

## Everything you need to know about Carbohydrates



Learn about

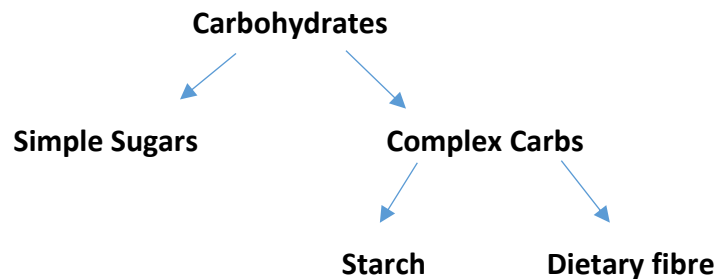
- Different types of cereals
  - The most nutritive
- Sliced breads
- Granola bars
- Cookies
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### ➤ Why do we need starchy foods?

They contain carbohydrates which are needed to give us energy for our organs to function and to perform daily activities.

### What are the different kinds of carbohydrates?

Not all carbohydrates are created equally and the main difference lies in its molecular chemistry and hence how they are broken down and absorbed.



**Simple sugars:** Honey, Syrup, white and brown sugar, fruits

**Complex Carbs:** Bread, pasta, rice, quinoa, cereals, root vegetables (potatoes, sweet potatoes, carrots)

### What carbs should I be eating?

Simple carbs, such as white refined sugar or sugary processed foods and drinks, can be digested really quickly and are empty calories, giving us a blood sugar spike followed by an energy low that can leave us feeling sluggish.

Even though fruits contain simple sugars, they also contain fibre which helps to slow down the sugar absorption.

Eating more complex carbohydrates is key – they take longer to break down, are slow-releasing and give us a more sustained level of energy. Even better, choose wholemeal and whole-wheat varieties, as these also contain more fibre and other nutrients that our bodies can use and take even longer to digest, helping to keep us feeling fuller for longer.



## **What about fibre?**

Fibre is also classified as a carbohydrate, and is found mainly in plant-based foods. We should be aiming for about 26g of fibre each day. We consume two different types:

- *Insoluble fibre* – largely found in wholemeal and whole-wheat foods, we can't digest this, so its important function is to help other food and waste pass through the gut, keeping our insides happy.
- *Soluble fibre* – found in foods such as amazing oats, pulses, beans, vegetables and fruits. We can't digest this but the good bugs in our colon can, which keeps them happy. Also, oats have a proven health claim to reduce blood cholesterol, so we love, love, love them

## **How much carbs should I be eating?**

This depends on your weight, height, age and physical activity. But a good guideline is to get between 4g-6g per kilogram of your body weight per day. Try to make at least half of your intake of starchy foods coming from whole grain source to maximize your dietary fibre intake.

## **Should we choose gluten-free products?**

Gluten is a protein, naturally found in wheat, barley and rye and it is what gives a dough its elasticity.

Unless a person suffers from celiac disease or an intolerance to gluten, it is not recommended to eliminate gluten from the diet. Gluten-free products often lack fibre and contain more sugar and/or fat than the regular gluten-containing products. Therefore if not chosen adequately and if it is not balanced with the proper selection of food, nutritional deficiencies can arise.

## **Sliced bread**

### **Criteria**



Reference portion	Fibre	Sodium
30g	Minimum 3g	Maximum 160mg

### **List of ingredients**

- 👍 **Best choices:** Look for integral flour (meaning that the wheat has not been stripped from the outer layer called the bran, therefore providing more fibre).

#### **Integral flour can also be called:**

- 👍 Whole wheat flour with the germ
- 👍 Stone-ground whole wheat flour
- 👍 Oat flour
- 👍 Buckwheat or quinoa flour

- 👉 If you see **inulin or oat hull fibre** added, this means that manufacturers have added this ingredient to boost the fibre content of the bread. However, this type of fibre is not digested and does not help in increasing our satiety. Inulin or oat hull fibre are often added in “smart” breads or pastas.

## **Breakfast cereals**

### **Criteria**



Reference portion	Fibre	Sugar	Sodium	Proteins
55g	Minimum 6g	Maximum 10 g	Maximum 140mg	Minimum 4g

### **Some nutritious cereals**

Brand	Type	Price per 100g
Kashi	Go Lean Original	\$1.08
Kashi	Go Lean Crisp Cinnamon crumble	\$1.00
Special K	+ Proteins	\$1.50
Post	Shredded Wheat	\$0.76
Quaker	Life Multigrain	\$0.94

## **Granola bars**

### **Criteria**

Reference portion	Saturated fat	Fibre	Sugar	Sodium
30g	Maximum 2g	Minimum 3g	Maximum 8 g	Maximum 140mg

### **Some nutritious granola bars**

Brand	Type	Price per 100g
Kashi	Trail mix, Chia and dark chocolate, Cherries and dark chocolate, Dark chocolate coconut, Honey Almond flax	1.42 \$
Nature Valley	Lunchbox	1.92 \$

## List of ingredients

- 👉 Watch out for high fructose corn syrup, commonly known as glucose-fructose in the list of ingredients. This type of sugar is more easily converted into fat and decreases satiety by decreasing the secretion of the satiety hormone called leptin.

