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Dietary Guidelines to Control Diabetes



Introduction

Integrated healthy nutrition is a key factor in controlling diabetes and preventing its complications.

Organizing diets for diabetics is not just reducing the amount of starches and sugar you eat. There are many options for organizing meals. By choosing the appropriate organization method for you, you can try new types of food and enjoy eating your favorite dishes while keeping your blood sugar levels under control.



How do I make the right food choices?

Think and then decide, before eating any food give yourself a chance to answer the following question: [What is the benefit of this food?](#)

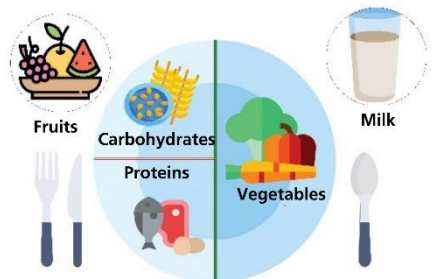
Knowing the benefits of healthy foods increases the chance of making food choices.



What is a healthy plate Method?

An easy way to help start controlling the types of food in the meal and its quantity as well, to ensure nutritional integration. You can choose an item from each of the food groups and specify the quantity according to the recommendations of the clinical dietitian.

This regulation will help you to better control your sugar level after meals.



What is the healthy shopping method?

It is the first step to start a healthy eating pattern, prepare the list of foodstuffs to be purchased before going to shopping and be sure to stick to it.

It should also be taken into account not to shop when hungry to avoid exaggeration in buying what you do not need from food.



- Read information from food labels

The nutrition label on prepared foods is an accurate source of carbohydrate counting.



What is the healthy shopping method?

- Serving size

The amount of food for which a nutritional analysis was done and the conclusion of all the nutrients it contains, which is not necessarily the whole package, but it can be part of it.



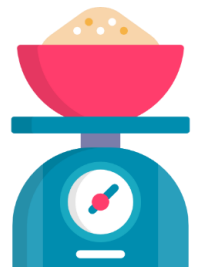
-Total carbohydrates

The number that you need to use when calculating carbohydrates per serving, and the number must be adjusted if less or more quantities are consumed.

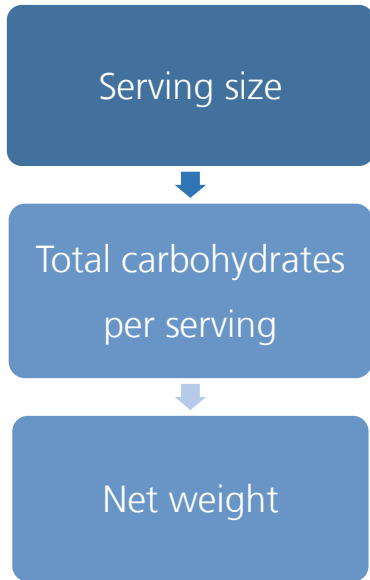


-The quantity in one serving

All values in the table are for one serving only, not for the whole package.



What is the healthy shopping method?



How to read food labels:

Food Card			
-serving size	1 cup (228 gm)		
Number of serving per package	2		
<hr/>			
Quantity per serving			
Calories 250	Fat Calories 110		
*Daily value%			
Total Fat 12gm		18%	
Saturated fat 3gm		15%	
Trans fat 1.5gm			
Cholesterol 30gm		10%	
Sodium 450mlgm		20%	
Total carbohydrates 31gm		10%	
Dietary fiber 30gm		0%	
Sugar 5gm			
Protein 5gm			
<hr/>			
Vitamin A		40%	
Vitamin C		2%	
Calcium		20%	
Iron		4%	
*The daily value ratio is based on a diet (2000 calories) which can be more or less depending on the daily need.			
	Serving size	2000	2500
Fat		65gm	80gm
Saturated fat		20gm	25gm
Cholesterol		300mlgm	300mlgm
sodium		2400mlgm	2400mlgm
Carbohydrates		300mlgm	375mlgm
Dietary fiber		25gm	30gm

When calculating carbohydrates for a food product, consider:

- 1- Serving Size.
- 2- Total carbohydrates.
- 3- Focus on total carbohydrates only and not pay attention to the amount of sugar on the card.

What is the healthy shopping method?

If the portion size differs from the net weight, we do the following.



1. Find the amount per serving.
 2. Find total carbohydrates.
 3. Find the net weight in the same package.
- Calculate with the following equation:

Net Weight x Total Carbs ÷ Amount per Serving and the result is equal to the amount of carbohydrates in the product itself.

250ml x
 $12 \div 100 = 30\text{g}$
of
carbohydrates
in juice pack



-The amount
per serving is
100 ml -Total
Carbohydrates
12g - net
weight 250ml.



