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Diabetes

Health Promotion Department

What do you know about diabetes

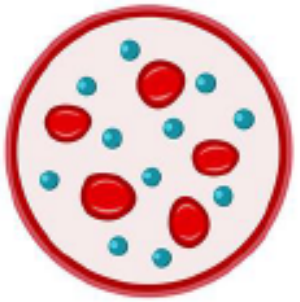
What is diabetes

It’s a disease associated with high level of sugar in blood, blood sugar called glucose

How do we get glucose?

We get glucose from food as the body breaks down sugars and starches we consume into glucose.

Glucose is the primary energy source for the body's cells.



How does blood glucose rise?

pancreas is the organ responsible for the production of the hormone insulin

insulin plays an important role, which help glucose to enter the cells of the body, where its converted into energy that enables each cell to carry out its mission.

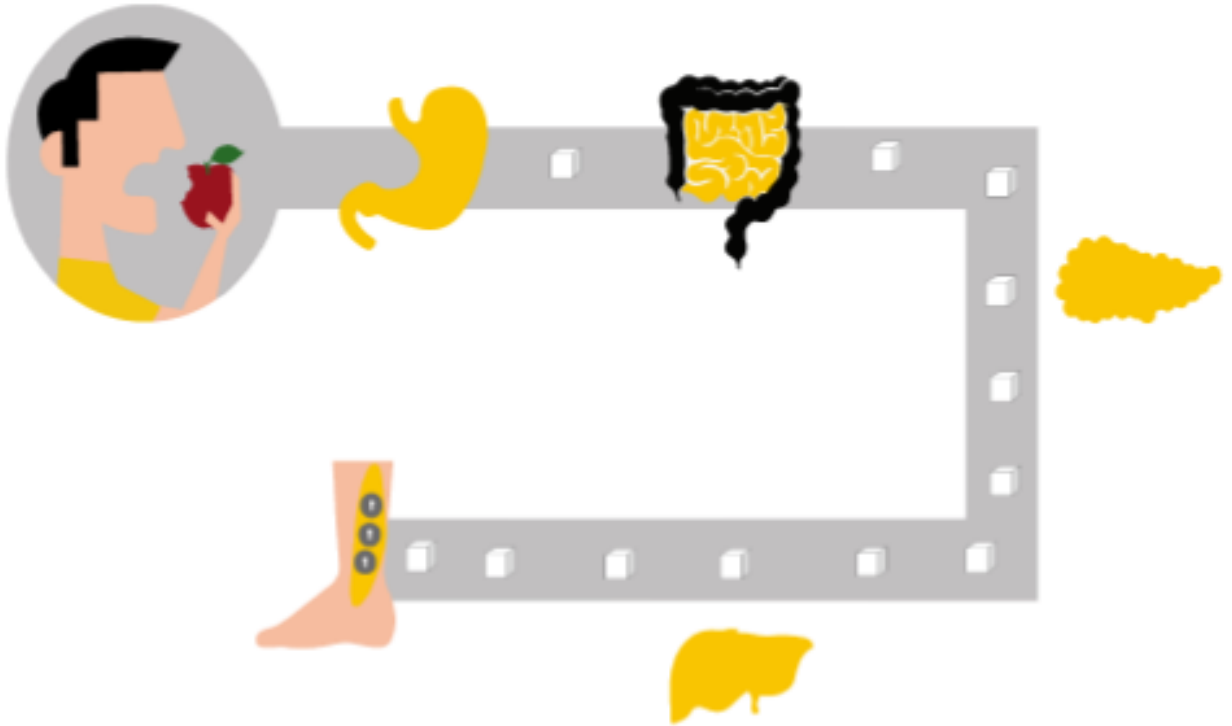
glucose in the blood can reach a very high level for two reasons:

- No enough insulin in the body
- The body does not use insulin properly

Diabetes physiology

Natural functional

body breaks down food we eat, sugar (glucose) enters the bloodstream, and insulin helps the body's cells absorb sugar to convert it into energy.



