



ELITE

Personal Training and Fitness Solutions

HEALTH TOPIC OF THE WEEK

2/27 - Frozen Foods

Introduction

If you've received nutrition counseling from Elite, you know we sing the praises of fruits and vegetables. A pro tip for having fruits and vegetables available at home is to purchase them frozen.

Background

Let's look back in time. Did you know that the modern frozen food industry was inspired by Canadian Inuits? Around 1912 to 1917, Clarence Birdseye learned of Inuit customs while working in the chilly region of Labrador, Canada. While ice fishing, the Inuits would leave their catch in the icy air until they were ready to cook it.

Birdseye was intrigued by the freshness. He studied the frozen fish and noticed small ice crystal formations that did not cause damage to the fish when thawed and cooked. By the 1920s, Birdseye was applying this flash air freezing concept to solve fish spoilage problems in New York.



While massively challenging, the evolution of frozen food through the 40s revolutionized the food industry. Birdseye's work contributed to the advancement of cold transportation methods, increasing America's demand for home refrigerators from 10% to over 50%. Today, life without a refrigerator is hard to imagine!



Frozen Food Does Not Deserve a Bad Rap

The popularity of frozen food has ebbed and flowed. Our focus here is to highlight the benefits. Sadly, frozen food stigma still exists. Traditional freezing methods created uneven, large ice crystals in food. Large crystals rupture cells in the food, resulting in low structural integrity when thawed. This is like canned foods that lose integrity and nutrients from the retorting process. Retorting means cooking canned or jarred products at high temperatures and pressure to sterilize them. Think of old school canning methods, but on a much larger scale.



Elite Personal Training and Fitness Solutions does not provide medical treatment or intervention. We acknowledge scientific evidence that appropriately intensive exercise and sustainable nutritional intervention can have significant impact on chronic health disorders and obesity, dramatically improving symptoms when recommendations are followed. Please visit us at Eliteptf.com for more information and to schedule your evaluation.

The Benefits of IQF

The good news is that most frozen food manufacturing is IQF (Individually Quick Frozen) or Flash Frozen. You can check this on the package or the manufacturer's website. IQF means the foods are chilled rapidly with pieces separated from each other. The result is a product with tiny ice crystals. The pieces are not stuck together in large clumps.

IQF works especially well with vegetables and meat due to "glass" formation. During the lower temperature of freezing, any unfrozen concentrated liquids in the food form an even, frozen layer called a "glass" layer. This layer formation is a significant factor in cell integrity when thawed. It's like a protective frozen water balloon of food nutrients.

When frozen, fruits are less likely to have "glass" layer formations due to their natural sugar solutions. This is why they have more structural damage when thawed than other frozen foods.

IQF preserves nutritional integrity. It can be performed on foods at, or very close to, the harvest location, eliminating lengthy transportation. Thus, the freezing process captures peak freshness and ripeness. Frozen foods have high nutritious content. Due to the commercial freezing process, IQF products maintain high quality taste and texture when thawed. It is also easier to find information on where the produce was grown since it is typically near the manufacturing facility.

Frozen foods also provide benefits in storage and cooking. Frozen food can be kept in your freezer for long periods of time. The only concern for IQF foods could be freezer burn if not sealed properly. Freezer burn occurs when the product accumulates too many ice crystals. This causes food to dry out. You do not want freezer burn. It significantly impacts taste and texture. When cooking, it's easy to use vegetables straight from the freezer. Adding frozen foods to stir fry or other dishes allows them to steam cook. Frozen vegetables are also easily cooked in the microwave.



Tip of the week (2/27), page 2

Shopping Tips

- From a psychosocial aspect, be prepared for your trip down the frozen food aisles. There you will find a mix of processed foods and fully prepared meals that incorporate some veggies. Avoid the temptation. These are less healthy options.
- Preparation is key to avoiding temptation. Make a list of the frozen food you need and stick to it. Do not shop while hungry or in an emotional state.
- Are you an online shopper? Frozen foods are available for shipment from many online retailers. You can buy in bulk or only what you need and have it delivered right to your door. It's the ultimate in convenience and control.
- Frozen foods are often packaged in plastic bags. That's great for storage, but we will cover the dangers of cooking in plastic in another newsletter. Stay tuned!



Take-Home Message

Don't turn up your nose at frozen fruits and vegetables. They are convenient, affordable and nutritious. Like fresh fruits and vegetables, frozen versions provide water content, fiber and a plethora of beneficial phytonutrients and antioxidants. Need more guidance when it comes to selecting healthy food? Check in with Elite's Functional Nutrition Team.



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Tip of the week (2/27), page 3

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Tip of the week (2/27), page 4

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