Food as medicine

by Louise Huneault

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MORE AND MORE people look to foods not only for nutritional value, but for health benefits as well. In response, supermarket shelves are crowded with pumped-up food products. There's calcium in orange juice, echinacea in beverages, special bacteria in yogurt and psyllium in cereal. Called nutraceuticals or functional foods, these products blur the line between food and medicine. And they're big business. In 2004, Canada's functional food market was estimated at $2.7 billion.

What makes food functional?

Although there's no universally accepted definition for the term, it's typically used to describe foods and beverages that have health benefits beyond basic nutrition. Health Canada oversees this industry through two regulatory bodies: the Food Directorate for functional foods and the Natural Health Products Directorate for nutraceuticals. Below are key definitions put forth by Health Canada:

Functional food: looks like, or may be, a conventional food demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions.

Nutraceutical: a product isolated or purified from foods that's generally sold in medicinal forms not usually associated with foods. A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease. Examples are isoflavones from soy or omega-3 from fish oils.

Categories of food

There are different categories of functional foods:

- ***Basic foods:*** Conventional foods that contain bioactive compounds, like carrots that contain beta-carotene (an antioxidant)
- ***Processed foods:*** Foods with added ingredients, like calcium-enriched orange juice
- ***Enhanced foods:*** Foods enhanced through traditional breeding, special livestock feeding or genetic engineering, like tomatoes with higher levels of lycopene (an antioxidant)

Table 1 looks at some of the basic foods most commonly associated with health-promoting properties.

A growing body of solid research supports links between a food or biological compound in a food and health benefits. Once this research has been done, a company can start the process of obtaining a health claim for its product. In 2003, Health Canada approved five generic health claims:

- A healthy diet containing foods high in potassium and low in sodium may reduce the risk of high blood pressure, a risk factor for stroke and heart disease.
- A healthy diet with adequate calcium and vitamin D, and regular physical activity, helps to achieve strong bones and may reduce the risk of osteoporosis.
- A healthy diet low in saturated and trans fat may reduce the risk of heart disease.

Table 1: Functional foods

Food	Bioactive compound	Potential benefits
Carrots, fruits, vegetables	Alpha-carotene, beta-carotene	Neutralize free radicals which may cause damage to cells
Wheat bran	Insoluble fibre	Reduce the risk of breast or colon cancer
Salmon and other fish oils	Long chain omega-3 fatty acids – DHA/EPA	Reduce the risk of cardiovascular disease. Improve mental, visual functions
Cranberries, cranberry products, cocoa, chocolate	Tannins (proanthocyanidines)	Improve urinary tract health, reduce risk of cardiovascular disease
Yogurt, other dairy	Lactobacillus	Improve quality of intestinal microflora; gastrointestinal health
Soybeans and soy-based products	Isoflavones	Menopause symptoms, protect against heart disease and some cancers, lower LDL and total cholesterol

