



*canfitpro* | 2022

**GLOBAL CONFERENCE & TRADE SHOW**

# **DEMYSTIFYING NUTRITION**

**Lorne David Opler, M.Ed., CSCS**

# Today's Learning Agenda

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“Gluten Free Everything – Marketing Health or Marketing Hype?”

Protein Powders – Choosing the Right Kind

“Healthy Sweeteners: Fact or Fiction?”

“The Skinny on Fats: Are They all Bad?”



# About Me 😊

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ADJ. PROFESSOR OF FITNESS AND HEALTH  
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The logo for Seneca College, featuring the word "Seneca" in a bold, red, sans-serif font.

# About Me 😊

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LORNE OPLER MOBILE PERSONAL TRAINING

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[www.trainerlorne.com](http://www.trainerlorne.com)

[ACE \(acefitness.org\)](http://acefitness.org)

[Weightlifting may help with depression and anxiety - The Washington Post](#)

[Health and wellness coaches: What you should know - The Washington Post](#)

# Gluten Free Everything

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MARKETING HEALTH OR MARKETING HYPE?



# The Gluten Free Diet

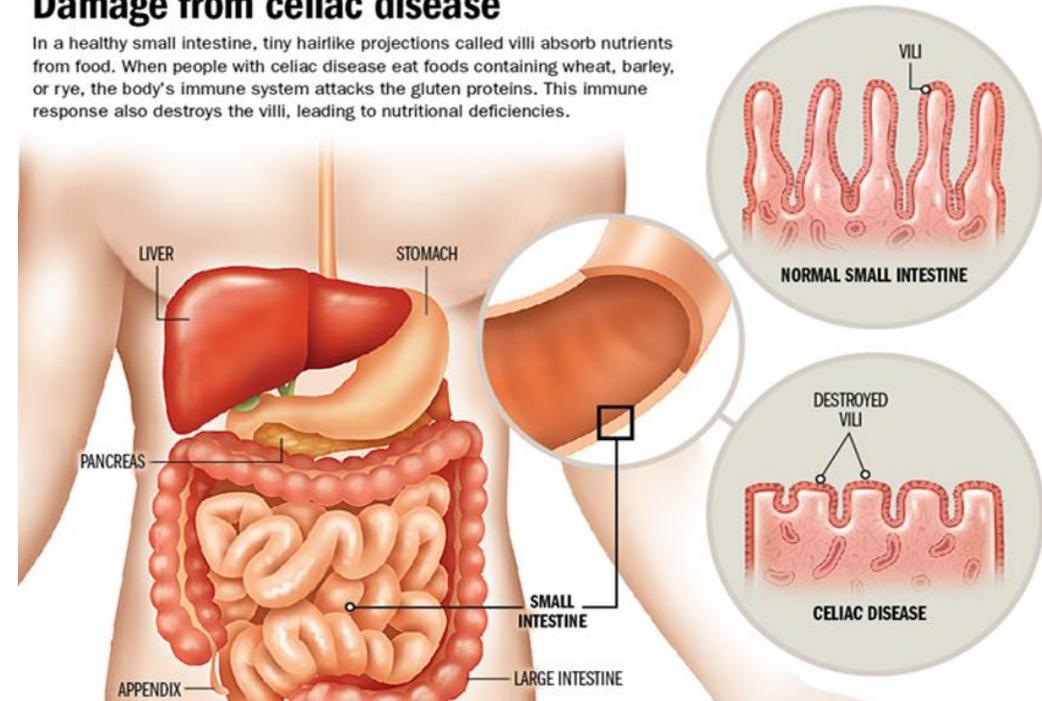
A gluten-free diet is a diet that excludes the protein gluten. Gluten is found in grains such as wheat, barley, rye. Gluten helps dough to rise, giving many foods a chewy texture.

A gluten-free diet is primarily used to treat **celiac disease** where the body tries to fight against gluten as if it was a virus. Gluten causes inflammation in and damage to the small intestines of people with celiac disease.

Eating a gluten-free diet helps people with celiac disease control their signs and symptoms and prevent complications.

## Damage from celiac disease

In a healthy small intestine, tiny hairlike projections called villi absorb nutrients from food. When people with celiac disease eat foods containing wheat, barley, or rye, the body's immune system attacks the gluten proteins. This immune response also destroys the villi, leading to nutritional deficiencies.



# SYMPTOMS OF CELIAC DISEASE



UNEXPLAINED WEIGHT LOSS



STOMACH & MUSCLE CRAMPS



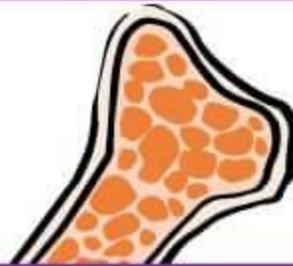
NUMBNESS & TINGLING IN LEGS



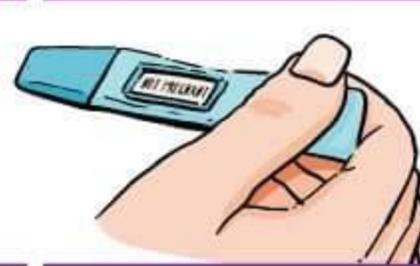
TOOTH ENAMEL LOSS



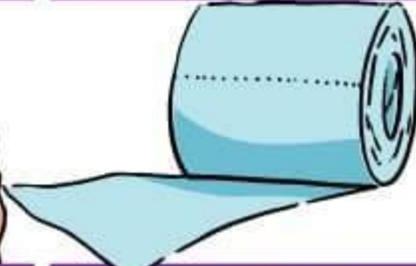
JOINT PAIN



WEAK BONES



INFERTILITY

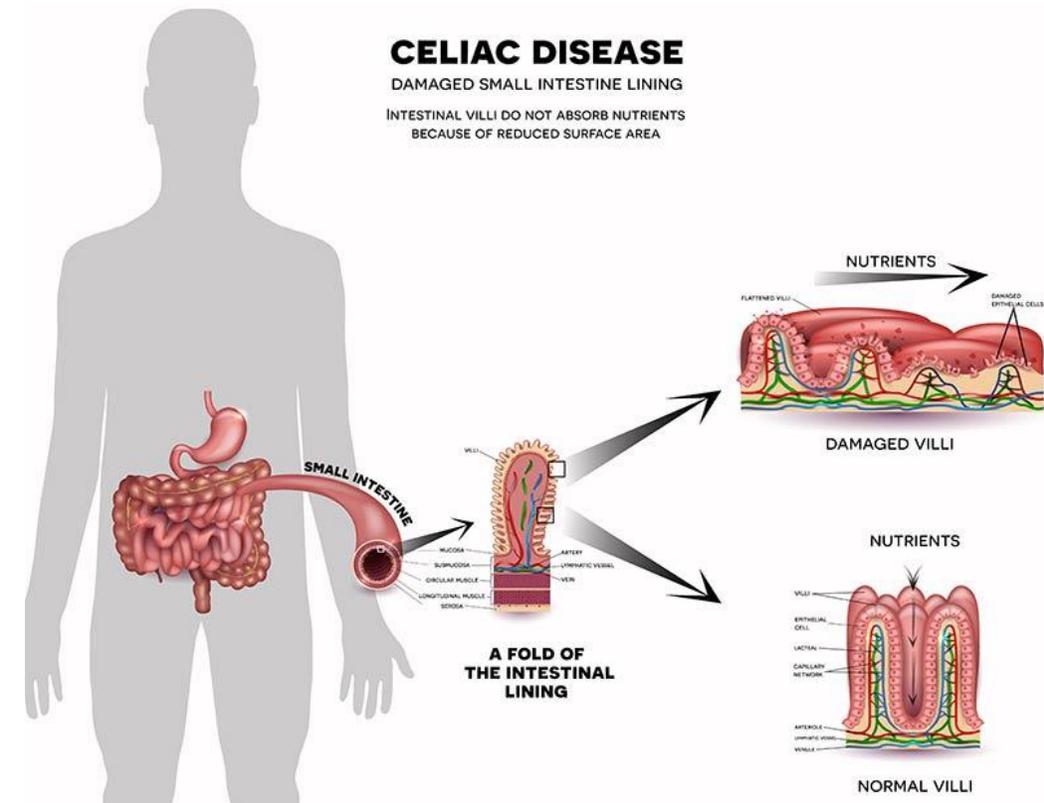


CHRONIC DIARRHEA  
OR CONSTIPATION

# Diagnosing Celiac Disease

Diagnosing celiac disease is done through a blood test that looks for specific antibodies in the blood that would indicate presence of celiac disease. If the blood test comes back positive, the doctors sample a piece of tissue (called a biopsy) to see if there is damage to the small intestine.