Orange juice



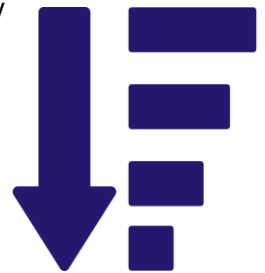
What is the healthy shopping method?

The previous equation is a basic way to choose meals in a healthy way, and it is the main key through which you learn about the types and quantities of nutrients it contains.



Here's an explanation of what to look for when comparing food labels

- When looking at food labels, start by reading the list of ingredients and remember that the ingredients are listed in descending order according to the percentage of their presence in the product, meaning that the main ingredient (the most quantitative) is listed first and followed by the quantities of other ingredients used in descending order.



What is the healthy shopping method?

- Taking into account the selection of products consisting of high-value nutrients such as whole grains, whole wheat, barley and oats.



- Avoid unhealthy ingredients such as fully or partially hydrogenated oils and choose products that contain monounsaturated fats such as olive, canola and peanut oils.

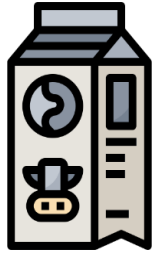


- It should be noted that sugar is found in other names in the food product by one of the following names: fructose, glucose, sucrose, high fructose corn syrup.



What is the healthy shopping method?

- It is preferable to choose the product by referring to the following tables to know the limits of fat content, saturated fat, sugar and salt so that your choices are within the **green area** (low content) or **at the beginning of the orange area** (medium content).



Examples on the following page:

Healthy shopping card

Solid food

100 gm per each component

Component	Low	Medium	High
Fat	Less than 3 gm	3 gm to 17.5 gm	More than 17.5 gm
Saturated fat	Less than 1.5 gm	1.5 gm to 5 gm	More than 5 gm
Sugar	Less than 5 gm	5 gm to 22.5 gm	More than 22.5 gm
Salt	Less than 0.3 gm	0.3 gm to 1.5 gm	More than 1.5 gm

The first three components of the food product represent the largest amount contained in the product. make sure sugar isn't one of them.

*Food falls into the food table from top to bottom depending on the quantity.

Healthy shopping card

Liquid food

100 ml per each component

Component	Low	Medium	High
Fat	Less than 1,5 gm	1.5 gm to 8.75 gm	More than 8.75 gm
Saturated fat	Less than 0.75	0.75 gm to 2.5 gm	More than 2.5 gm
Sugar	Less than 2.5 gm	2.5 gm to 11.25 gm	More than 11.25 gm
Salt	Less than 0.3 gm	0.3 gm to 0.75 gm	More than 0.75 gm

The first three components of the food product represent the largest amount contained in the product. make sure sugar isn't one of them.

*Food falls into the food table from top to bottom depending on the quantity.

What is the healthy shopping method?

The amount of sugar in 100g = 3gm Less than 5 gm within the green zone means a low level of sugar, and this product is considered by acceptable health standards.

Nutritional value	
Serving Size	100g
Calories	140 calories
Total fat	3g
Saturated fat	1g
Unsaturated fat	2g
Total carbohydrates	30g
Including sugar	3g
Dietary fiber	2g

What is the healthy shopping method?

The amount of sugar in 100g = **25gm**. More than 5 gm within the **red zone** means a high level of sugar, and this product is considered unhealthy and unacceptable, and you should avoid eating a product with this high content of sugar and saturated fat.

Nutritional Value	
Serving size	100g
Calories	200 calories
Total fat	1gm
Saturated fat	7gm
Unsaturated fat	2gm
Total carbohydrates	30gm
Including sugar	25gm
Dietary fiber	2gm

Healthy cooking

- The next step for the healthy shopping is to innovate in cooking methods, invent new healthy recipes with a variety of ingredients and take into account the incorporation of vegetables to implement the rule of the healthy plate.



- Use unsaturated fats in cooking and avoid deep frying food to control the total amount of fat in the meal.



- Taking into account not to exaggerate the time of cooking starchy foods such as potatoes, rice and pasta, and the reason is that the longer the cooking time, the



starch becomes more concentrated and may affect the speed of the body's response to the high level of sugar in the blood.