glucose

insulin

keys and locks

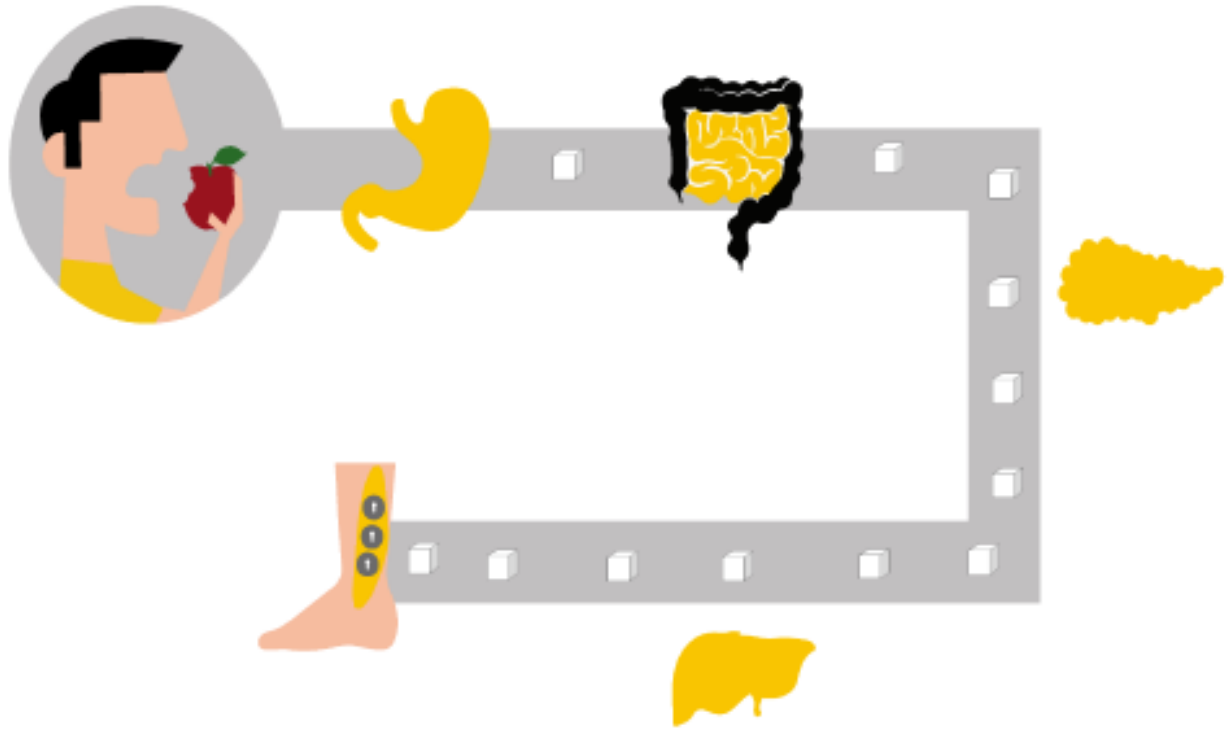
Diabetes physiology

Diabetes type 1

This type is an autoimmune disease in which your immune system attacks and destroys insulin-producing cells in your pancreas for unknown reasons. Up to 10% of people who have diabetes have Type 1. It's usually diagnosed in children and young adults, but it can develop at any age.

