

# CARBOHYDRATES

## *Should I eat foods with carbohydrates?*

**RECOMMENDATION:** Eat carbohydrate-rich whole foods like whole grains, legumes, fruits and vegetables as part of your balanced diet - but cut back on 'refined' carbohydrates found in starchy and sugary processed foods.

### What's the evidence?

#### **For Prostate Cancer Prevention?**

Eating too much refined carbohydrates might increase the risk of prostate cancer:

- New research suggests that diets high in refined carbohydrates like sugar and starch increases prostate cancer rates, however, the few studies done had mixed results.<sup>1</sup>
  - A recent large study showed only a weak link between a high-carbohydrate, low-fibre diet and prostate cancer risk.<sup>2</sup>
- There is not enough research to say that a low carbohydrate diet in itself will lower prostate cancer risk.
  - However, eating less refined carbohydrate and fat and more vegetables might help.

#### **For Prostate Cancer Treatment?**

Eating too much refined carbohydrates might increase the progression or recurrence of prostate cancer:

- There is little research on the effects of carbohydrates after a diagnosis, but one study recently found that patients who ate the most refined carbohydrates had the highest risk of aggressive prostate cancer.<sup>3</sup>
- We don't know if a low-carbohydrate diet itself will stop or slow prostate cancer growth.
  - However, one research review found that eating less refined carbohydrates and losing weight might slow prostate cancer growth in some patients.<sup>4</sup>
  - Similarly, in a small study, patients who ate a low-carbohydrate diet and lost weight over six weeks before surgery showed signs of slower cancer growth.<sup>5</sup>
- Any benefits from a low-carbohydrate diet are probably from eating less refined carbohydrates while also increasing plant-based, high-fibre foods.

### Whole foods rich in carbohydrates also contain vitamins and minerals needed for good health

#### **Carbohydrate facts:**

Carbohydrates (or 'carbs' for short) like starch and sugar are our main energy sources, found naturally in grains and grain products, vegetables, fruit and legumes.

- **Sugars** or '**simple**' carbohydrates are absorbed quickly into the body and are sources of 'fast' energy.
- **Starches** or '**complex**' carbohydrates are digested and absorbed more slowly, but are eventually converted into sugar.
- **Fibre** or **non-digestible carbohydrates** cannot be digested or absorbed but help reduce cholesterol, control blood sugar and improve bowel function.
- '**Refined**' carbohydrates are sugars and starches with most of the fibre and other nutrients removed - found in white flour, white rice and sugar (white, brown or 'raw').

Eating balanced diets that limit how much refined carbohydrates you eat might prevent prostate cancer or reduce cancer progression or recurrence for men already diagnosed with prostate cancer.

## Good carbs / Bad carbs?

Carbohydrates are essential macronutrients - nutrients like protein and fat - that provide energy.

- Health Canada suggests we get between most of our daily calories from carbohydrates.

Recommended amounts of daily energy from macronutrients:

Total Carbs	Total Protein	Total Fat
45 - 65 %	10 - 35 %	20 - 35 %

Health Canada Dietary Reference Intakes 2012:

[http://www.hc-sc.gc.ca/fn-an/nutrition/reference/table/ref\\_macronutr\\_tbl-eng.php](http://www.hc-sc.gc.ca/fn-an/nutrition/reference/table/ref_macronutr_tbl-eng.php)

### 'Bad carbs'

Refined starches and sugars that are digested and absorbed quickly and often raise blood sugar levels too high.

- Eating too much sugar such as white table sugar, brown sugar, raw sugar, honey and maple or other syrups - is unhealthy and contributes towards high or uncontrolled blood sugar levels, diabetes and possibly cancer.
- Canadians eat almost 21% of their calories as sugar - that's equal to 110 grams (26 teaspoons) or about 440 calories each day.
- Sweetened beverages provide much of this sugar - about 40 grams (10 teaspoons) are in a can of pop = 160 empty calories.
- Starch found in white flour and processed foods is quickly converted to sugar during digestion.

**WHAT TO DO?** Cut back on 'bad carbs' by eating less processed, starchy and/or sweetened foods.

### 'Good carbs'

Starches and sugars found naturally in whole foods like whole grain products, vegetables, fruits and legumes.

- Found with important vitamins (like vitamin C and folic acid), minerals (like calcium and potassium) and fibre.

**WHAT TO DO?** Replace 'bad' with 'good' carbs by eating more whole grain products - including whole grain breads, oatmeal, brown rice and whole wheat pasta.

## Should I eat a low carbohydrate 'low-carb' diet? Yes and no!

There are many kinds of low-carb diets, but in general they limit foods that contain large amounts of:

- **Starches** - like those found in breads, cereals, pasta, potatoes and carrots.
- **Sugars** - like those found in candy, syrups, desserts, jams and jellies and fruit.
- These foods are replaced by high-protein and/or high-fat foods - often meat - that can raise your cholesterol and risk of heart disease and cause long-term health problems.

It's hard to follow some popular low-carb diets because of the many restrictions and lack of food choices - people tend to drop them after a short time.

- Some low-carb diets are also low in fibre - bad news for men over 50 who typically don't get the 30 grams of fibre they need each day.
- Eating a low-carbohydrate diet that cuts out healthy whole foods like carrots or fruit can leave you low in vitamins and minerals.

Low-carb diets can be healthy if done right - by also eating less and exercising more.

- Cut out processed foods and reduce white bread, pasta and sugary foods and drinks and replace them with plant-based foods - not animal-based foods.

1. Hori S. et. al. Prostate cancer and diet: food for thought? *BJU (British Journal of Urology) International*. 2011; 107(9): 1348-59
2. Nimptsch K. et. al. Dietary glycemic index, glycemic load, insulin index, fiber and whole-grain intake in relation to risk of prostate cancer. *Cancer Causes & Control*. 2011; 22(1): 51-61.
3. Hardin J. et. al. Impact of consumption of vegetable, fruit, grain, and high glycemic index foods on aggressive prostate cancer risk. *Nutrition & Cancer*. 2011; 63(6): 860-72.
4. Freedland, S.J. & W.J. Aronson, Dietary intervention strategies to modulate prostate cancer risk and prognosis. *Current Opinions in Urology*. 2009; 19(3): 263-7.
5. Lin DW, et al Low-fat, low-glycemic load diet and gene expression in human prostate epithelium: a feasibility study of using cDNA microarrays to assess the response to dietary intervention in target tissues. *Cancer Epidemiology, Biomarkers & Prevention*. 2007; 16(10): 2150-4.

**This information is not meant to replace advice from your doctor or dietitian.**



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