## Cookies

### Criteria



Reference portion	Total Fats	Saturated fats	Fibre	Sugar
30g	Maximum 5g	Maximum 2g	Minimum 2g	Maximum 10 g

## List of ingredients

- 👉 Look for whole wheat or whole grain flour as the first ingredient in the list.
- 👉 Look for vegetable oil or non-hydrogenated fats to make sure that there is no trans-fat.

## The different types of flour

**Enriched flour:** The bran (containing B vitamins and fibre) which is the outer layer of the wheat seed and the germ which is the embryo (containing a bit of fat and fibre) of the seed have been removed before milling the flour. Thereafter, vitamins B are added to the flour, hence making it enriched.

**Unbleached flour and bleached flour:** The main difference is the addition of a bleaching agent called benzoyl peroxide to bleached flour to speed up the aging process. On the other hand, unbleached flour is left to age naturally and will have an off-white colour as opposed to a whiter colour for bleached flour. They both have the same nutritive value.

**Nutri flour:** This is white all-purpose flour with oat hull added to increase its fibre content (3g fibre per 30g flour)

## Crackers

### Criteria



Reference portion	Total Fat	Saturated fat	Sodium	Fibre
30g	Maximum 3g	Maximum 2g	Maximum 140mg	Minimum 2g

## **Top crackers**

Brand	Type	Price per 100g
Ryvita	All types	\$1.52
Wasa	All types	\$0.91
Christies	Triscuit low in sodium (first choice) The other types are also good choices	\$1.46
Kashi	7 grains, roasted vegetables	\$1.08
Grissol	Melba Toasts Whole Wheat	\$1.14

## **List of ingredients**

- 👉 Look for whole wheat or whole grain flour as the first ingredient in the list.
- 👉 No shortening or hydrogenated fats in the list of ingredients.

## **Which rice to choose?**

### **Brown rice**

It is the most nutritious as the bran and the germ have been left on the seed, thereby containing more fibre and vitamins B.

With its nutty flavour, it can be used in main course as well as an accompaniment. Brown rice takes a bit longer to cook than white rice and will take approximately 45 minutes to be ready.

Because, the rice still has the germ part which contains fat, prone to rancidity, the rice is best kept in the fridge in an airtight container and consumed within 6 months after purchase.



### **Parboiled rice**

Before removing the bran, the rice grains are steamed and during this process, the vitamins migrate from the bran into the grain. The hull is then removed after steaming the rice. This process decreases the cooking time of brown rice from 45 minutes to about 20 minutes.

## White rice

This category includes Arborio rice and perfumed rice such as basmati and jasmine rice. White rice has less fibre and vitamins B than brown rice because the endosperm and the germ have been removed. The cooking time is therefore shorter, being approximately 20-25 minutes.

There are two types of white rice: short-medium grain and long grain.

In the short-medium grain category, there is the Arborio rice, popular in Italian cooking and used for making risotto and rice pudding. Also in this category, is the calrose rice used to make sushi.

In the long grain category, there are Jasmine rice, often used in Thai cuisine and Basmati rice, popularly used in Indian cuisine. Despite both, being long grain, basmati rice takes longer to be absorbed, therefore not creating as much the spike in blood sugar as jasmine rice does.

## Wild rice

Wild rice is not a rice but instead is a grain coming from four grasses, which are grown in lakes and streams.

It has twice as much proteins and almost three times the fibre content of brown rice. Being also higher in some B vitamins than brown rice, wild rice is considered to be the most nutritious of all rice. The only disadvantage is its high cost.

Healthy and economical tip: try mixing  $\frac{1}{4}$  cup wild rice with  $\frac{3}{4}$  cup brown or basmati rice.

## Precooked rice (Instant rice)

This type of rice has been entirely precooked and then dehydrated. During the processing, the rice has lost a lot of vitamins B and fibre, making it a less nutritious choice. They are usually a more expensive choice as well.

Flavoured instant rice have added flavouring agents, a lot of sodium and sometimes added fat. So be careful with those rice.

## Quinoa

This grain originates from South America and has been cultivated for close to 5000 years.

**Nutritive value** Quinoa is one of the cereals providing the most iron, even though this non-animal source of iron is not as easily absorbed as iron from an animal source such as red meat.

It is also rich in vitamins B, fibre and contains two to three times more proteins than other cereals.



## How to cook quinoa?

The quinoa grains are covered with a substance called saponine, which gives the quinoa a bitter taste. For this reason, it is important to rinse the quinoa well under tap water until the water no longer foams to get rid of the bitterness.

It takes about 2 parts water for each part of quinoa and the cooking time is about 15 minutes on medium heat.