Also, a procedure called an endoscopy is performed whereby a specialized doctor who deals with digestive issues (gastroenterologist) examines the upper part of the gastrointestinal tract to see if there has been damage done to the villi.



# Non-Celiac Gluten Sensitivity

Some people who don't have celiac disease, and have no damage to their intestinal villi, may have symptoms when they eat gluten, however. This is called non-celiac gluten sensitivity (NCGS) or intolerance.

People with non-celiac gluten sensitivity/intolerance may benefit from a gluten-free diet.

It is very hard to diagnose NCGS and is done through a process of elimination. If blood tests are normal and celiac disease has been ruled out, patients are asked to eradicate all gluten from their diet. If their symptoms improve, they are deemed gluten sensitive.

<b>Gluten Sensitivity vs Celiac Disease Extraintestinal Symptoms</b>	
<b>Gluten Sensitivity</b>	<b>Celiac Disease</b>
Bone and joint pain	Bone and joint pain
Osteoporosis	Osteoporosis
Leg numbness	Leg numbness
Muscle cramps	Muscle cramps
Unexplained anemia	Unexplained anemia
Glossitis	Migraines
Migraines	Behavioral changes
	Amenorrhea
	Infertility
	Miscarriage
	Delayed growth
	Thyroiditis
	Tooth discoloration
	Seizures
	Dementia
	Hepatitis



# CELIAC DISEASE VERSUS GLUTEN INTOLERANCE

Celiac disease is an inherited autoimmune disorder that affects the digestive process of the small intestine

Symptoms include diarrhea, abdominal pain, loss of weight and appetite, constipation, acid reflux, heartburn, headaches, itching, rashes, anemia, osteoporosis, etc.

Will be diagnosed by a duodenal biopsy and serological screening

Gluten intolerance is not an autoimmune reaction

Symptoms include mental fatigue (brain fog), physical fatigue, bloated feeling in the abdomen and headache

Will be diagnosed by excluding possible causes of wheat allergy and underlying celiac disease

# Gluten Free Diet - For everyone else?

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But only about 1% of the population has celiac disease.

In a study released in 2016 by Rutgers University in New Jersey, findings showed that while celiac disease numbers remained stable from 2009-2014 in the US, the # of people following a gluten-free diet tripled, from 0.5% of population to nearly 2%.

That's over 6 million people- about the size of the GTA - Greater Toronto Area





# Perceived to be Healthier....

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"Part of what may be driving [a] gluten-free diet trend is simply a belief, fueled by marketing and media, that these foods are healthier," Dr. Daphne Miller, an associate clinical professor of family and community medicine at the University of California, San Francisco.

Gluten-Free diets have been touted as an effective weight loss tool too.



# Perception vs. Reality

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But there is not any proof that a gluten-free diet is an effective weight loss technique.

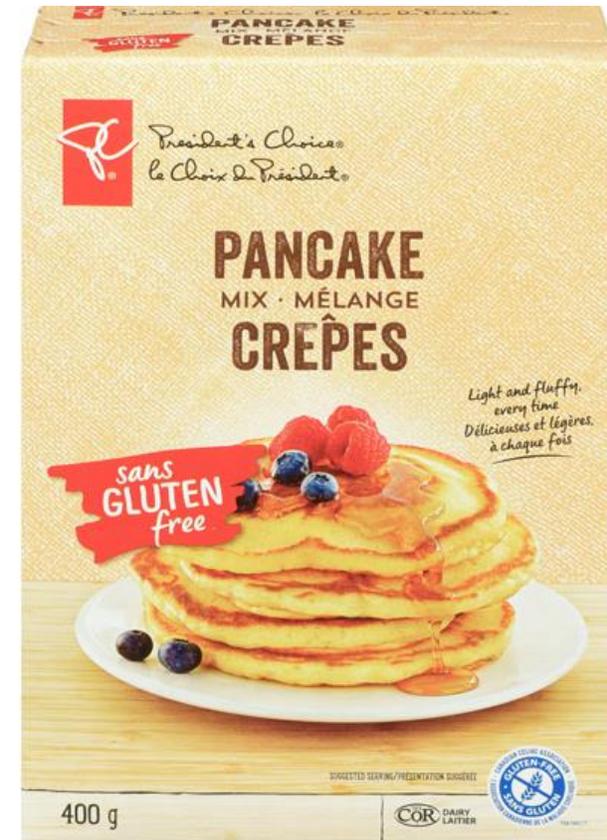
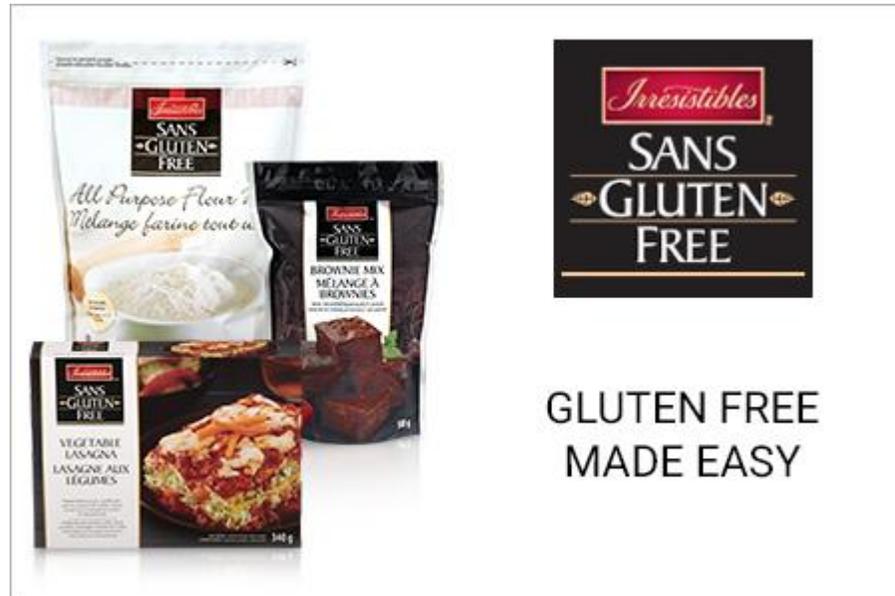
Furthermore, a gluten-free diet is by no means a healthier way to eat.

Food manufacturers often add more fat and sugar to gluten-free versions of food that naturally contain gluten in order to mimic the taste and texture of these foods.

Putting yourself on a gluten-free diet if you are a healthy person also limits your choice of foods – often to foods that are high in sugar and high in fat.



# Gluten Free in Loblaw's and Metro stores



# More Gluten Free Products from Sobey's

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# Perceived to be Healthier?

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# Bottom Line...

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Gluten free diets are a haven for people who really need it. But for those who don't, following a gluten free diet can actually be dangerous as it can put you at risk for nutritional deficiencies, e.g., lack of insoluble fiber that you get from eating whole grain wheat

- Whole wheat fiber promotes softer stools, prevents constipation and reduces the risk of colorectal conditions, such as hemorrhoids and diverticulitis

## Misconception around gluten-free

- It's becoming a health food fad instead of a pressing needs.
- There's only approx **1%** of whole world population that are **celiac disease** and need to have a gluten free diet.
- It's a marketing scheme for industry to capture market share



# Gluten Free Has Gone Out of Control!

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# Out of Control!

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# Protein Powders

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HOW TO CHOOSE WHICH ONES ARE RIGHT FOR YOU

# Understanding Protein Powders

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Protein plays a vital role in muscle recovery. When you workout, your muscles are damaged, and are in need of repair.