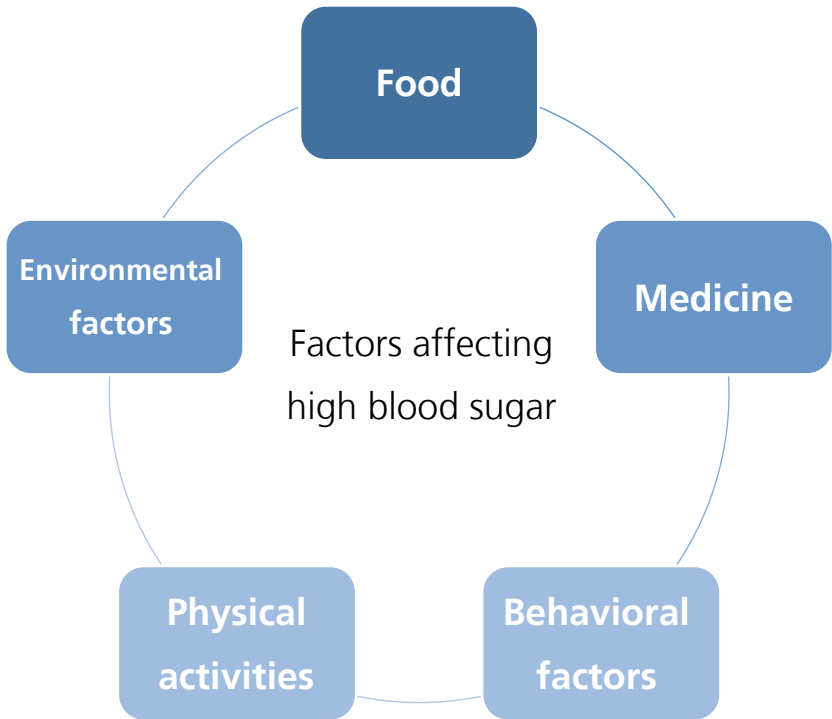
***There are samples of some healthy meal**

What is the best time for a meal?

Organize your time, regulate your sugar

- Regular meal times helps to increase the regularity of treatment times and this increases the positive chance of controlling the sugar level.
- Spacing meal times may cause a drop in the level of sugar in the blood, so you can make an interval between the main meals 5-6 hours as a maximum, and in the event that the sugar level drops, it is advised to add a light meal between meals to reduce this problem.


What are the factors affecting high blood sugar?




What are the factors affecting high blood sugar?

Food

1. Cooking method.

 **The reason:** The longer the time of boiling some starchy foods such as potatoes and pasta, the greater the chance of a rise in the level of sugar after eating them, because sugar becomes quickly absorbed.

 **The solution:** Reduce the time of cooking to these kinds of foods.



What are the factors affecting high blood sugar?

2. The meal is high in fat and protein.



The reason: It may cause a delayed rise in sugar and the scientific explanation for this case is as follows: Often 80-90% of carbohydrates are digested during the first two hours of the meal, protein within 3-4 hours of the meal, and fats are slowly digested, it may take 4-6 hours and some sugar molecules stick to Fat molecules to be digested later with it, which leads to a delayed rise in the level of sugar.



The solution: Controlling the amount and the quality of fat added to the meal.



What are the factors affecting high blood sugar?

3- The high content of the meal from multiple sources of simple carbohydrates.



The reason: This will cause your blood sugar level to rise rapidly.



The solution: choose complex sources of carbohydrates over simple ones.

4- Having a moderate amount of dietary fibre.



The reason: It slows down the digestion of this meal, which helps to better regulate the sugar level after this meal.




The solution: Make sure to add a rich source of dietary fibre with all meals.


What are the factors affecting high blood sugar?

Medicine

1. Insulin dose.




 **The reason:** Not adjusting the appropriate dose of rapid act insulin may lead to an increase or decrease in the required dose, which leads to disturbance in the blood sugar level.

 **The solution:** Adjust the appropriate dose correctly according to the instructions of the treating team.

2. Dose time.



 **The reason:** Rapid act Insulin has a specific time to be effective in the body and a specific time in which it reaches the peak of its action and then ends, and this point must be taken into account in organizing the meal.

What are the factors affecting high blood sugar?



The solution: It is preferable to take the rapid-acting insulin immediately before the meal so that its effect starts when your body starts in food digestion, which leads to better utilization of the insulin.

Behavioral factors.

1. Keep checking your blood sugar level



The reason: Repeating the examination helps determine the appropriate dose and strive to regulate sugar in the event of its disorder.



The solution: Continue to check the sugar level according to your healthcare team and use their directions and instructions.

What are the factors affecting high blood sugar?

2. The ability to make the right decisions



The reason: Making the right decisions

about food choices and determining the appropriate dose helps to better regulate sugar.



The solution: Communicate with the healthcare team, pay attention to the educational material presented by them, and insist on applying it correctly.

What are the factors affecting high blood sugar?

3. Family support.



The reason: The family plays a major role in supporting our diabetic friends and helping them to adapt to a healthy lifestyle and medication plan.



The solution: If the person with diabetes is a child, father or mother, the whole family tries to follow a healthy eating pattern to support this person to continue the healthy pattern.

What are the factors affecting high blood sugar?

Physical Activity.