Glucose

Insulin

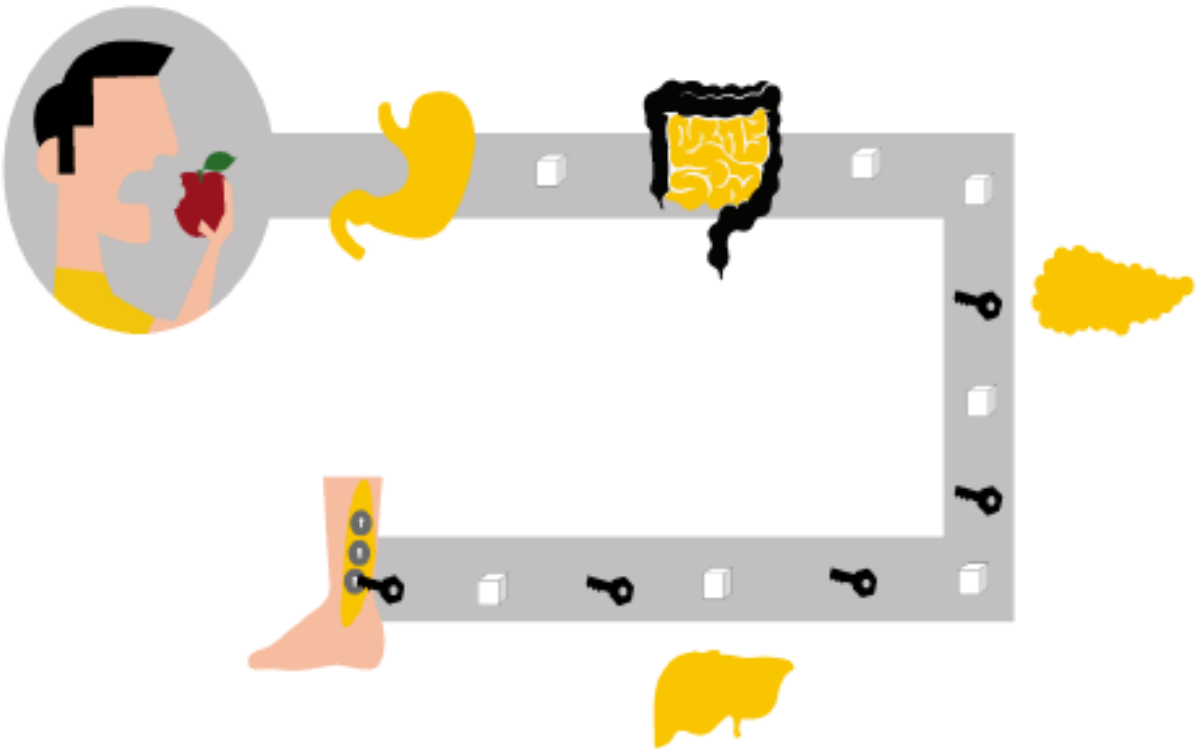


Diabetes type 1 No keys/insulin

Diabetes physiology

Diabetes type 2

The most common type, usually associated with obesity due to the body resistance to hormone insulin, a disturbance of the cell's response to the hormone so that glucose accumulates in the blood.



glucose

insulin

Locks are broken

Type 2	Type 1
○ Occurs due to the ineffective use of insulin by the body ○ The most common type and occurs mostly in adults ○ occurs as a result of the genetic factor or being overweight (obesity) and lack of physical activity	○ Resulting from a total or partial lack of insulin secretion from the pancreas ○ Occurs at early age during childhood or adulthood ○ A patient with type 1 should take insulin daily

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Controllable risk factors

High cholesterol

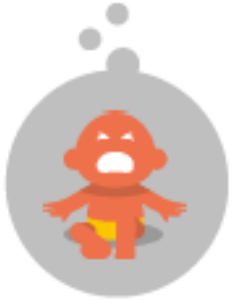
Smoking

Hypertension

Lack of physical activity

Overweight/ obesity

Uncontrollable risk factors



Birth weight

Race/ethnicity

Age over 45 years

Family history

Symptoms of diabetes

Fatigue and weakness

Extreme thirst

frequent urination

Weight loss

Complications of diabetes

Kidney damage

Nerve damage

Cardiovascular diseases

Visual impairment

Hypoglycemia

causes	Not eating or delaying food Insulin overdose
symptoms	Feeling hungry Headaches Nervousness Lack of concentration Fainting

What should I do when my sugar level is low?

- You should measure your blood sugar if it is less than 70 mg / dl You should eat or drink to raise your blood sugar level.
- To raise sugar you can take 1/2 cup natural juice, a spoon of sugar or honey.
- Re-measure your sugar after 15 minutes, if it's still low, repeat treatment
- See a doctor if necessary.

Hyperglycemia

causes	o **Neglect of taking medication** o **high intake of food and lack of physical activity** o **Emotion and nervous tension** o **Exposure to illness or infections**
symptoms	o intense thirst o frequent urination o Fatigue and drowsiness o Dry mouth

What should I do when my blood sugar level is high?

Self-examination of sugar.

Drink large amounts of liquids that do not contain sugar, such as water.

Visit a doctor and nutritionist if sugar still high .

What do the readings tell you?

Body mass rate	Cumulative sugar	Glucose two hours after eating	Fasting sugar
extreme obesity 40 or more	-	-	-
(obesity)30 – 39.9	6.5% or more	200 mg/dl, 11.1mmol/L or more	126 mg/dl, 7mmol/L or more
(overweight)25 – 29.9	5.7 – 6.4%	140-199 mg/dl, 7.8-11mmol/L or more	100-125 mg/dl, 5.7-6.9mmol/L or more
(Normal weight)18 – 24.9%	5.6% or less	70-139 mg/dl, 3.9-7.7mmol/L	70 - 99 mg/dl, 3.9-5.6mmol/L

Dietary habits and diabetes?

