

Breakthrough common nutrition myths, see what's trending, catch up on latest research, and get great tips from our team of Registered Dietitians.

**MYTH**

*People with high cholesterol should not eat eggs.*

**FACT**

It's true that egg yolks have a lot of cholesterol, about 190 – 235 mg depending on the size of the egg. But cholesterol in foods has little impact on most people's blood cholesterol level. That's why the 2015 U.S. Dietary Guidelines, dropped its daily cholesterol intake limit of 300 mg. Not all experts, however, agree that there's no link between food cholesterol and blood cholesterol. Studies suggest that people with diabetes absorb more cholesterol from foods and are more responsive to its blood cholesterol-raising effect. For this reason, people with heart disease and/or diabetes should still limit cholesterol intake to 200 mg/d.



## The Dirt of Farming: Part 3 – Genetically Modified Foods and Chicken and Egg Facts

### What are Genetically Modified (GM) Foods?

The World Health Organization defines genetically modified organisms (GMOs) as, “organisms (i.e. plants, animals or microorganisms) in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating and/or natural recombination”. The terms genetically modified (GM) and genetically engineered (GE) usually refer to the same concept and are often used interchangeably.

### What GM foods are available in Canada?

Currently, four main genetically modified crops are grown in Canada: canola, corn, soybean and sugar beet. Most of these crops are exported to other countries. Four GM crops are available via import: alfalfa, cotton, papaya and squash. Few GM foods are consumed whole. The majority of GM foods are used in processed ingredients and foods such as oils, soy lecithin and high fructose corn syrup. Recently, two GM foods, the Arctic Apple and AqaAdvantage salmon, were approved for production and sale in Canada.

### How are GM foods regulated in Canada?

Health Canada completes a thorough safety assessment on all GM foods before they are allowed to be sold. A safety assessment can take many years. Canada does not currently use post-market monitoring to evaluate the safety of GM foods. Visit the link below for a full explanation of how GM foods are regulated in Canada.

[http://www.hc-sc.gc.ca/sr-sr/pubs/biotech/reg\\_gen\\_mod-eng.php](http://www.hc-sc.gc.ca/sr-sr/pubs/biotech/reg_gen_mod-eng.php)

### What are the benefits of GM foods?

Producer benefits: reduced loss, lower costs and faster time to market (ie. AqaAdvantage Salmon)

Environmental benefits: reduced insecticide use, improved soil quality

Consumer benefits: lowered food costs due to increased yields, improved sensory properties of foods (ie. GM apples have less bruising and browning) and improved nutrient profile (ie. have more of a certain nutrient like vitamin A found in Golden Rice, a GM rice crop used to fight malnutrition in developing countries)

## What are the concerns of GM foods?

Human Health: gene insertion could lead to the generation of toxins and to the creation of allergens - although there has been no evidence to support this; nutrient malabsorption (ie. GM soybeans have a component that interferes with the breakdown of protein which non-GM soybeans do not have).

Environment: gene insertion and flow into other crops; possible reduced biodiversity.

Socioeconomic: monopolization of seed and agricultural markets by GM companies.

<http://www.eatrightontario.ca/en/Articles/Food-technology/Biotechnology/Novel-foods/Understanding-Genetically-Modified-Foods.aspx#.V63yQhbrx0g>

**Bottom line: GM foods available in Canada are considered safe for us to eat. While Canada does produce some GM crops, most of them are exported. Labelling GM foods is not required in Canada, so it can be difficult to know if a food product contains GM ingredients. If you are concerned about eating GM foods, call food companies to see if they use GM ingredients, look for “GMO free” foods, try buying organic foods or plant your own garden with GMO-free seeds.**

## How are chickens raised?

In Canada, all chickens raised for meat (called broilers) are kept in barns. They are never kept in cages. They are free to roam around the barn, they are able to walk about and spread their wings, and they have access to feed and water 24 hours a day.

## What’s the difference between “free range” and “free run” chickens?

In Canada, there is no legal definition for free run and free range. Free range chickens are generally allowed to have access to the outdoors (as weather permits). Free run chickens are typically raised in an open barn, and they can move freely within the barn. All chickens raised for fresh meat in Canada are considered to be free run.

## What do the different labels on chicken eggs mean\*:

- **Standard or conventional** – Hens are raised in battery cages without access to nest boxes, perches or litter. Each cage houses 5 to 7 hens, and movement (such as wing-flapping, nesting, and perching) is severely restricted. Most egg-laying hens in Canada are raised in battery cages.
- **Furnished or enriched cage** – The debate over the use of battery cages has led to the use of furnished or enriched cages. Hens are provided with a nest area and perches, but the cage is still crowded and the birds’ movements are still restricted. Eggs from these hens may also be labelled “Comfort-Coop Eggs” or “Nest-laid Eggs”.
- **Free-run or cage-free** – Hens are not confined to cages and can move freely within an open barn. Standard practice is to provide hens with access to nest boxes and they may also be provided with perches and litter.
- **Free-range** – Hens have access to all the features described in the free-run system, and are also given access to the outdoors (weather permitting).
- **Organic** – Hens are provided with nest boxes, perches and dust-bathing materials. They also have access to the outdoors, and have a guaranteed amount of space. In addition, hens are fed 100% organic feed which is free of additives and animal by-products. The Canadian Food Inspection Agency (CFIA) regulates the organic-certifying organizations.

*\*It is important to note that in Canada, except for organic eggs, there is no independent inspection or verification system to ensure hens are raised in the way described on the label.*

**Bottom line: Regardless of which type you buy, all eggs deliver plenty of nutrition. They’re an excellent source of protein, vitamin B12 and selenium. (Brown eggs and white eggs are equally nutritious; shell colour depends on the breed of the hen.)**

<http://www.chicken.ca/ask-us/>

<http://www.choosetocagefree.org/what-do-different-egg-labels-really-mean>

<http://www.eggs.ca/onthefarm/article/9/the-laying-barn>

<http://www.virtualfarmtours.ca/en/eggfarms/index.html>

<http://www.realdirtontofarming.ca/assets/docs/flipbook2014eng/#p=9>

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**Talk to your Registered Dietitian for more information.**