A steady stream of protein insures a proper nitrogen balance. And a positive nitrogen balance allows your body to be in “muscle repair mode”.

The faster your muscles repair, the faster you recover. Conversely, undereating protein foods creates a negative nitrogen balance. In this state, it will take longer to recover.



# How Much Protein Do You Need?

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It is generally advised that for avid strength trainers, they should consume approx. 1 to 1.5 grams of protein per pound of bodyweight.

Bodyweight – Grams of Protein Required

125 pounds – 125 to 188 grams of protein

150 pounds – 150 to 225 grams of protein

175 pounds – 175 to 263 grams of protein

200 pounds – 200 to 300 grams of protein

225 pounds – 225 to 338 grams of protein



# Common Protein Terms

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**Isolate.** An isolated protein source is one that has been chemically purified to remove most everything other than the actual protein source. Generally isolates are 90%+ pure protein. Fast digesting because it's almost all pure protein.

**Concentrate.** A concentrated protein is not as pure as an isolate, and generally contains 70 to 85% of protein source. Concentrates contain more fats, carbs and in the case of whey protein, more lactose. Slow digesting

# Common Protein Terms

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**Amino Acids.** Amino acids are the building blocks of protein. 20 amino acids are considered standard. These standard amino acids are separated into two categories: essential and non-essential amino acids. There are 9 essential amino acids which cannot be created in the human body, and must be obtained from food. Non-essential amino acids can be synthesized in the human body.

**BCAA.** Branched chain amino acids, also called BCAA's, is a term that refers to a chain of the three essential amino acids leucine, isoleucine and valine. These are essential for muscle growth and maintenance.

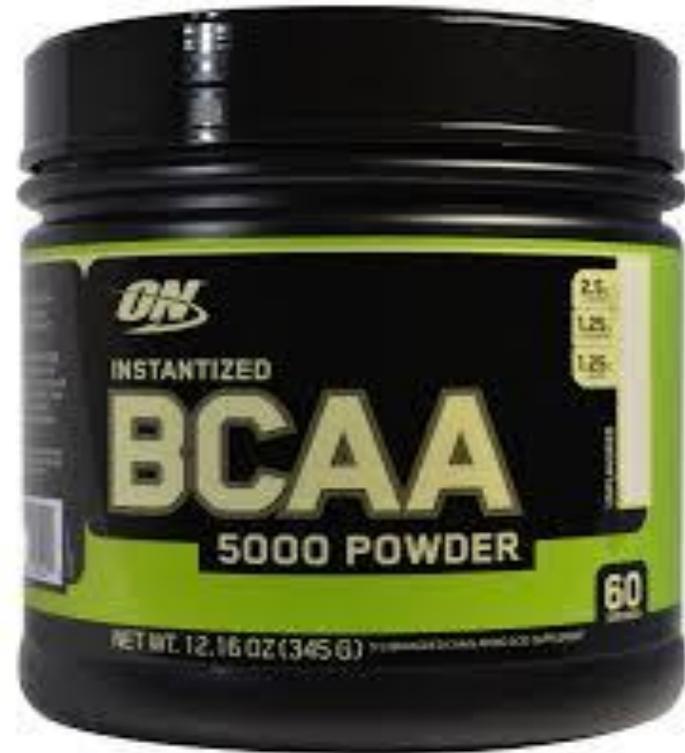
# Do you Need to take extra BCAA's?

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Of these three, leucine is the muscle-building powerhouse. To unlock the full effects of leucine, the latest research suggests consuming 2 to 3 grams a sitting.

You'll find that "sweet spot" of 2 to 3 grams leucine in 1 scoop of whey protein, 1 cup of cottage cheese, or 3 ounces of chicken breast.

So, there is really no need to supplement with more BCAA's.



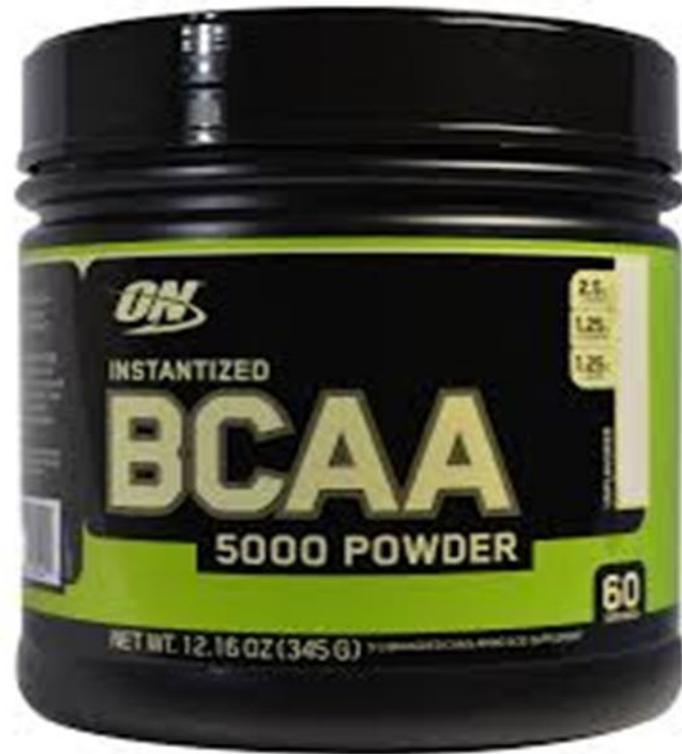
# No Need to Supplement

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In fact, any animal protein has the leucine, isoleucine, and valine you need—in doses that are doable.

Basically, if you're eating real food, you don't have to shell out cash money for expensive BCAA supplements.

“Bottom line: If you're taking in adequate protein, then BCAA are a complete waste of money,” says protein researcher, Stuart Phillips, Ph.D., of McMaster University in Hamilton, Ontario Canada.



# What is Whey Protein?

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Whey Protein is a milk protein. Whey is a by-product of cheese production.

Whey contains one of the Highest Biological Value (BV) proteins providing approx. 21 grams of muscle building protein per serving

Whey is an excellent protein source because it is high in BCAA'S. In fact, whey protein contains about 25% BCAA's - the highest of any protein source.



# Biological Value

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The biological value of a protein describes how well it is absorbed by the body. More precisely, it is a measure of the percentage of the protein that is actually incorporated into the proteins of the human body.

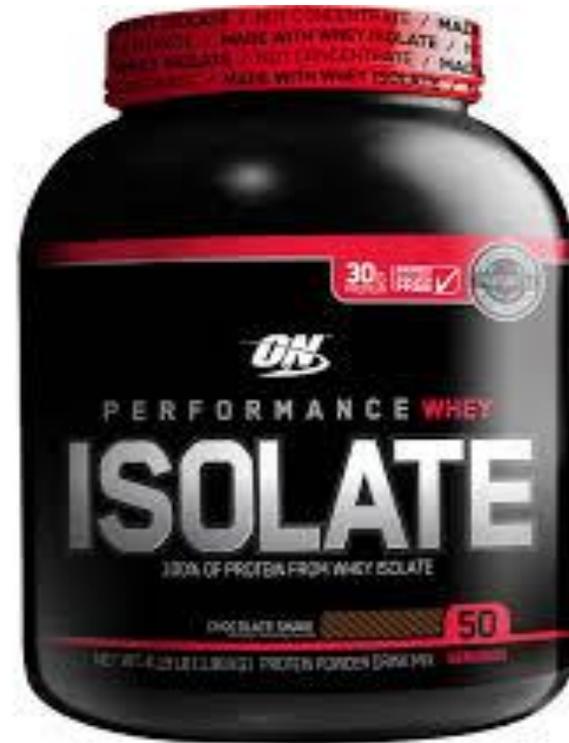
PROTEIN	BV
100% Whey Protein for Her	104
Milk Protein Isolate	91
Calcium Caseinate	77
Micellar Casein	77
Brown Rice	70

# What Does Whey Protein “Isolate” mean?

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An isolated protein source is one that has been chemically purified to remove most everything other than the actual protein source. Generally isolates are 90%+ pure protein. Fast digesting because it's almost all pure protein.

It is a high quality protein source with a high BV, and contains less fat and lactose per serving than whey concentrate.