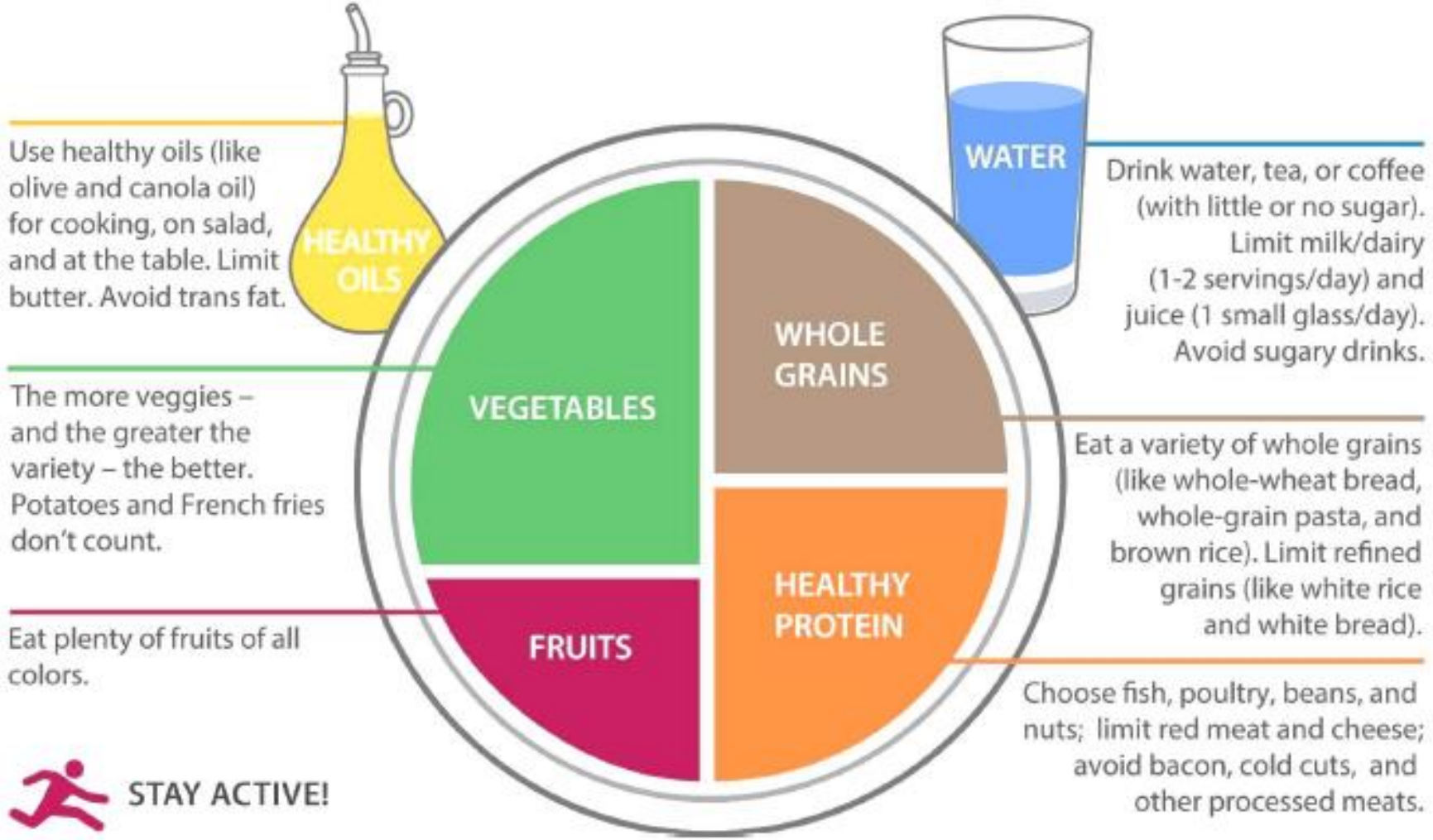
How can we prevent type II diabetes?

Changing our lifestyle by losing weight and becoming more active can prevent diabetes.