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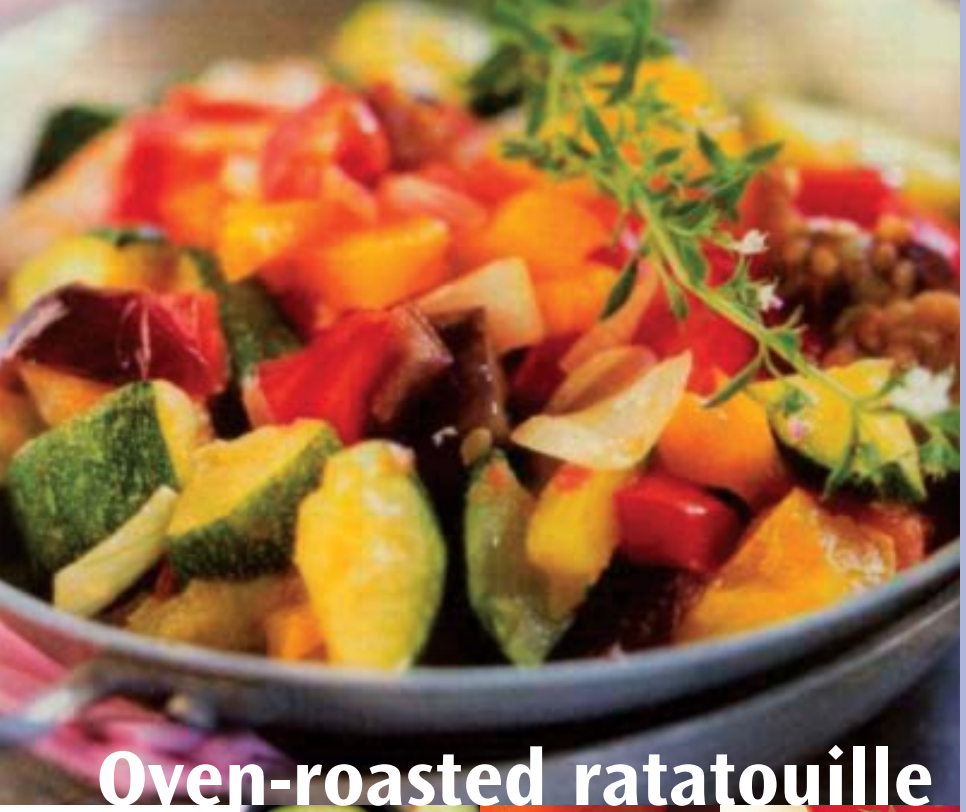

Oven-roasted ratatouille

MAKES 4 SERVINGS

1 each	zucchini (260 g), eggplant (340 g), red bell pepper (120 g), orange bell pepper (120 g) cut into bite-size chunks
8	garlic cloves, peeled
¼ c. (60 mL)	olive oil
¼ tsp. (1.25 mL)	Kosher salt
16 (150 g)	cherry tomatoes
16	fresh thyme sprigs
6	fresh, large basil leaves, roughly chopped
1 tsp. (5 mL)	balsamic vinegar
	fresh ground pepper

Approximately per serving:	
Calories	189
Protein	2.4 g
Fat (Saturated Fat)	14 g (1.8 g)
Carbohydrates	16.8 g
Fibre	4.1 g
Sodium	105 mg
Cholesterol	0 mg

Preheat oven to 450° F (230° C). Line a rimmed baking sheet with parchment paper, set aside.

Combine zucchini, eggplant, bell pepper chunks and garlic in large bowl. Add olive oil and salt and toss to coat. Spread vegetables on prepared baking sheet, cover with thyme sprigs and roast until vegetables start to brown, about 30-40 minutes depending on size. In the last 5 minutes, add tomatoes and continue roasting. When done, remove thyme sprigs and pour vegetables into serving bowl. Add basil, vinegar and fresh ground pepper to taste, toss to coat. Serve warm or at room temperature.

- A healthy diet rich in a variety of vegetables and fruit may help reduce the risk of some types of cancer.
- You may also see claims related to cavities on foods such as sugar-free gum and candies.

Canada lacks an approval process for functional foods with health attributes. Manufacturers struggle with how to classify their products and which regulatory body to approach when seeking a health claim. In 2007, Health Canada is planning to address this problem.

How do you fit functional foods into your diet? Functional foods are not "magic bullets" to health. A lot of the benefits of these foods remain unknown. They also don't replace the role of a balanced diet and exercise as part of a healthy lifestyle.

Here are a few tips on how to include functional foods in your diet:

- Eat a variety of foods with potential functional benefits.
- Choose foods from all of the food groups of Canada's Food Guide to Healthy Eating.
- Choose functional foods wisely. Foods that were processed or enhanced to be made "more functional" may not be the best choice, especially if they weren't healthy in the first place.
- Read food labels and health claims to find foods that complement your specific health needs.

Here's a fresh, tasty and quick dish with Mediterranean flare to get you started!

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