1. Continuing to do sports.



The reason: Continuing with sports activities increases physical fitness and helps in the pursuit of regulating the level of sugar.



The solution: Increasing the daily rate of movement and allocating time to practice any favourite sports such as walking, swimming, cycling or playing in open spaces.

What are the factors affecting high blood sugar?

Environmental factors

1- Insulin expiration date and temperature



The reason: When using expired insulin, it will be ineffective, and this may cause high blood sugar levels.



The solution: Make sure to check the expiration date of the insulin and its temperature before use.

2- Outer weather



The reason: high temperature may sometimes contribute to high blood sugar level.

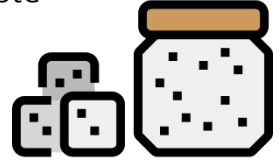


The solution: Avoid exercising outside in case of high temperature.



Is it allowed to use artificial sweeteners?

- Artificial sweeteners provide the sweet taste of sugar without calories, and are often much sweeter than sugar, so a small amount is needed to sweeten foods.



- **You can use some artificial sweeteners, including:**

Stevia (Steviana)



Saccharin (Sweeten Low)

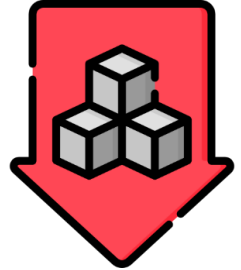


Sucralose (Splenda)



Is it allowed to use artificial sweeteners?

- Artificial sweeteners should be consumed in moderation, because excessive use may cause an adverse reaction, and increase the desire to eat sugar.



- If you get used to eating tea, coffee and some foods without adding sugar or artificial sweetener, it is preferable to continue doing so to avoid the body getting used to the sweet taste a lot and this will help you to control the total sugar consumption in the day.



How do I eat outside the house?

- Make sure to choose restaurants that offer more healthy options.



- Order a small sandwich instead of a large sandwich.



- Add a salad dish to increase the nutritional value and try to reduce the addition of ready-made sauces and mayonnaise due to the increased fat content in them.



- Try to have a variety of food and at the same time a limited amount.

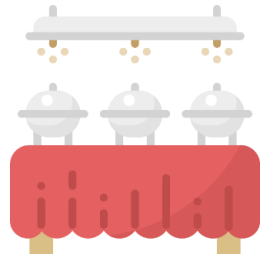


How is my food at social events?

- Diabetes control does not prevent you from participating and attending social events. Try to eating a plate of vegetables at home before you go and then you can eat in moderation.



- In the event that the hospitality is an open buffet system, you can choose a variety of foods within your usual healthy choices.

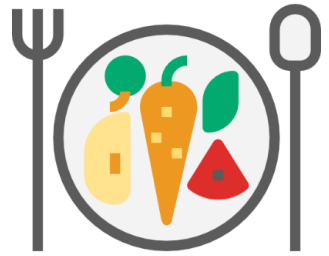


- Make sure to bring your insulin pen with you and take the usual dose right before the meal.



How do I take care of my food while traveling?

- Make sure to stick to choosing a variety of healthy foods that are appropriate for your healthy diet.



Choosing more starchy foods than other foods may expose you to a rapid rise in the blood sugar level.

- Taking into account the arrangement of meal timing to ensure the balance of sugar level throughout the day.



How do I take care of my food while traveling?

- Always make sure to carry healthy meals that are easy to eat, especially if you are driving for long distances, for example, a halloumi cheese sandwich with



vegetables in brown bread is an excellent meal that contains all the necessary nutrients and is also easy to eat.

- Make sure to eat a light meal and check your blood sugar before making an intense physical effort to avoid developing a low blood sugar level.



How do I control my diet with physical activities?

Physical activity plays a key role in your diabetes control plan.

- Exercising contributes to improving the level of sugar and fats in the blood and helps in regulating blood pressure



- Increasing physical fitness and increasing the ability to control psychological stress (increasing psychological comfort).



- Reducing the chance of developing medical complications, thus increasing the quality of life.



How do I control my diet with physical activities?

If you want to exercise, please take into account the following steps:

- It is recommended to exercise 60 minutes a day for children and juniors and 150 minutes of sports a week for adults, and it can be distributed over 3 days a week.



- Checking the sugar level before and after the exercise to be able to determine the intensity of the exercise.



How do I control my diet with physical activities?

- Drink 600-1200 ml of water after performing the exercise.



- Avoid exercising if your blood sugar level is higher than 250 mg/dL.



- Estimate the amount of carbohydrates to be eaten and adjust the insulin dose accordingly.



How do I diet with exercise?