# Whey Protein Concentrate

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A concentrated protein is not as pure as an isolate, and generally contains 70 to 85% of protein source. Concentrates contain more fats, carbs and in the case of whey protein, more lactose. Slow digesting



# Benefits of Whey Concentrate

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Why and when would you want whey protein concentrate over whey protein isolate?

It's the best choice if your goal is to maintain a healthy weight and if you're looking to lose weight because it is digested a little slower than whey protein isolate.

This means it will help you feel full longer, which is a good thing when you are working towards a weight-loss goal. Another great feature of whey concentrate as compared to an isolate is a lower price point.

Look for a whey concentrate of at least 80%



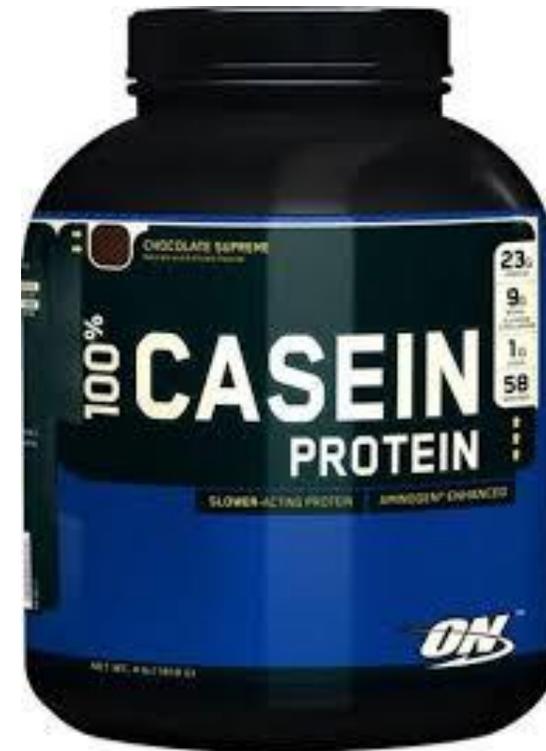
# Casein

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Casein protein is a slow digesting protein that is isolated from milk. It is 92% protein, and has a very “thick” taste (think: cottage cheese which is very high in casein protein).

Because casein is so thick, it forms a clot in the stomach which slows down the rate at which the protein’s amino acids are removed from the stomach and then absorbed by the small intestine where the AA’s are absorbed.

This slow release makes casein the ideal protein supplement to take before bed, or when you will be without any protein ingestion for a long period (i.e. fasting)



# Healthy Sweeteners

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FACT OR FICTION?

# White (Table) Sugar

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Let's start with the most commonly identifiable sugar – Sucrose

It is a disaccharide made of two molecules - fructose and glucose.

White sugar is created as a result of the processing of one of two types of plants: sugar beets or sugar cane. These plants are harvested, processed, and refined to eventually resemble the white sugar served with coffee. This sugar has no nutritional value: it's just refined, cavity causing, diabetes triggering, obesity promoting sugar.



# Agave Syrup

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This is a syrup derived from the agave plant. Agave in its natural state is quite healthy as it's high in fructans which is a type of fiber that acts as a prebiotic.

Prebiotics are nutrients we consume that promote the growth of probiotics –healthy bacteria in our digestive tract that fights off bad bacteria.

But agave syrup itself is highly processed – removing the fructans in agave creates an unhealthy end product.



# Agave Syrup/Nectar

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In fact, it should be avoided even though it is often touted as a natural alternative to table sugar.

Table sugar (sucrose) is 50 percent fructose, whereas agave syrup contains around 85 percent fructose.

High fructose sweeteners like agave are similar to high fructose corn syrup (or in Canada it's called glucose-fructose)

High- fructose sweeteners like agave and glucose-fructose are linked to obesity, diabetes, high triglycerides (blood fats), and metabolic syndrome (high blood pressure, high blood glucose, large waist circumference)



# Honey

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Honey is very similar to sugar. Both are composed of glucose and fructose molecules. Sugar has a 50/50 split between fructose and sucrose. Honey has a 40/30 split with the remainder ingredients that include water, potassium, magnesium, antioxidants and enzymes (which may account for honey's slightly more nutritious value).

In its raw unprocessed form, honey is less processed than table sugar making it slightly more beneficial nutrition wise.

If opting for honey over sugar, choose dark, raw varieties, which contain more nutrients



# Molasses

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**What it is:** The thick, dark syrup that's leftover when sugar beets or sugar cane are processed into granulated sugar.

Black strap is loaded with vitamins, minerals and trace elements naturally present in the sugar cane plant and is a good source of iron, vitamin B6, potassium, calcium and magnesium.

Problem is, black strap molasses is not very sweet so while nutritious, it does not add sweetness to foods/drinks.

Most molasses today is blended with sugar.



# Maple Syrup

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Like table sugar, maple syrup has the same ratio of glucose to fructose: 50/50.

But because maple syrup contains minerals like zinc, calcium, riboflavin (maintains body's energy supply), and manganese (metabolizes carbs), as well as a wide range of antioxidants, it is more nutritious than table sugar.

Pure maple syrup also contains prebiotics called oligosaccharides, which help support probiotics in our gut.

Comparably, maple syrup beats the other sweeteners in terms of nutritional quality



# Comparison of Sweeteners per ½ cup

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	Honey	Molasses	Maple Syrup	Agave Nectar	White Sugar
Weight	169g	168g	161g	168g	100g
Calories	515	489	420	480	387
Carbohydrates	140g	126g	108g	128g	100g
Sugars	139g	93g	96g	120g	100g
Estimated Glycemic Load	85	77	63	77	70

# Glycemic Index

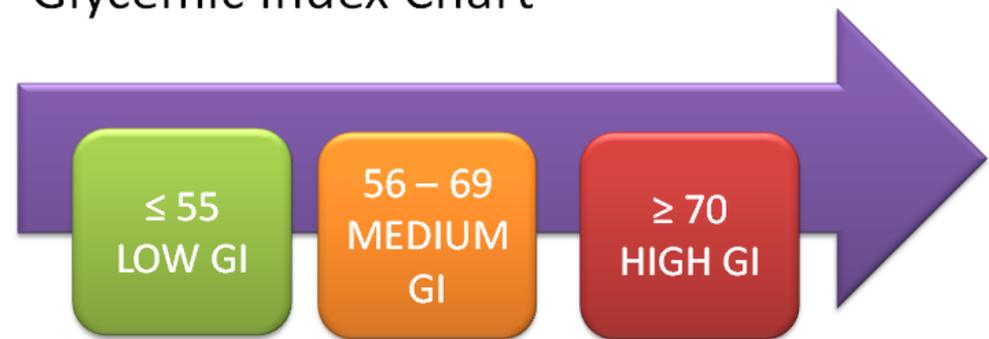
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The Glycemic Load is a rating of a food's impact on blood sugar level. The GL tells you how high your blood sugar can rise after eating a specific food (how much glucose per serving of a food, is pumped into the bloodstream)

The higher the GL value of a food, the faster it pumps sugar into the bloodstream

This spike in blood sugar levels is what can lead to pre-diabetes, diabetes, metabolic syndrome and obesity

Glycemic Index Chart



# Stevia

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Stevia is a plant derived sweetener made from a leaf related to the flower chrysanthemum. Leaves of the stevia plant are dried, and the concentrated extract is filtered and turned into powder or liquid. The final product is 300 times sweeter than sugar.

**It is a non nutritive sweetener – i.e., contains no calories, no carbs.**

Only the purified form of stevia, called stevioside, is safe to use. Products considered safe contain words in their ingredient list such as stevia extract or *Stevia rebaudiana*



# The “Skinny” on Fats

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ARE ALL FATS BAD?

# What are Fats?

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Fats are a subcategory of substances known as **lipids** which include fats, oils, and cholesterol

- **Fats** are lipids found in animals (i.e. saturated fats, unsaturated fats) solid at room temp
- **Oils** are lipids found in plants (i.e. peanut oil, sunflower oil, olive oil). Liquid at room temp
- **Cholesterol** is a lipid that is found in all cells of our body and travels through our blood. Cholesterol is need for brain health, skin health and forms the outer coating around our body cells



# Fat and Vitamins

Fat helps the body absorb **vitamins A, D, E, K**. These vitamins are fat-soluble, which means these vitamins can only be absorbed with help of fats we eat.

