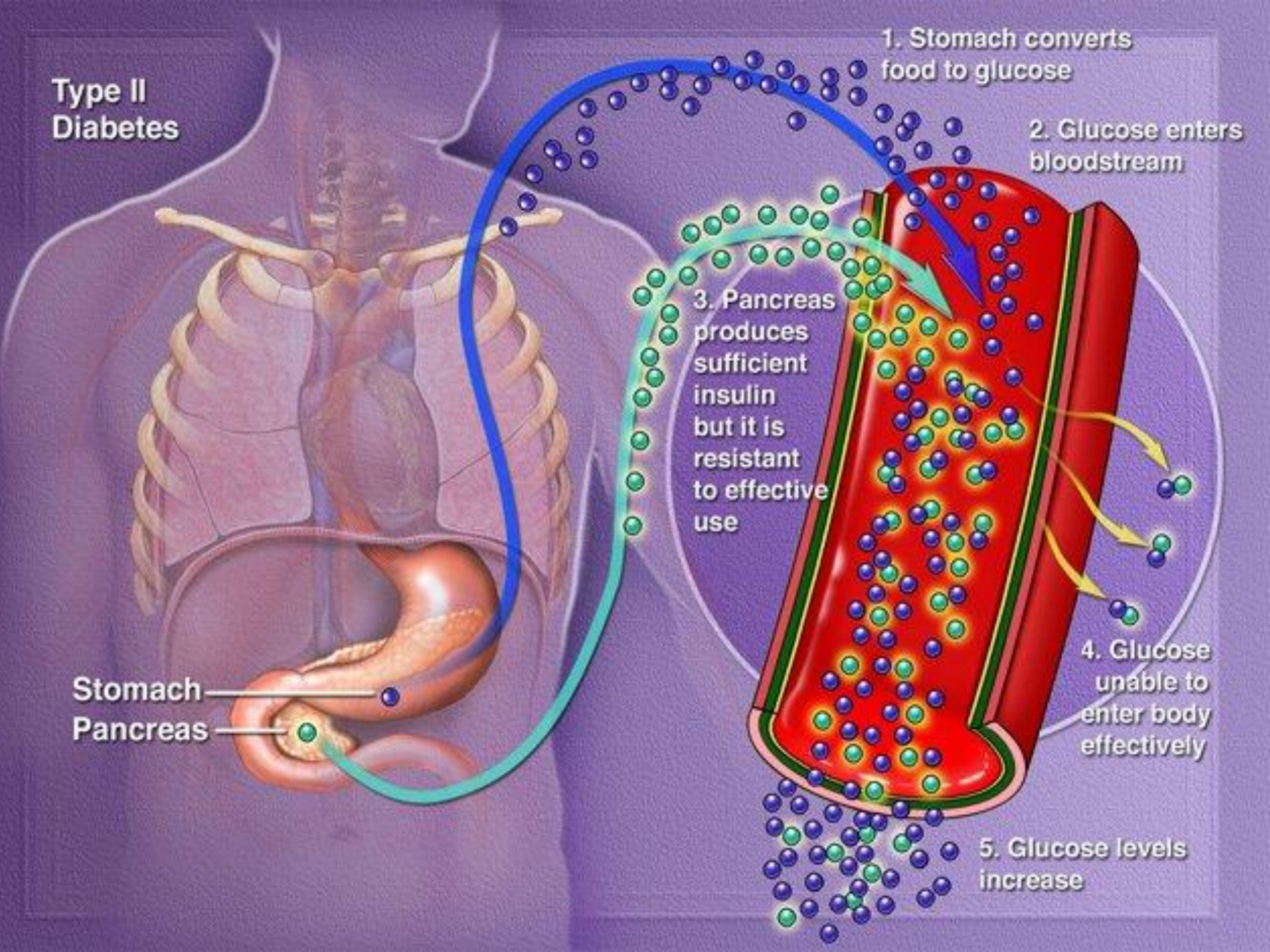
1. Stomach converts food to glucose

2. Glucose enters bloodstream