Example of foods to eat:

10 g of
carbohydrates

- 100 g of fruit or a piece of oatmeal

15 g of
carbohydrates

- 120 g of bannans or apples 15

25-30 g
carbohydrates

- 200ml milk + 120gm banana or apple
- 160ml greek yogurt + 1/2 cup of pomegranate.
- 160 ml Greek yogurt + half a cup chickpeas.
- 200 ml of milk + 30 g of brown bread, a spoonful of feta cheese with vegetables, a spoonful of peanut butter, or a slice of cheese, tuna or eggs.

How do I diet before exercise?



Exercise intensity



Blood sugar level

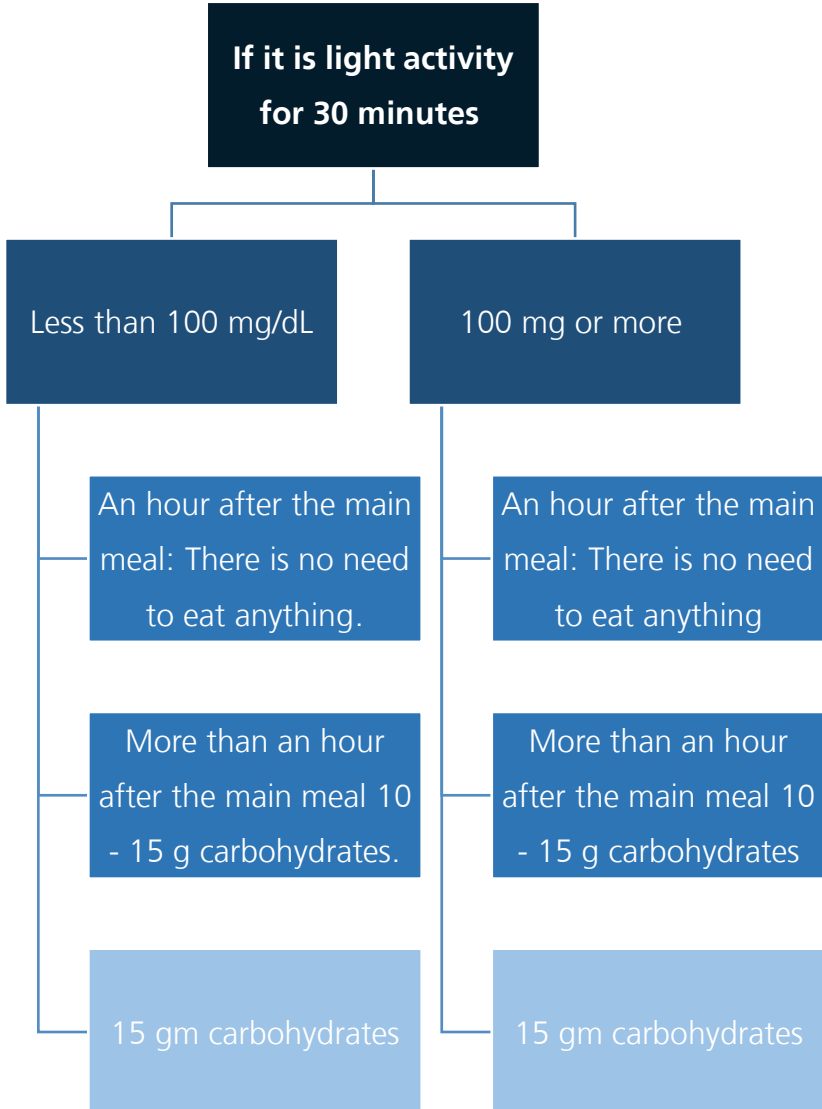


Grams of carbs per meal after

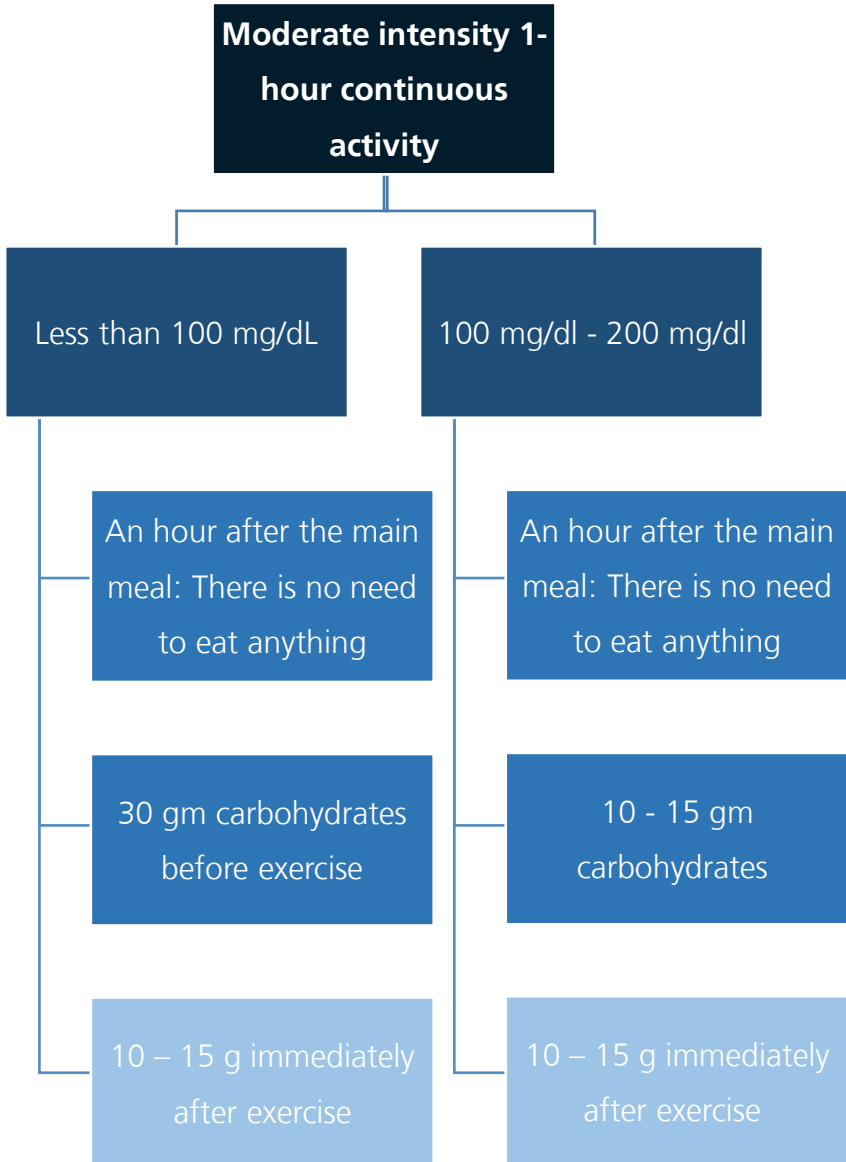
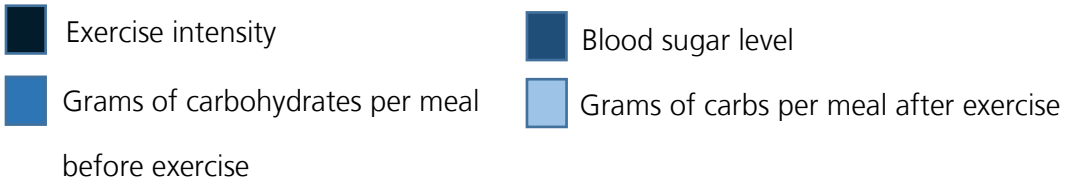


Grams of carbohydrates per meal

before exercise



How do I diet before exercise?



How do I diet before exercise?



Exercise intensity



Blood sugar level



Grams of carbohydrates per meal
before exercise



Grams of carbs per meal after exercise

**Intense and continuous activity
(match that lasts two and a half
hours / continuous sports training)**

100-180 mg/dl

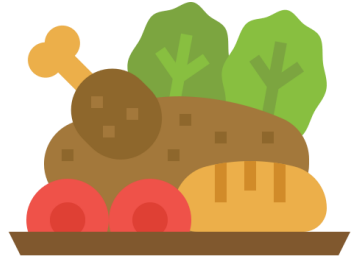
Eat 30 grams of carbohydrates
every hour during exercise, and
you must monitor your sugar
constantly

Eat 30g of carbohydrates

*** Note: It is preferable not to exercise if the blood sugar
level is 250 g or more.**

Healthy recipes

Chicken tray with vegetables



Ingredients:

- Various types of vegetables (zucchini, cauliflower, carrot, broccoli, eggplant, tomato, onion, green pepper).
- Chicken according to the quantity to be prepared.
- Various spices (cumin, black pepper, turmeric, dry coriander, nutmeg, lemon).
- Spoon of olive oil.

Method:

- Put tomatoes, onions, green peppers, spices, lemon and a tablespoon of olive oil in the blender to prepare the seasoning sauce.
- Cut vegetables and chicken as desired.

Healthy recipes

- Put all the ingredients in a deep bowl, then put the seasoning sauce on it and mix it well then put it in a deep tray and leave it for 15 minutes.



- Put it in the oven at 380 degrees Fahrenheit for 50 minutes.
- It can be served with white rice or whole wheat bread, or add potatoes with vegetables to be eaten instead of bread or rice.