Example: green leafy vegetables are high in Vitamin K. To be absorbed into the bloodstream, you would need to eat a fat with the leafy greens (i.e. olive oil based dressing)

When you eat foods that contain fat-soluble vitamins, the vitamins are stored in the fat tissues in your body and in your liver. They wait around in your body fat until your body needs them. What for?

## FAT SOLUBLE VITAMINS



# What Else Do Fats Do?

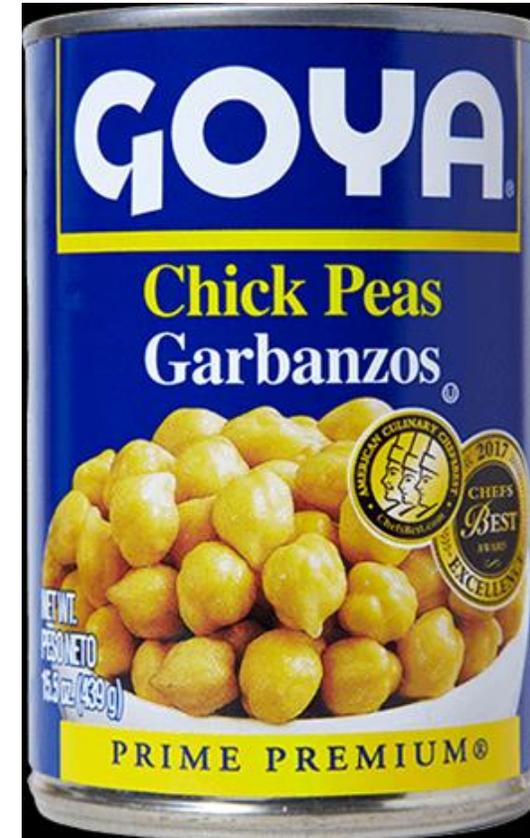
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1. One role of fats is that they reduce the glycemic impact of a meal or snack so your blood sugar doesn't spike and lead to a crash (and feeling tired) when it falls.
2. While carbohydrates are the main source of fuel in your body, your system turns to fat as a backup energy source when carbohydrates are not available (this is how "keto" or ketogenic diets work)
3. Fat cells (see photo), stored in adipose (fat) tissue, insulate your body against cold and cushions and protects organs



# Now You Know Where Chick Peas Come From

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# Two Types of Fat in the Body

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**White fat** builds up when you take in extra calories. Most of the fat in your body is white fat. You typically store it in your thighs, hips, and stomach.

Excess white fat in the belly (visceral fat) is associated with metabolic syndrome—a group of symptoms (high blood pressure, high blood glucose, high blood fats, high waist circumference) that signal a risk for heart disease, diabetes, and cancer



# Brown Fat

The other fat is called brown fat. Brown fat is more metabolically active than white fat meaning it burns calories much more than white fat due to presence of mitochondria (the energy burning structure of a cell)

The burning of calories creates the warmth that helps maintain your body temperature.

Brown fat also regulates blood sugar which decreases risk of diabetes

Lean people typically have more brown fat than overweight people.

**Brown Fat** 3 Key Facts

Brown Fat burns calories and keeps you warm

**It Generates Heat**

Brown Fat 🔥🔥🔥🔥 Regular Fat 🔥

Brown fat contains more mitochondria and generates more heat

**It Burns Glucose**

patients with brown fat burned significantly more glucose in the cold

0.09  $\mu\text{mol}/\text{kg}\cdot\text{min}$  Brown Fat - 1.0  $\mu\text{mol}/\text{kg}\cdot\text{min}$  Brown Fat +

**Its Location:**  **Supraclavicular**  
above the clavicle

Clearvue Health

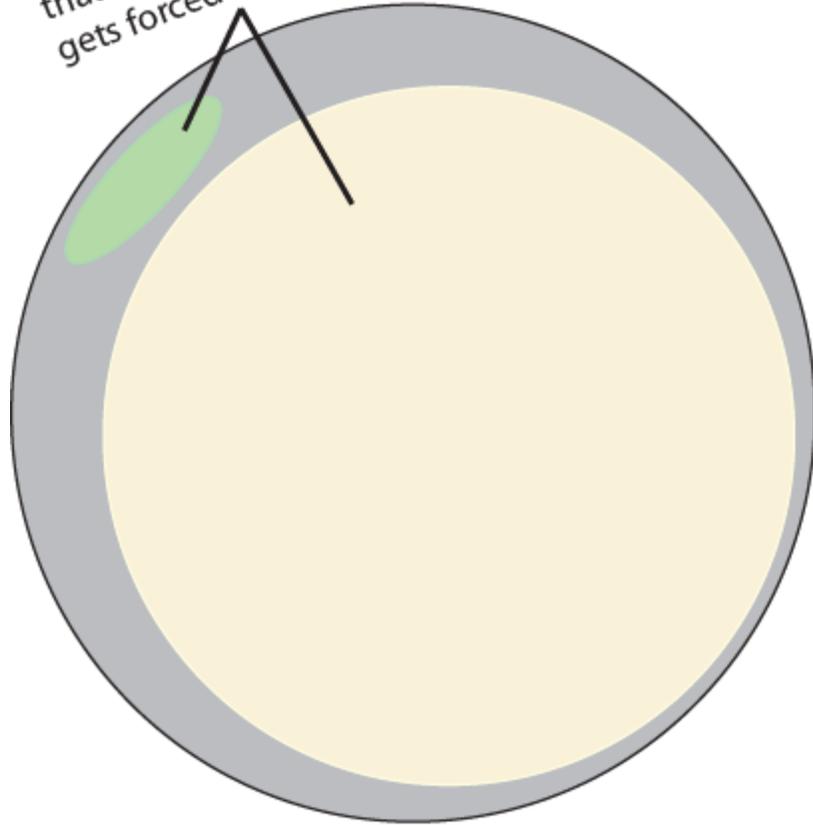
# Where is Brown Fat Located?

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Brown fat is abundant in babies, but now it is known that even adults have small reserves of brown fat typically stored in small deposits around the shoulders and neck and on either side of the spinal cord

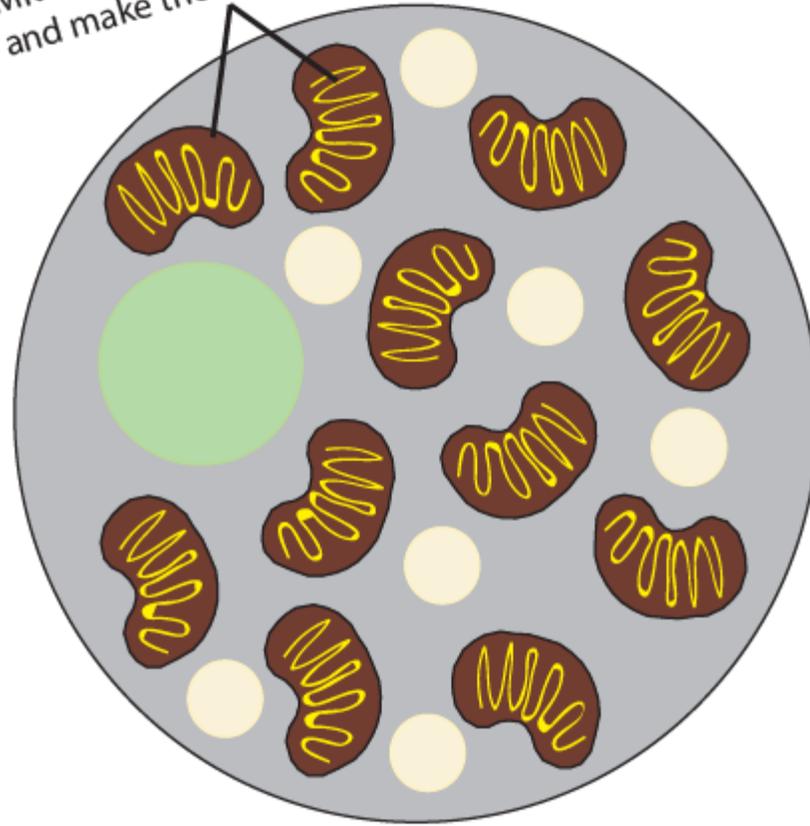


The fat drop is so large  
that everything else  
gets forced to the edge



White Fat Cell

Mitochondria generate heat  
and make the cell brown



Brown Fat Cell

# Saturated vs. Unsaturated Fats

## – It's all about Carbon/Hydrogen Bonds

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**Saturated fats:** What is “saturated”?