## Potato chips

### Regular or low in sodium or low in fat or vegetable-based?

Brand	Type	Portion	Calories	Fat	Saturated fat	Sodium
Lays	Regular	28g (20 chips)	154 kcal	10g	1.5g	144mg
Lays	Low in sodium	28g (15 chips)	160 kcal	10g	1.5g	85mg
Lays	Baked in oven	28g (15 chips)	113 Kcal	2g	0g	180mg
Terra	Regular	28g (8 chips)	130 kcal	9g	1g	110mg

As the chart indicates, the caloric intake is practically the same for all the chips. Even though, we are more inclined in choosing the vegetable chips, they are as fatty as regular chips and are not a significant source of vitamins and minerals.

Looking at the baked chips, despite being lower in fat, they are saltier and there is not a big difference in the amount of calories. Furthermore, those chips can be quite processed as some of them are made from potato flakes to which other starchy ingredients have been added to make them look like real potatoes.

In summary, there is no real winner. Some are less fatty, others less salty but in the end they all contain about the same amount of calories. So once in a while, enjoy a bowl of chips without feeling guilty.



# CHICKPEA COOKIES

Preparation: 8 minutes

Cooking: 10 minutes

Yield: 14 1" cookies

## Ingredients

- 1 ¼ cups canned chickpeas, well-rinsed and patted dry with a paper towel
- 2 teaspoons vanilla extract
- ½ cup natural peanut butter
- ¼ cup honey or maple syrup
- Pinch of salt
- 1 cup oats
- ½ cup dark chocolate chips



## Directions

1. Preheat an oven to 350 degrees F (175 degrees C). Line a cookie sheet with parchment paper.
2. Combine all the ingredients, except for the chocolate chips, in a food processor and process until very smooth. Make sure to scrape the sides and the top to get the little chunks of chickpeas and process again until they're combined.
3. Put in the chocolate chips and the oats. Stir it if you can, or pulse it once or twice. The mixture will be very thick and sticky.
4. With wet hands, form into 1 1/2" balls. Place them on the baking sheet, press down slightly on the balls. They don't do much rising.
5. Bake for about 10 minutes. The dough balls will still be very soft when you take them out of the oven. They will not set like normal cookies.

# VANILLA QUINOA PUDDING

Preparation: 5 minutes

Cooking: 30 minutes

Yield: 3 servings (1 cup for each portion)

## Ingredients

- 3 cups milk (cow's milk/soy milk/almond milk/coconut milk)
- 1 cup quinoa
- 3-4 tbsp. maple syrup or honey
- 2 tsp. vanilla extract

**Suggested toppings:** fruits, coconut flakes, nuts and seeds, nut butter, cocoa powder, cinnamon powder,

## Directions

1. Wash the quinoa thoroughly to remove the residual resins that might cause the quinoa to be bitter.
2. Mix the milk, maple syrup together in a pan and set to simmer.
3. Add the quinoa to the milk mixture and stir frequently but not constantly on medium heat.
4. Once thickened, remove from heat and allow to cool before refrigerating. Even if not all the milk has evaporated, the quinoa will absorb the liquid and will set once it is cooling off. Can also be served warm.



# Popcorn in the microwave

Cooking: 2 minutes

Yield: 1/3 cup of kernels gives 3 cups popped popcorn

## Ingredients

- 1/3 cup kernels
- One brown paper bag
- Seasonings of your choice: salt, pepper, chili powder, smoked paprika, grated parmesan, onion powder, caramel, peanut butter



## Directions

1. Put 1/3 cup of kernels in a brown paper bag and close it with a staple.
2. Cook in the micro-wave for 2 minutes.
3. Add the seasonings of your choice: salty or sweet. You can also drizzle 1-2 tablespoons melted butter on top to make it more decadent.

# WONTON CHIPS

Preparation: 10 minutes

Cooking: 10 minutes

Yield: 3-4 portions

## Ingredients

- 12 wonton wrappers
- 1 tsp. oil
- Seasonings of your choice: salt, cumin, chili powder, garlic powder, etc...



## Directions

1. Preheat oven to (400F). Line baking sheet with parchment paper.
2. Put the wrappers on the sheet and with a brush, lightly coat them with a bit of oil.
3. Cut the wonton wrappers diagonally with a knife so as to get triangles. Sprinkle the seasonings of your choice on top.
4. Bake in the oven for 10 minutes or until the wrappers are crispy and lightly golden brown.

Note: The wonton wrappers can also be replaced with pita breads.

# ENERGY BALLS

Preparation: 10 minutes

Yield: 36 balls

## Ingredients

- 1 cup raw whole natural almonds
- 1 cup pitted Medjool dates (about 12)
- ¼ cup natural peanut butter
- 1 tsp. ground cinnamon or ground ginger or allspice



## Directions

1. In a food processor, pulse the almonds until finely ground. Put aside in a bowl.
2. Grind the dates and add to the ground almonds. Add the spices of your choice.
3. Mix with your hands and make small bite-sized balls.
4. They can be stored for 10 days in the refrigerator and up to 2 months in the freezer.

**For more information, contact your nutritionist-dietitian:**

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