



جامعة الإمام عبد الرحمن بن فيصل  
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

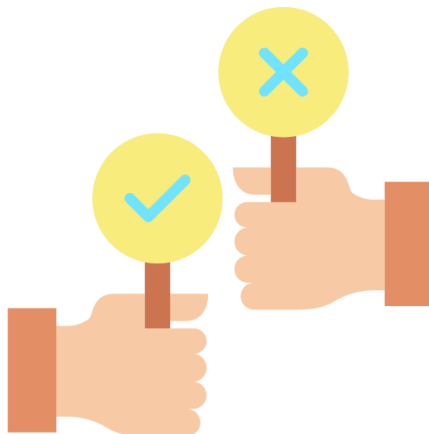
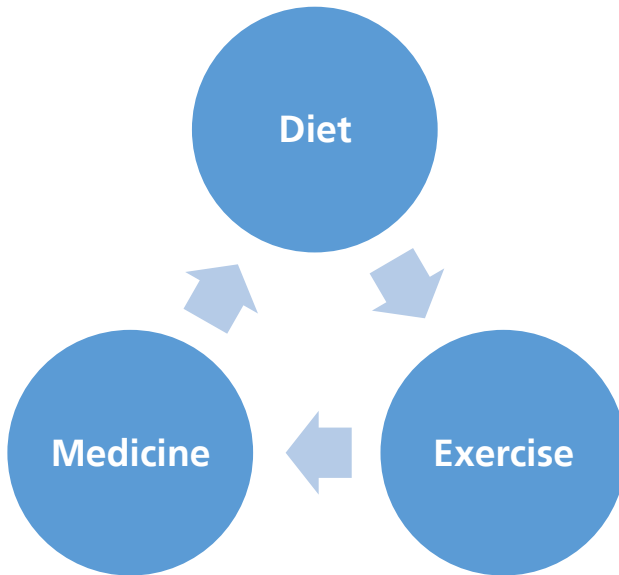
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## Exercise & Diabetes



## How can I control my diabetes?

When you think that the diet alone is enough to cure the diabetes *you are wrong*, for diabetes controlling depends on three major factors as below:



# What is the effect of exercise in controlling diabetes?

Sport has a great effect on treatment plan as it:

1. Keeps blood sugar regular



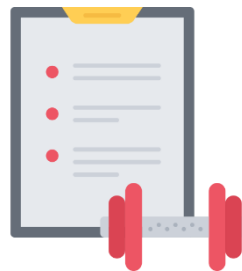
2. Activates blood circulation



3. Maintains an optimum weight and reduces chronic implications



To make a maximum use of exercise without developing any implications, you should exercise daily.



## How do I start my exercise program?

**First:** You should make a medical checkup including:

- Hypertension



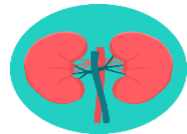
- Feet check



- Eye check



- Kidney functions



- Nerves functions



- Cardiac stress examination for +35 years patients.



**Second:** choose suitable sport types:

The sport type may affect you according to:

- your age



- your physical fitness



- Glucose levels



- Diabetes type



- Other diseases as Asma, or chronic diabetic implications



### Third: starting with warm-up exercises

This is to prepare the muscles before the basic exercise, and be sure to gradually increase the time for exercise to avoid muscle tension, so you must do the following:

1. Exercise 3-4 time a week for 20 minutes continuously



2. The exercises must be sufficient to increase the heart beats rate and breathing to the required rate without excessive fatigue.







## Fourth: Friends Role

It is better to practice sport with your friends as it encourages continuity and enjoyment.



## Fifth:

It is better to check your blood sugar level before, during and after the exercise, particularly when you start a new sport program.

<b>Blood sugar level</b>	<b>What you should do?</b>
Less than 100 mg / dL	Eat half of a sandwich and fruit piece, or eat half of a sandwich and take low-fat milk 
Between 100 - 250 mg / dL	Eat a snack every 30 minutes such as apple or orange and starches 
Between 100-250 mg / dL	You do not need to eat 
More than 250 mg / dL	Do not do exercises and wait until blood sugar is below 250 mg 



## What are the precautions you should take before starting any sport program?

To avoid any implications during the sport program as low level of blood sugar for diabetics take insulin or pills, follow the below instructions:

1. Measure the blood sugar level and urine ketone before starting any sport.



2. If the medicine effectivity is still high, don't exercise.



3. If the blood sugar level is less than 100mg/dl, do not exercise and better take starches.



## What precautions should I take before starting a sport program?

1. Have juice with you or candy when performing any sport



2. Stop exercising if you feel hypoglycemia and take a juice or candy immediately.



3. Do not inject the dose of insulin into the thigh or the arms when you're going to exercise because the speed of insulin absorption will increase with exercise and hypoglycemia is possible in this case.



# When should I avoid practicing exercise?



Blood sugar level is 240 mg/  
dL or more



Blood pressure is 180 ml/  
150 Hg or more



Symptoms of arteries  
diseases or heart disorders



Severe injury to the retina  
or bleeding in the eye



Heart beats are 120/minute  
or more

## What are the best exercises for diabetics?

There are two types of exercises that are suitable for diabetics:

1. **Aerobic exercises:** such as walking, jogging, swimming, and cycling. These types are more useful for diabetic patients.



2. **Anaerobic exercises:** Such as weightlifting.



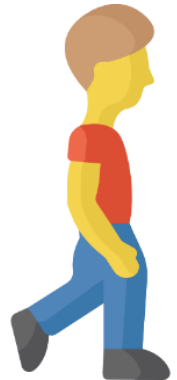
# What are the types of Aerobic exercise?

## Walking

It is the best type of exercise you when start your exercise program, especially if you did not engage in sports previously.

### All you need is:

- comfortable shoes
- cotton comfortable clothes
- Then walk 10-15 minutes
- Then gradually increase the period every week till you reach 45 minutes 3-5 times a week.



**For the optimum use,** you must walk in quick steps to increase the pulse to the required rate for slow walking does not lead to the desired purpose.

# What are the types of Aerobic exercise?

## Jogging

Fast running and jogging became common in recent years, however, practicing it for a long period may lead to joints pain due to the exposure of the body to successive shocks, so it must be on the tips of the fingers. A brisk walk is better than jogging or can be with simultaneous jogging. [Jogging](#) for a long distance is not preferred for diabetics because of the possibility of sudden hypoglycemia.



# What are the types of Aerobic exercise?

## Cycling

It is one of the useful and less dangerous sport types. Its use increases if you practice it in a street with hills, or when you increase the resistance via using bicycles of different speeds, but make sure the bicycle seat is comfortable and the brake is good to avoid any accident.



# What are the types of Aerobic exercise?

## Swimming

Start swimming in short distances and then increase the distance gradually. Cross the swimming pool once and relax, then twice and relax, and so on per your fitness till you reach 6-8 times. You can sport or walk in no deep areas, particularly, for pregnant.



Swimming is recommended sport for joints pains.



# What are the types of Aerobic exercise?

## Physical fitness sport:

It is useful and recommended for men and women as there are clubs for such exercises that must be preceded by warm-up and stretching for all muscles, and to gradually start following the advices of fitness coach.

Mind, you need to use special shoes to soften the shocks when jumping, and the floor you train on must not be solid.



### Sources and References:

American Diabetes Association, ADA

### Review and Audit:

The content of this booklet is reviewed by  
Diabetes Unit Consultants at King Fahd University  
Hospital.

## Health Awareness Unit

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