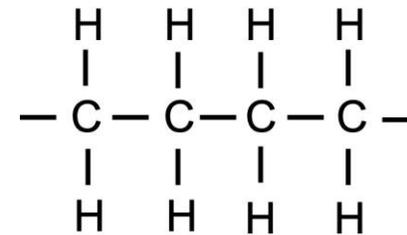
A molecule of saturated fats has **all** its carbon atoms bonded to hydrogen atoms. All the carbon atoms are “saturated” by or connected to hydrogen atoms

They are also solid at room temp: i.e. butter

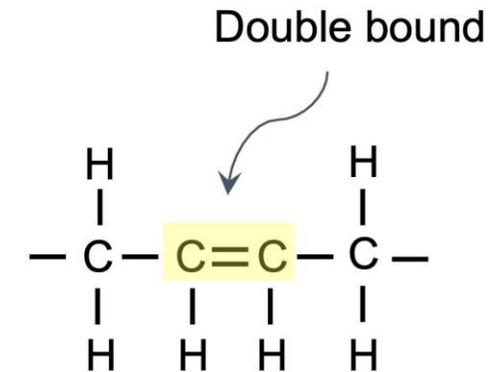
**Unsaturated fats:** What's “unsaturated” ?

A molecule of unsaturated fat does not have every carbon atoms saturated by hydrogen atoms. So it's considered “unsaturated”

They are also liquid at room temp: i.e. oil



Saturated



Unsaturated

# Saturated vs. Unsaturated Fats

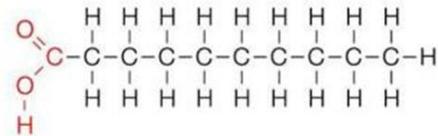
## Saturated vs Unsaturated

- Its all about the double bonds

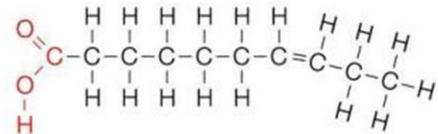
*Saturated fats tend to come with added cholesterol that you do not need*



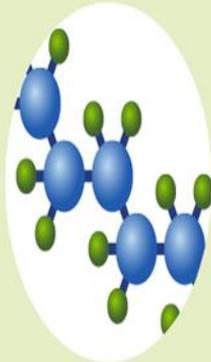
### Saturated



### Unsaturated



## SATURATED FATS

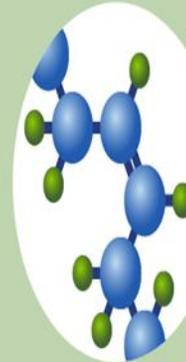


SINGLE BONDS  
BETWEEN CARBONS



MAINLY SOLID AT  
ROOM TEMPERATURE

## UNSATURATED FATS



ONE OR MORE DOUBLE  
BONDS BETWEEN CARBONS



MAINLY LIQUID AT  
ROOM TEMPERATURE

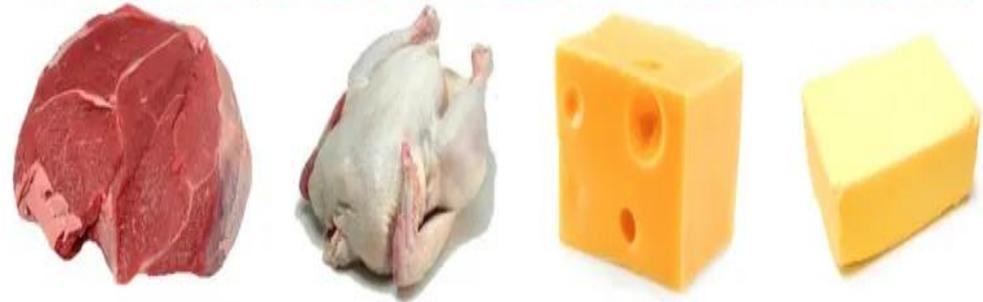
# Saturated Fats

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- Saturated fats are common in the Canadian diet. Common sources of saturated fat include: 1) red meat 2) whole milk and other whole-milk dairy foods, 3) cheese 4) hot dogs/processed meats (i.e. salami) 5) pork 6) butter
- For years, we have been told that saturated fats are bad for you and can increase your risk for heart disease, and so we should minimize our intake of saturated fats.

## SATURATED FATS

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# Is this still true?

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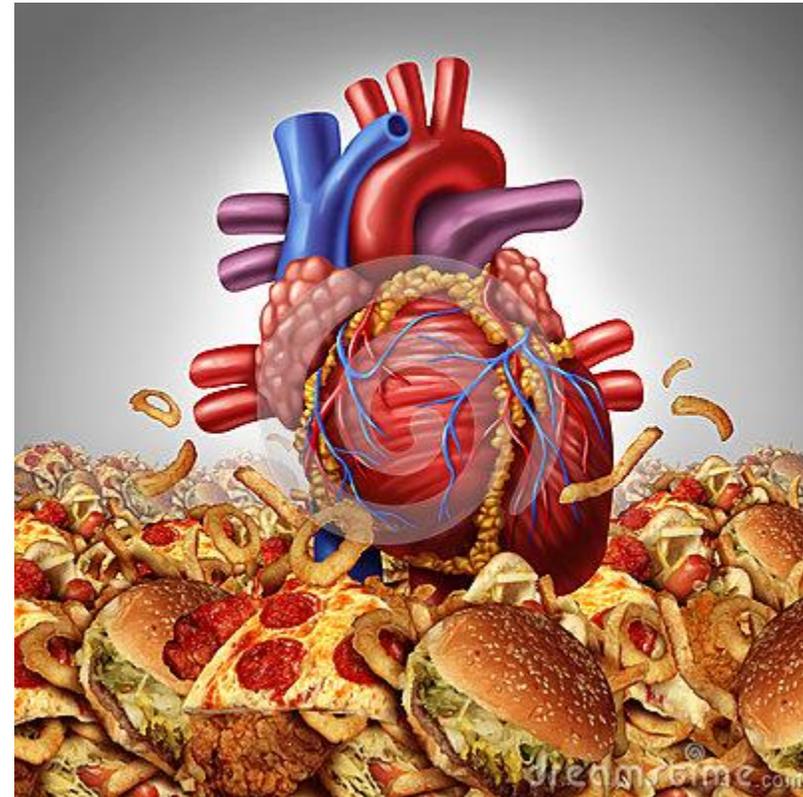
Yes. Saturated fat intake may indeed increase heart disease *risk factors*

What are these risk factors?

1) LDL (low density lipoprotein) cholesterol (the “bad” cholesterol)

2) the ratio between LDL and HDL (high density lipoprotein – the good cholesterol. Saturated fats increases ratio of LDL to HDL)

BUT.. the research has shown there’s **no** conclusive evidence that saturated fat increases heart disease *itself*. But it does elevate the risk.



# So...Is Saturated Fat Bad for You?

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A diet high in saturated fats in the form of fast food, fried products, sugary baked goods, and processed meats (hot dogs, deli meats) likely affects health differently than a diet which includes in saturated fats in the form of full fat dairy, and coconut.

So does that mean you can have saturated fats in the diet? Answer: YES. **BUT**...In moderation. Let's explore



# Including Saturated Fats in the Diet

Of course, you can enjoy a glass of whole dairy milk (i.e. 3% “Homo” milk), a cup of full fat yogurt (i.e. 5-10% fat), etc. but REMEMBER:

**MODERATION**

An easy way to track this is by reading nutrition labels and aiming for no more than 13 grams of saturated fat *per day* in the foods you eat (read the nutrition label).