Nutritional values per cup (60 gm of chicken + 1 cup of vegetables):

Calories	Carbohydrates	Protein	fats
241 calories	5 gm	19 gm	15 gm

Healthy recipes

Spring pasta

Ingredients:



- Choose any type consisting of one of the following options: (whole wheat pasta, oat pasta, barley pasta).
- Various types of vegetables (zucchini, cauliflower, carrots, broccoli, eggplant, tomatoes, onions, green peppers) and various spices (cumin, black pepper, turmeric, dry coriander, nutmeg, lemon).
- Spoon of olive oil.
- Pieces of chicken or minced meat, according to the quantity to be prepared.

Healthy recipes

Method:

- Boil pasta for only 8 minutes
- Cut the eggplant into rings of medium thickness and spray with oil.
- Arrange the rings in a tray and put in the oven for 25 minutes.
- Cut all the vegetables and put them in order, starting with onions and tomatoes to prepare the sauce, and then the rest of the vegetables and spices.
- Climb the chicken pieces and add them later to the vegetable mixture, or you can add chicken or meat in the previous step after placing the onions and tomatoes.



Healthy recipes

- Add the pasta to the vegetable mixture and mix very well.
- Optional: You can add a little fresh mozzarella cheese on the top and rosemary for garnish.



Nutritional values per cup:

Calories	Carbohydrates	Protein	Fats
347 calories	35 gm	15 gm	14 gm

Healthy recipes

Egg sandwich with avocado sauce.



A special, healthy, satisfying dish that can be prepared in more than one way.

Here we'll describe two methods with the same ingredients.

Ingredients:

You can use toast or samoli bread from one of the following options: (whole wheat bread, oat bread, barley bread).

- 1 ripe avocado.
- ¼ cup mixed vegetables, tomatoes, green peppers, coriander or parsley and onions (as desired).
- 1 boiled egg.
- Salt, black pepper or paprika, lemon.

Healthy recipes



First method:

- Boil eggs for 8 minutes only, and then, peel them and separate the white from the yolk.
- Mash the avocado and put it with the vegetables, salt, black pepper or lemon paprika all in a deep bowl and then add the egg yolk only.
- Fry the toast as desired, then wipe it with the pre-prepared avocado sauce, and then add the egg white pieces on it.

Second method:

- Boil eggs for 8 minutes only, and after they are well-done, peel them and separate the white from the yolk.

Healthy recipes

- Mash the avocado and put it with the vegetables, salt, black pepper or paprika, lemon all in a deep bowl.
- Cut the egg into wide slices.
- Bake the toast as desired, then wipe it with the pre-prepared avocado sauce, and then add the eggs on it.



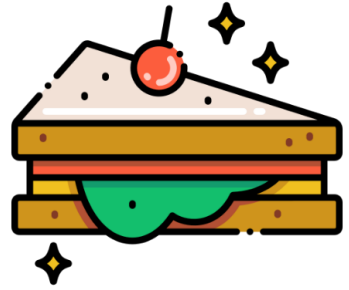
Nutritional values per cup:

Nutritional values for one sandwich (2 slices of toast, weighing 60 g):

Calories	Carbohydrates	Protein	Fats
280 calories	30 gm	10 gm	9 gm

Healthy recipes

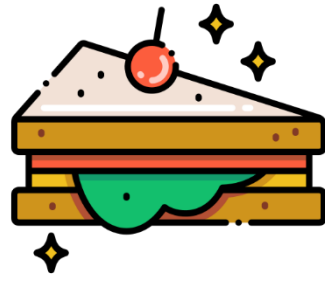
Halloumi cheese sandwich with tomato sauce.



Ingredients:

- You can use toast, samoli bread or flatbread from one of the following options: (whole wheat bread, oat bread, barley bread)
- 30 gm low fat halloumi cheese.
- Half a cup of mixed vegetables, tomatoes, green peppers, coriander or parsley, olives and grilled eggplant slices (as desired).
- 1 fresh tomato.
- Black pepper or paprika, wild thyme.

Healthy recipes



Method:

- First, start preparing the tomato sauce, by cutting it and grinding it in the electric mixer, then we put it in a small and deep cooking pot for **8-10 minutes** with the addition of spices.
- cut the halloumi cheese in a medium size and spread it on a hot plate that is wiped with an oil or a light drizzle of oil (optional plan, it is possible to eat the cheese without frying).
- Toasted the toast as desired, then wipe it with the pre-prepared tomato sauce, and then add the cheese and vegetables on it.

Nutritional values for one sandwich:

Calories	Carbohydrates	Protein	Fats
255 calories	30 gm	10 gm	8 gm

Healthy recipes

Healthy Burger.



Ingredients:

- 60 gm minced meat or chicken, as desired.
- 1 cup of vegetables (zucchini, onion, green pepper, cilantro, parsley).
- Various spices (cumin, black pepper, turmeric, dry coriander, paprika).
- Lettuce leaf and tomato slice (optional extras: Low-fat cheese slice, jalapeno, cucumber pickles).
- Olive oil spoon.