Healthy eating habits depend on:
Food groups and ingredients of food we consume.
Way of Preparing food
Rations/amounts of food.

Note: It is recommended to visit anutritionist and follow up with her to lose and/or maintain a healthy weight.

Food Groups


Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.
HEALTHY OILS
The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.
VEGETABLES
Eat plenty of fruits of all colors.
FRUITS
STAY ACTIVE!
WHOLE GRAINS
HEALTHY PROTEIN
WATER
Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.
Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).
Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.

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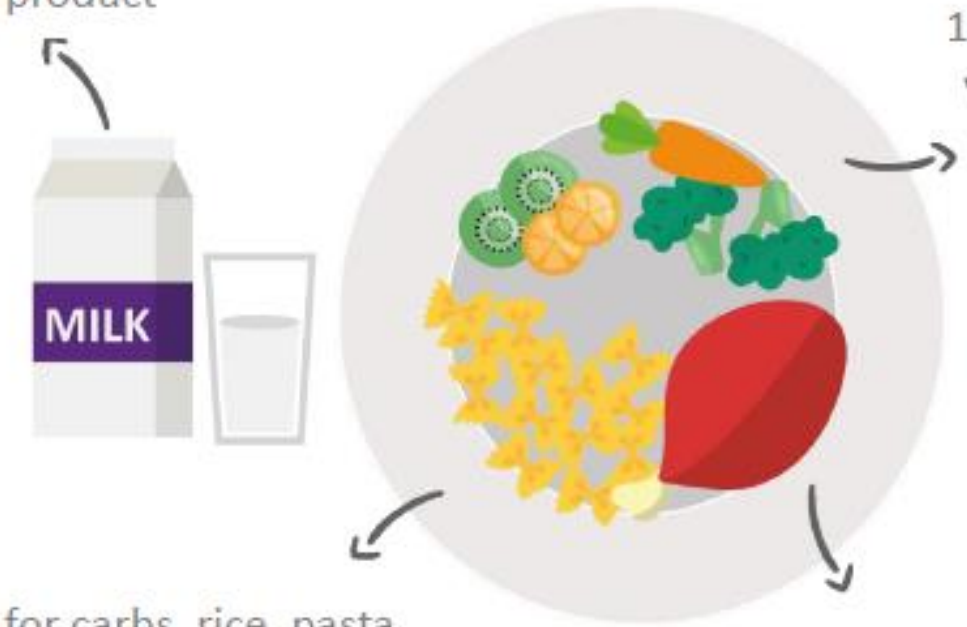
Healthy Plate

Don't forget your daily requirement from low fat dairy product



1\2 of plate for mixed vegetable and fruits

1\4 of plate for carbs, rice, pasta

1\4 of plate for poultry and fish


Cheese and dairy serving size


Healthy fats serving size


vegetables serving size


Protein serving size


Carbohydrates serving size

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Food label

Sample label for
Macaroni & Cheese

1. **Start Here**
2. **Check Calories**
3. **Limit these Nutrients**
4. **Get Enough of these Nutrients**
5. **Footnote**
6. **Quick Guide to % DV**

- **5% or less is Low**
- **20% or more is High**

Physical activity

It is every body movement performed by skeletal muscles that leads to calorie consumption.

The importance of physical activity:

- Helps to lose excess weight or maintain a healthy weight
- Improves mental health and enhances self-confidence
- Contributes to overcoming depression and anxiety
- Gives energy

