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# The Experts' FORUM



Feature Article  
Back to Basics:  
**BUTTER!**

## Back to Basics: Butter

Ah, butter. Rich. Creamy. A luxury for some, a must for others. Any way you put it, butter is best. And not just because of its great taste. Butter is packed with vitamins, minerals, and fatty acids, including glycosphingolipids.

- **Vitamins**
  - A rich source of easily absorbed vitamin A, as well as fat soluble vitamins E, K, and D.
- **Minerals**
  - Butter is chockfull of trace minerals. As the name implies, only *trace* amounts of certain minerals are needed for the body to function properly. Butter contains a particularly important trace mineral-- selenium—an antioxidant.
  - Butter also contains iodine, an important vitamin for the proper functioning of the thyroid gland.
- **Fatty Acids**
  - Butter has several fatty acids, including butyric acid, lauric acid, and conjugated linoleic acid (CLA), which is thought to impede the growth of certain types of cancer. It also contains small amounts of essential fatty acids omega 3 and omega 6.
- **Glycosphingolipids**
  - Butter contains glycosphingolipids, a type of fat that helps with digestion and protects against gastrointestinal infections.
- **Conjugated Linoleic Acid (CLA)**
  - Conjugated Linoleic Acid (CLA) occurs naturally in whole milk and red meat and is a slightly altered form of the essential fatty acid linoleic acid.
  - Studies have shown that CLA can increase lean body mass and decrease fat, inhibit the growth of tumors and enhance immune function. CLA is found naturally in beef, and milk fat. (Source: [www.diet-and-health.net](http://www.diet-and-health.net)).



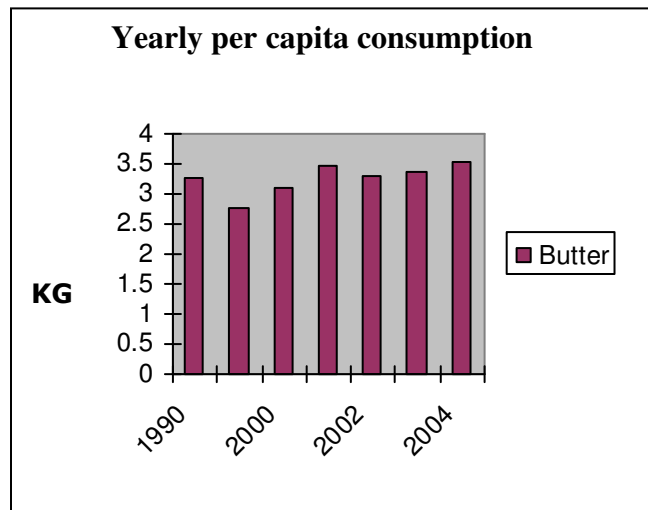
### Health conscious consumers

Although some consumers believe that butter is an unhealthy product, it is not the health villain we make it out to be. With nutrients such as vitamin A, monounsaturated fat and conjugated linoleic acid (CLA), butter accounts for only “5% of the fat in the average Canadian diet” (Facts and Fallacies: A Healthy Perspective, [www.dairygoodness.ca](http://www.dairygoodness.ca)).

Butter provides a relatively small amount of cholesterol, is not hydrogenated, and has very little saturated fat.

Food processors like consumers are just as concerned about the health and wellness attributes associated with the products and ingredients they use in their recipes.

In choosing butter for their product formulations over hydrogenated oils and fats, food processors are getting the best of both worlds: a healthier ingredient choice with excellent organoleptic properties. Recent per capita consumption figures for butter suggest that consumers are sticking with butter for its all natural, low cholesterol, non-hydrogenated benefits.



Source: Statistics Canada; calculations by the  
Dairy Section, Agriculture and Agri-Food Canada

Food processors concerned with over-processed ingredients containing chemicals, additives and preservatives are reassured by the fact that the butter-making process involves a simple churning operation, with nothing be added to the butter except for a little salt (in the case of salted butter).

### **Benefits of using butter in confections, soups and sauces, bakery products and other food products**

So how can food processors take advantage of this healthy ingredient choice? By using butter in your products of course! Adding butter to your food products is a way to attract consumers who are looking for all natural ingredients in their food items and don't want to compromise on quality and taste.

In addition to imparting an "upscale or gourmet" image, butter performs a variety of functions in baked products (cakes, pastries, laminated dough, breads and biscuits). It contributes to flavour, mouthfeel, texture and shelf life.

- **Flavour:** Butter's pleasant flavour is made up of many volatile and nonvolatile compounds. It absorbs natural flavours and consequently, helps in the uniform distribution of flavourings.

- **Mouthfeel:** Butter provides highly desirable mouthfeel characteristics to baked products. Mouthfeel is related to the ratio of the crystalline (solid) and noncrystalline (liquid) fractions of butter as a function of temperature. It melts completely at 37.8°C .
- **Texture:** Butter serves a useful function in creating flakiness in laminated dough like croissants, Danish and puff pastries. Flakiness is caused by trapped carbon dioxide. When the pastry is baked, the moisture in butter is transformed into a vapor. Carbon dioxide is released from the leavening, making the dough layers rise. The rise (or volume) of baked pastry is directly proportional to the percentage of solid fat. For pies and tarts, flakiness is increased by mixing part of the butter into the dough. Cold butter works well. In the production of cookies, cakes, breads, and icings, butter is warmed to room temperature. For cake batters, sugar is thoroughly mixed with butter at room temperature to achieve a uniform distribution in the batter or dough. Butter contributes tenderness to bread by interfering with the development of the gluten network.
- **Other benefits:** Butterfat acts as a barrier to preventing loss of moisture in finished baked goods. It gives an attractive appearance to bread when spread on the loaf surface (browning). Furthermore, it is claimed to slow retro gradation of starch (which is associated with staling). Thus, tenderness and flakiness are maintained during the shelf life of baked goods. This positive effect on shelf life is observed in cakes as well as in yeast or chemically leavened breads.

## Market opportunities

With the advent of high end fresh and frozen food products entering the marketplace, the end use applications for butter seem limitless.

Flavoured butters are becoming quite popular. Bittersweet Plantation Dairy in Gonzales, Louisiana, launched chocolate pecan butter. Original, flavorful butters such as these are popular in the food service and restaurant sector that specialize in the breakfast and brunch circuit. Dairy and food processors know well that consumers are looking for value-added products that promote health and wellness benefits. How long will it be before we see fortified butter blends containing added calcium and vitamins?

Butter makes everything better, including your health!