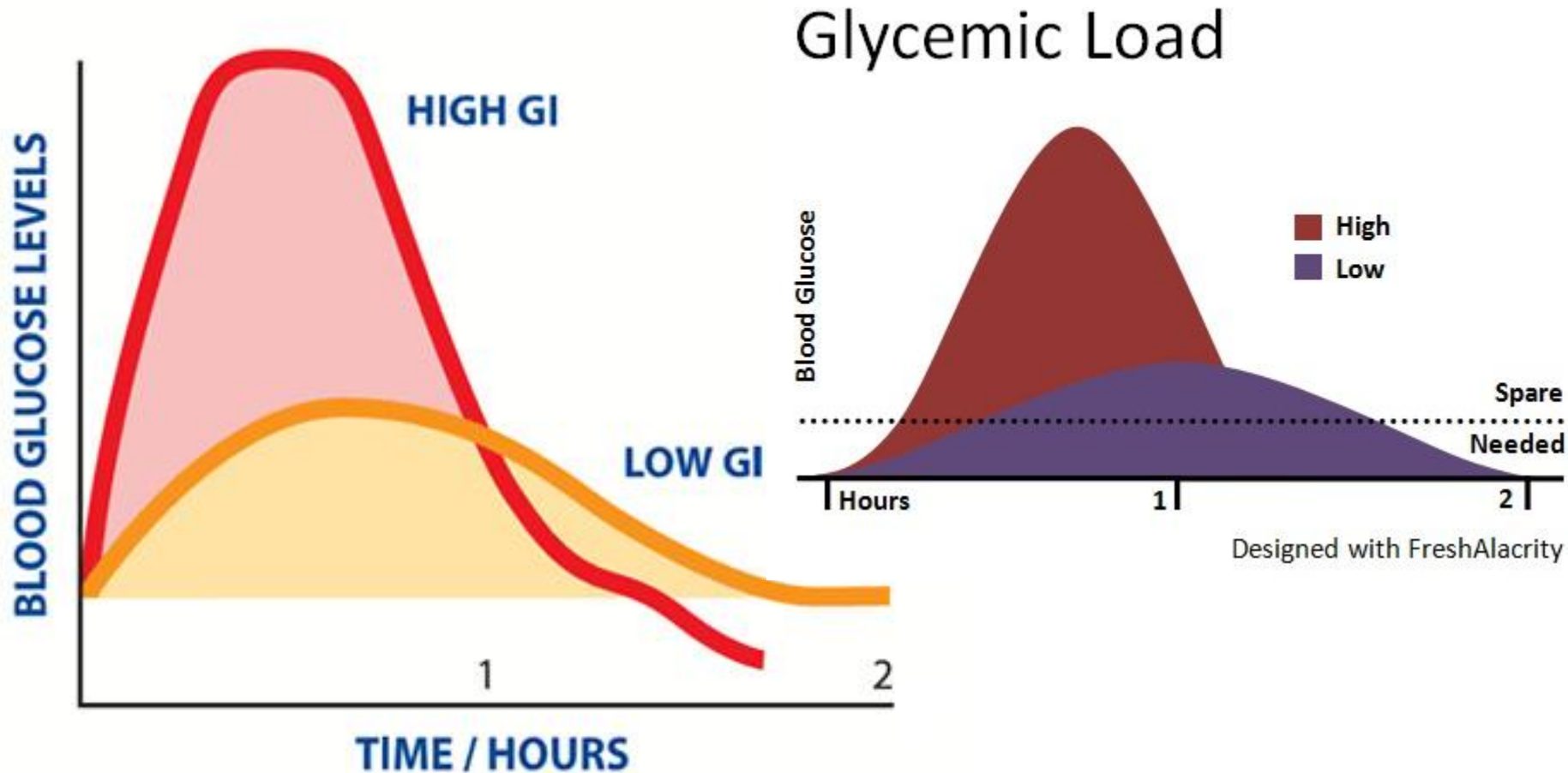
3. Pancreas produces sufficient insulin but it is resistant to effective use