LET’S LOOK AT THE MILK LABELS. FIRST SKIM MILK ON RIGHT:

Nutrition Facts	
Valeur nutritive	
Per 1 cup (250 mL) / par 1 tasse (250 mL)	
Amount	% Daily Value
Teneur	% valeur quotidienne
<b>Calories / Calories 80</b>	
<b>Fat / Lipides 0 g</b>	<b>0 %</b>
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
<b>Cholesterol / Cholestérol 0 mg</b>	
<b>Sodium / Sodium 115 mg</b>	<b>5 %</b>
<b>Carbohydrate / Glucides 12 g</b>	<b>4 %</b>
Fibre / Fibres 0 g	0 %
Sugars / Sucres 11 g	
<b>Protein / Protéines 9 g</b>	
Vitamin A / Vitamine A	15 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	30 %
Iron / Fer	0 %
Vitamin D / Vitamine D	45 %

# Comparing 2% (partly skimmed) milk to 3.25% (Homogenized milk)

## 2% MILK

<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Per 1 cup (250 mL) pour 1 tasse (250 mL)	
Amount Teneur	% Daily Value % valeur quotidienne
<b>Calories / Calories 130</b>	
<b>Fat / Lipides 5 g</b>	<b>8 %</b>
Saturated / saturés 3 g + Trans / trans 0.1 g	<b>16 %</b>
<b>Cholesterol / Cholestérol 20 mg</b>	
<b>Sodium / Sodium 120 mg</b>	<b>5 %</b>
<b>Carbohydrate / Glucides 12 g</b>	<b>4 %</b>
Fibre / Fibres 0 g	<b>0 %</b>
Sugars / Sucres 12 g	
<b>Protein / Protéines 9 g</b>	
Vitamin A / Vitamine A	10 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	30 %
Iron / Fer	0 %
Vitamin D / Vitamine D	45 %

## 3.25% MILK

<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Per 1 cup (250 mL) / par 1 tasse (250 mL)	
Amount Teneur	% Daily Value % valeur quotidienne
<b>Calories / Calories 160</b>	
<b>Fat / Lipides 8 g</b>	<b>13 %</b>
Saturated / saturés 5 g + Trans / trans 0.2 g	<b>26 %</b>
<b>Cholesterol / Cholestérol 30 mg</b>	
<b>Sodium / Sodium 110 mg</b>	<b>5 %</b>
<b>Carbohydrate / Glucides 12 g</b>	<b>4 %</b>
Fibre / Fibres 0 g	<b>0 %</b>
Sugars / Sucres 11 g	
<b>Protein / Protéines 9 g</b>	
Vitamin A / Vitamine A	10 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	30 %
Iron / Fer	0 %
Vitamin D / Vitamine D	45 %

# Comparing Saturated Fat in Greek Yogurt

FAT FREE GREEK YOGURT



5% MILK FAT (M.F.) GREEK YOGURT



# Saturated Fats in Burgers

## BEEF BURGER

<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Per 1 burger (113 g) pour 1 burger (113 g)	
<b>Calories 290</b>	<b>% Daily Value*</b>
	<b>% valeur quotidienne*</b>
<b>Fat / Lipides 23 g</b>	<b>31 %</b>
Saturated / saturés 10 g	55 %
+ Trans / trans 1 g	
<b>Carbohydrate / Glucides 5 g</b>	
Fibre / Fibres 0 g	0 %
Sugars / Sucres 0 g	0 %
<b>Protein / Protéines 16 g</b>	
<b>Cholesterol / Cholestérol 65 mg</b>	
<b>Sodium 350 mg</b>	<b>15 %</b>
Potassium 225 mg	5 %
Calcium 10 mg	1 %
Iron / Fer 2 mg	11 %
*5% or less is <b>a little</b> , 15% or more is <b>a lot</b>	
*5% ou moins c'est <b>peu</b> , 15% ou plus c'est <b>beaucoup</b>	

## YVES VEGGIE BURGER

<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Per 1 burger (88 g) / Pour 1 galette (88 g)	
<b>Amount</b>	<b>% Daily Value</b>
<b>Teneur</b>	<b>% valeur quotidienne</b>
<b>Calories / Calories 230</b>	
<b>Fat / Lipides 13 g</b>	<b>20 %</b>
Saturated / saturés 1 g	5 %
+ Trans / trans 0 g	
Polyunsaturated / polyinsaturés 4 g	
Omega-6 / oméga-6 1.5 g	
Omega-3 / oméga-3 0.5 g	
Monounsaturated / monoinsaturés 7 g	
<b>Cholesterol / Cholestérol 0 mg</b>	
<b>Sodium / Sodium 430 mg</b>	<b>18 %</b>
<b>Potassium / Potassium 300 mg</b>	<b>9 %</b>
<b>Carbohydrate / Glucides 15 g</b>	<b>5 %</b>
Fibre / Fibres 2 g	8 %
Sugars / Sucres 1 g	
<b>Protein / Protéines 14 g</b>	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	4 %
Iron / Fer	25 %
Thiamine / Thiamine	25 %
Riboflavin / Riboflavine	10 %
Niacin / Niacine	20 %
Vitamin B <sub>6</sub> / Vitamine B <sub>6</sub>	15 %
Vitamin B <sub>12</sub> / Vitamine B <sub>12</sub>	50 %
Pantothenate / Pantothénate	8 %
Zinc / Zinc	25 %

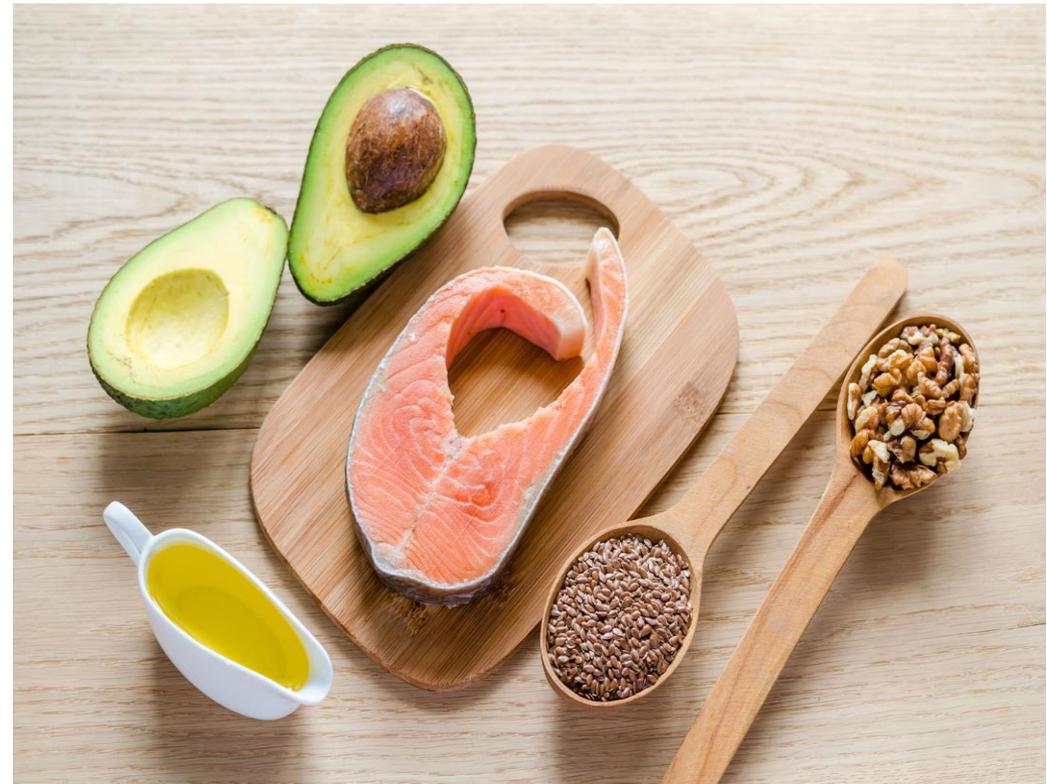
# Unsaturated Fats

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Overall, unsaturated fats are better for the body than saturates because they can reduce the levels of LDL (bad) cholesterol, ease inflammation, stabilize heart rhythms, improve strength of cell membranes.