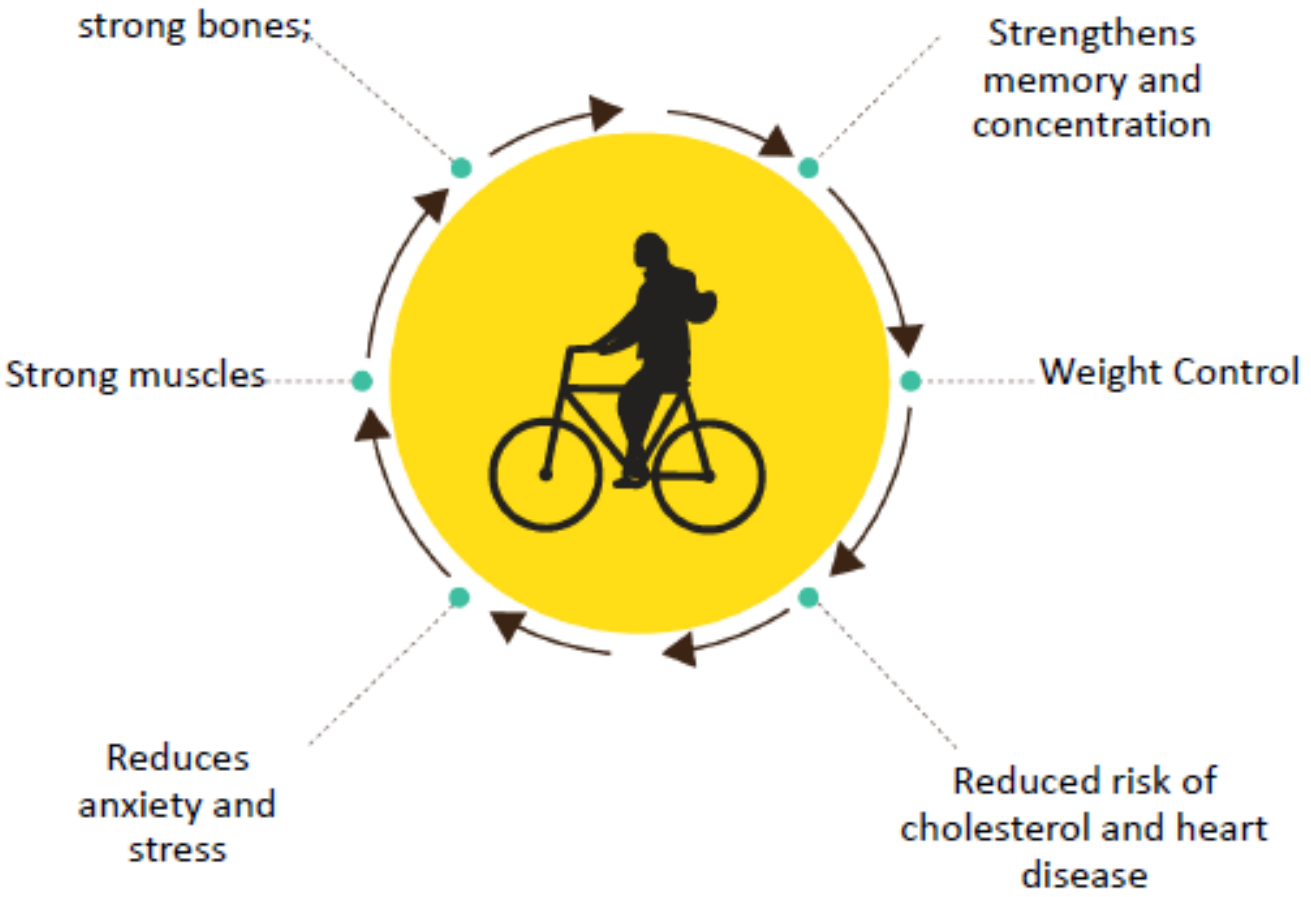
Fitness

It is defined as the physical and psychological readiness of the athlete that qualifies him to achieve the level of sports work required .

Physical activity improves your fitness by:

- Reduce the risk of cholesterol, heart disease, diabetes and some cancers.
- Raises the level of HDL cholesterol
- Lowers the level of triglycerides.
- Helps in Maintain a normal level of blood pressure.

Benefits of physical activity



Physical activity reduces the risk of type II diabetes by enabling the body to optimally utilize insulin and lower the blood sugar level.

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Goal:

150 Minute of physical activity per week which is equivalent to 30 minutes a day for 5 days

30 minutes per day (10X10X10)

5 days a week

- Try to reach this goal gradually
- Choose activities you like
- Choose moderate types of activity such as walking

Safety of diabetic person before physical activity

Wear appropriate sportswear.
Wear comfortable shoes, especially for walking or jogging.
Wear light-colored stockings to detect any bleeding.
It is important to monitor your blood sugar level before, during and after physical activity.
Provide a carbohydrate snack when practicing physical activity in case of a sudden drop in blood sugar.

Be sure to exercise with a partner who can help in case of an emergency.
< 100 Don't practice physical activity, snack and then recheck your sugar
> 300 Don’t be physically active, take an insulin dose and consult your doctor

“

Thank you

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