4. Glucose unable to enter body effectively

5. Glucose levels increase

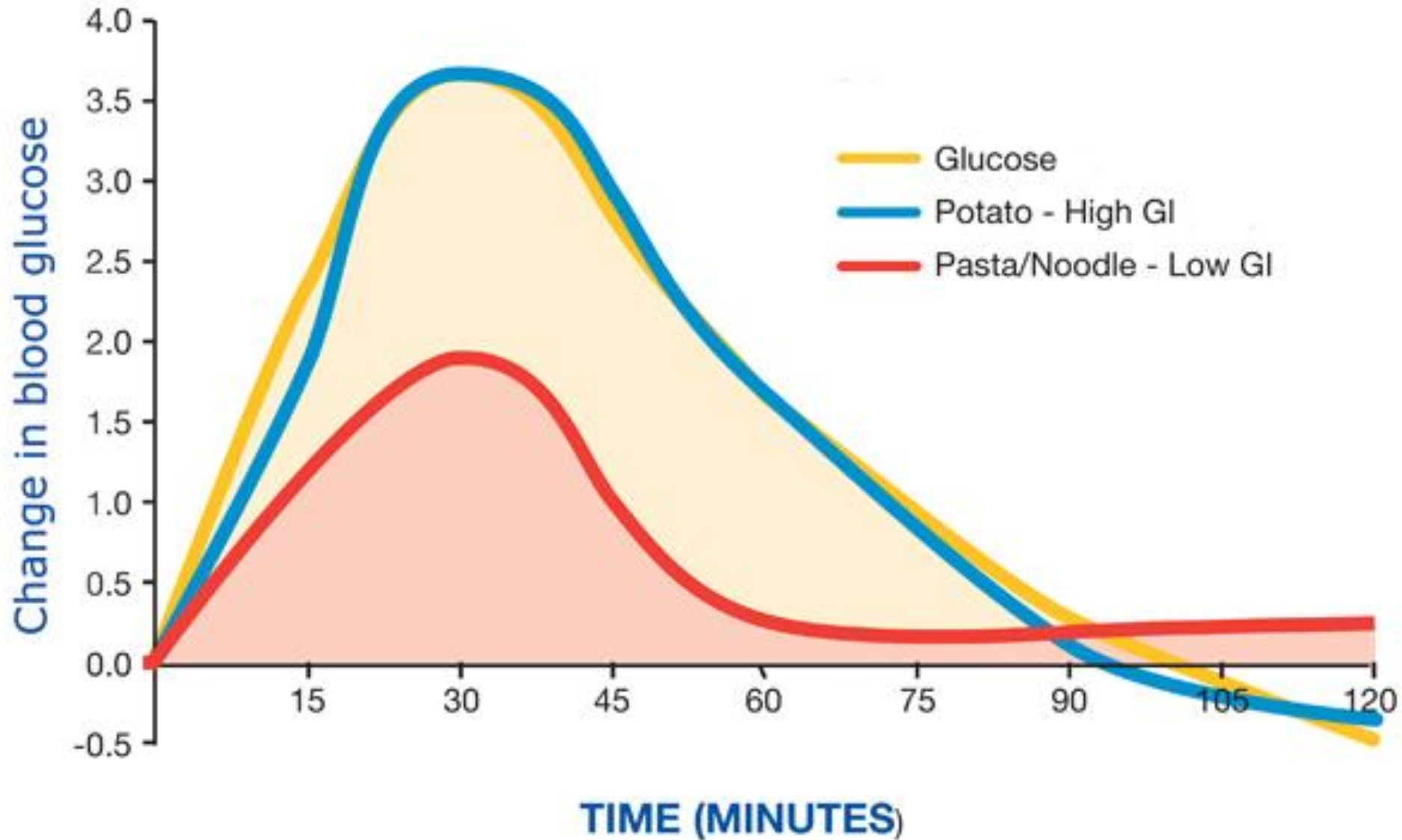


High GI foods and high glycemic load cause high blood sugar

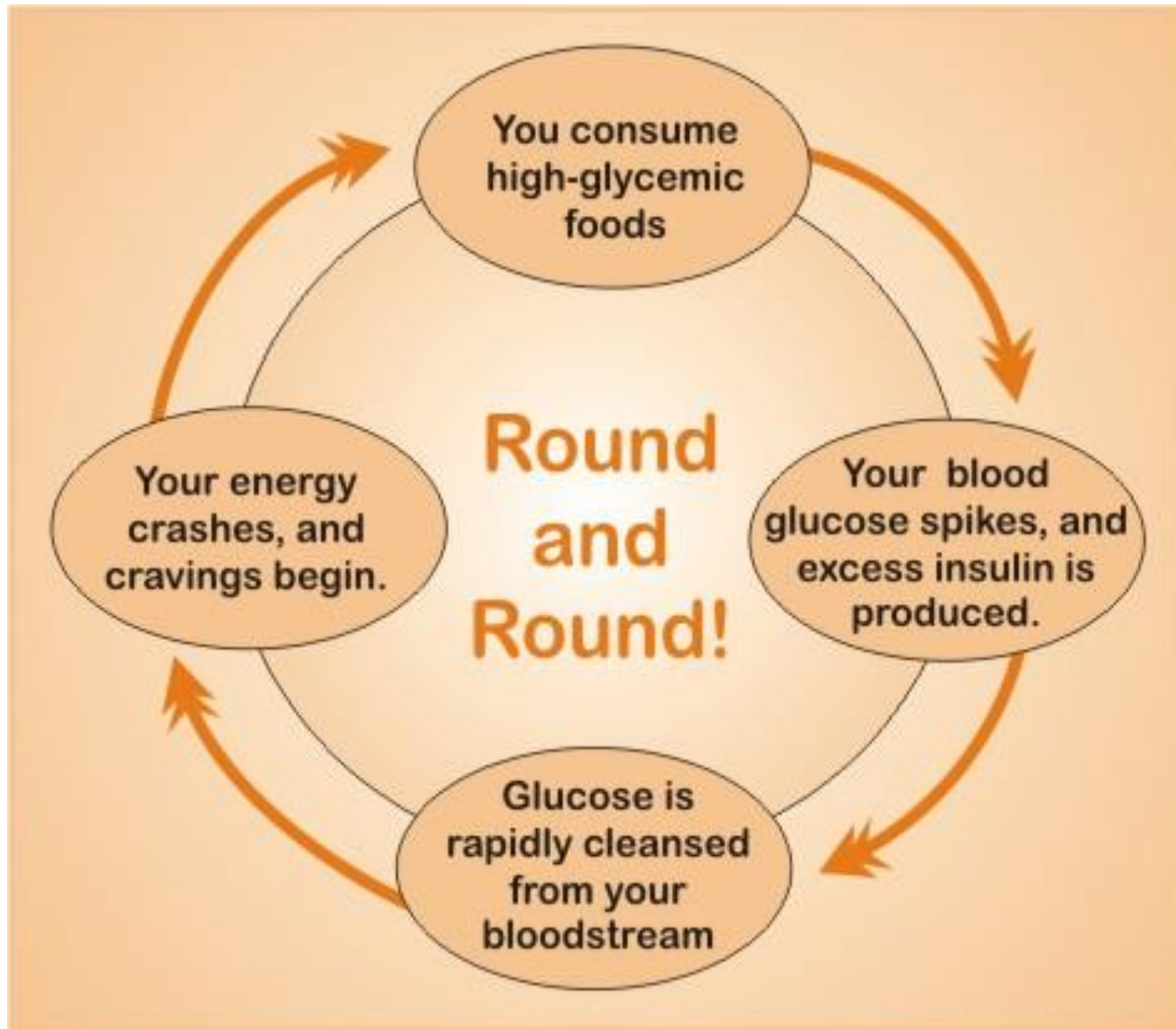


The amount of carbohydrate in the reference and test food must be the same.

Potato is extremely high carbs



Vicious cycles of Glucose spiking & glucose crashing



Glycation as one key molecular basis of diabetic complications

- Glycation is one of main causes of diabetic complications and aging;
- Glycation is produced when **protein is cooked with sugar** without water (like baking frying etc).
- The cross-linked glycated protein is tough and inflexible, contribute to thickening and hardening of the blood vessels and catarat, and wrinkles.
- Glycated protein also produces large quantity of damaging free radicals;



Unhealthy Cookings produce glycation

Food Item	AGE Content
• Beef boiled for 1 hour	22 kU/g
• Beef broiled for 15 minutes	60 kU/g
• Fried chicken breast	61 kU/g
• Broiled chicken breast	58 kU/g
• Raw tofu	8 kU/g
• Broiled tofu	41 kU/g

• kU/g: units of AGEs per gram of food

• Remarks: glycated proteins speed rate of pro-aging cross-linkages in collagen;



High blood sugar may causes gestational diabetes

Gestational diabetes

Gestational Diabetes



High blood glucose levels in mother

Brings extra glucose to baby



Causes baby to put on extra weight



- (1) Mother's blood brings extra glucose to fetus
- (2) Fetus makes more insulin to handle the extra glucose
- (3) Extra glucose gets stored as fat and fetus becomes larger than normal

Pre-diabetes is reversible

- *Movement of the muscles works like insulin-decrease blood sugar, take action today!*



Our body is gifted with self-healing power,
Good Health to You!



Designed by Lanson Lan
TCM, Nutrition, Sports Medicine
Email: 715515212@qq.com, skype: Nutriforce