Healthy recipes

Method:



- Put tomatoes, onions, green peppers, spices, lemon and a tablespoon of olive oil in the blender to chop finely.
- Put all the ingredients in a deep bowl and then mix them well to mix and then put them in a little deep tray and leave them for 15 minutes.
- Divide the quantity evenly to make circular pieces and then arrange in the cooking tray.

Healthy recipes

- Place in the oven at 350 Fahrenheit for 25 minutes, then flip on the other side and return to the oven for 10 minutes at the same temperature.
- Served with 60 gm of whole wheat bread (roll, toast, flat) or grilled potatoes (1 medium size potato, cut as desired, add a little salt, paprika and a teaspoon of olive oil, or a dash of oil and put in an air fryer for 25 minutes).



Nutritional values per sandwich:

Calories	Carbohydrates	Protein	Fats
572 calories	37 gm	26 gm	35 gm

Healthy recipes

Kabsa

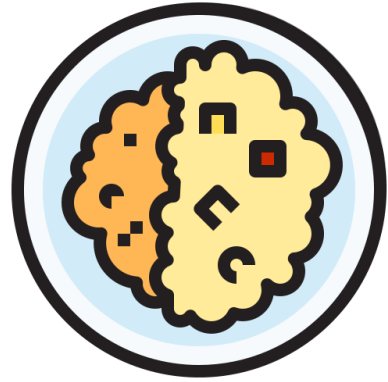


- Various types of vegetables (carrots, tomatoes, onions, green peppers, lemons) cut into small cubes
- 120 gm chicken
- A cup of washed and soaked rice in warm water for half an hour.
- Various spices (mixed chicken spice, cumin, black pepper, turmeric, dry coriander, black lemon) (part of it is placed with chicken and the other part with rice)
- Olive oil spoon.
- 1 tablespoon of tomato paste.

Healthy recipes

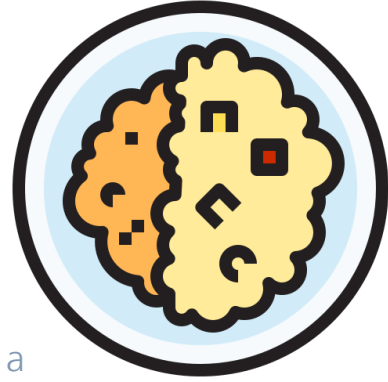
Method:

- Put tomatoes, onions, green peppers, spices, lemon and a tablespoon of olive oil in the blender to prepare the seasoning sauce.
- Put the chicken pieces in a deep bowl, then put the seasoning sauce on it and mix it well to mix, then put it in a little deep tray and leave it for 20 minutes.
- Place in the oven at 380 degrees Fahrenheit for 50 minutes.
- To prepare the kabsa rice: In the cooking pot, put a tablespoon of olive oil, put the onion pieces and stir it a little until it turns gold, then add the tomatoes, tomato paste and spices, and continue stirring, leave until the tomatoes begin to melt, add the green pepper.



Healthy recipes

- Put the washed and soaked rice with a balance of water and salt and cover until the rice is cooked and all the bulk has dried for about a 15 minutes on a low heat, then serve with chicken and a garnish of parsley leaves.



Nutritional values per cup of rice + 60 gm of chicken:

Calories	Carbohydrates	Protein	Fats
550 calories	50 gm	22 gm	25 gm

Healthy recipes

Fish tray with vegetables

Ingredients:

- Various types of vegetables (tomatoes, onions, green peppers).
- Fresh hamour or kingfish pieces, according to the quantity and quality to be prepared.
- Various spices (Mixed fish spice, black pepper, turmeric, dry coriander, nutmeg, lemon).
- Olive oil spoon.



Method:

- Put tomatoes, onions, green peppers, spices, lemon and a tablespoon of olive oil in the blender to prepare the dressing sauce.

Healthy recipes



- Cut vegetables into thick rings.
- Put all the ingredients in a deep bowl, then put the dressing sauce on it and mix it well to mix, then put it in a little deep tray and leave it for 30 minutes.
- Place in the oven at 380 degrees Fahrenheit for 50 minutes.
- It can be served with rice or whole wheat bread, or add potatoes with vegetables instead of bread or rice.

Nutritional values per cup of rice + 60 gm of fish:

Calories	Carbohydrates	Protein	Fats
500 Calories	50 gm	22 gm	21 gm

Diabetes management tips:



Sources and References:

Saudi food and drug Authority

Review and Auditing:

The content of this booklet was reviewed by
clinical nutrition specialists in diabetes unit at King

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