Unsaturated fats are predominantly found in foods from plants, such as vegetable oils, nuts, and seeds.

Animal sources of unsaturated fats include fish such as salmon, sardines.



# Unsaturated Fats – Mono vs. Poly

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<b>Monounsaturated vs Polyunsaturated Fats</b>		
More Information Online <a href="http://WWW.DIFFERENCEBETWEEN.COM">WWW.DIFFERENCEBETWEEN.COM</a>		
	<b>Monounsaturated Fats</b>	<b>Polyunsaturated Fats</b>
<b>DEFINITION</b>	Fatty acids having only one unsaturated carbon bond.	Fatty acids having more than one unsaturated carbon bonds.
<b>DOUBLE BONDS</b>	Have only one carbon-carbon double bond.	Have more than one carbon-carbon double bonds.
<b>ESSENTIAL FATS</b>	Do not provide us with essential fats.	Provide us with essential fats such as omega-3 that the body cannot produce.



# Unsaturated Fats: Monosaturated vs. Polyunsaturated

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Replacing saturated fats with foods containing mainly monounsaturated and polyunsaturated fats can help protect you against the risks associated with heart disease.

Unsaturated fats are collectively referred to as “healthy fats” because they do not appear to promote the formation of atherosclerosis, - the buildup of cholesterol on the walls of the arteries that can lead to heart disease and stroke.

## DIETARY SOURCES OF GOOD FATS

(MONOUNSATURATED AND POLYUNSATURATED FATS)



Monounsaturated oils come from sources like olive oil and canola oil, avocados



Polyunsaturated fats include fatty fish such as salmon or mackerel, sunflower oil, corn or soybean oil, sesame oil, nuts, and seeds.



# Foods Containing Mono/ Polyunsaturates

GOOD FATS	
MONOUNSATURATED FATS	POLYUNSATURATED FATS
<ul style="list-style-type: none"><li>• Olive oil</li><li>• Canola oil</li><li>• Sunflower oil</li><li>• Peanut oil</li><li>• Sesame oil</li><li>• Avocados</li><li>• Olives</li><li>• Nuts (almonds, peanuts, macadamia nuts, hazelnuts, pecans, cashews)</li><li>• Almond or other nuts butter</li></ul>	<ul style="list-style-type: none"><li>• Soybean oil</li><li>• Corn oil</li><li>• Safflower oil</li><li>• Walnuts</li><li>• Sunflower, sesame, and pumpkin seeds</li><li>• Flaxseed</li><li>• Fatty fish (salmon, tuna, mackerel, herring, trout, sardines)</li><li>• Soymilk</li><li>• Tofu</li></ul>



# Polyunsaturated Fats – Omega 3 Fatty Acids

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There are two types of polyunsaturated fats, they include: omega-3 (linolenic acid) and omega-6 (linoleic acid).

These are called essential fatty acids because they are essential for the health of the body (needed for brain function and cell growth) and we can only get them from food.

Omega 3 Fatty Acids are the more important ones for optimal health



# Main Benefits of Consuming Omega – 3's

1. They make up a significant part of each human cell membrane – contributing to the structure, strength and health of the cell membrane
2. They help in managing blood cholesterol levels and blood fat levels and blood pressure
3. They contribute to heart health
4. They support mental health - Omega-3 fats may help reduce mental health conditions such as depression and cognitive decline



# The Three Most Important Omega 3's

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The three MOST important are ALA, EPA, DHA.

ALA is vegetarian - mostly found in plants, nuts, seeds

EPA and DHA are mostly found fatty fish so **they are sometimes called marine omega-3s.**

EPA and DHA Omega 3's have a high "bioavailability" meaning the body can absorb and utilize them directly without any conversion or modification required.



# Benefits of Marine Sources of Omega 3's

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The marine (fish) sources of omega-3's (EPA and DHA) have shown to provide many healthy benefits for the body but especially they show a reduced risk of:

1. Developing cardiovascular disease (disease of the heart and the arteries)
2. Coronary heart disease (i.e. diseases of the arteries that supply the heart – called coronary arteries)
3. Heart attacks



# Best Marine (Fish) Sources of EPA & DHA

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<b>Fish</b>	<b>EPA</b>	<b>DHA</b>	<b>EPA + DHA</b>
Salmon, Atlantic, farmed	0.587	1.238	1.825
Herring, Pacific	1.056	0.751	1.807
Mackerel, Pacific	0.555	1.016	1.571
Sablefish	0.737	0.782	1.519
Whitefish	0.345	1.025	1.37
Halibut, Greenland	0.573	0.428	1.001
Trout, farmed	0.284	0.697	0.981
Bluefish	0.275	0.565	0.84
Tuna, white, canned	0.198	0.535	0.733
Shark	0.219	0.366	0.585

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\* All values in grams of fatty acid per 3 oz of fish, cooked.

† Adapted from US Department of Agriculture.<sup>72</sup>

# But What if You're Vegetarian or Vegan?

Because vegetarians and vegans eat a plant based diet, they cannot consume marine foods that are high in the Omega 3's - EPA and DHA

But they can consume Omega 3's that are high in ALA. But ALA needs to be converted into EPA or DHA before it can be utilized by body for all the Omega 3 benefits

Problem is this conversion process is inefficient in humans. Only a small percentage of ALA is converted into EPA — and even less into DHA

The solution:



# Sea Algae for Vegan/Vegetarian DHA/EPA

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[Algae-based supplements](#) are created when mineral algae, like chlorella and spirulina, are harvested from fresh-water lakes and algae farms. Both DHA and EPA can be found in this algae, as well as in nori.



# Trans Fats

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The worst type of dietary fat: trans fat. Artificial trans fats are a by-product of a process called hydrogenation that is used to turn healthy unsaturated oils into solid fats.

This allows foods made with trans fats to stay longer on supermarket shelves like cakes, cookies, candies, etc.

Trans fats have no known health benefits and that there is no safe level of consumption.



# Trans Fats

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Trans fats raise your bad (LDL) cholesterol levels and lower your good (HDL) cholesterol levels. Eating trans fats increases your risk heart disease and stroke.

It's also associated with a higher risk of developing type 2 diabetes.

In September 2018, Canada officially banned artificial trans fat from food products.



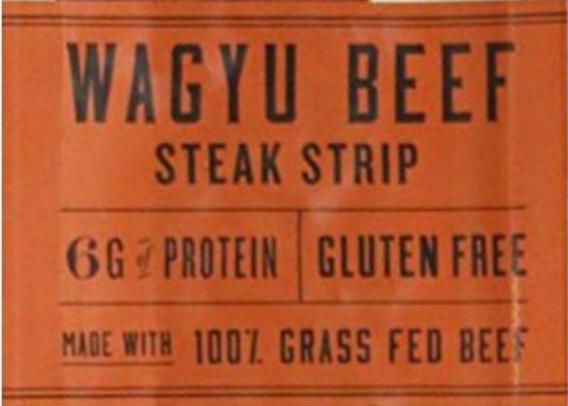
# Trans Fats in Canada

However, you may also still see trans fats on labels of meat and dairy products, because trans fats also occur naturally in meats and dairy products. But this is different from the artificial trans fats which are now banned in food.

But don't worry, trans fats that are naturally produced in cows, sheep, goats, etc do not affect human health and don't appear harmful

<b>Nutrition Facts</b>	
Serving Size 1 Package (23g)	
Amount Per Serving	
<b>Calories 110</b>	<b>Fat Cal 60</b>
% Daily Value*	
<b>Total Fat 7g</b>	11%
Saturated Fat 3.5g	17%
Trans Fat 0.5g	
<b>Cholesterol 25mg</b>	9%
<b>Sodium 300mg</b>	12%
<b>Total Carb 3g</b>	1%
Dietary Fiber 0g	0%
Sugars 3g	
<b>Protein 6g</b>	
Vitamin A 0% • Vitamin C 0%	
Calcium 0% • Iron 4%	
*Percent Daily Values are based on a 2,000 calorie diet.	

**INGREDIENTS:** Grass Fed Wagyu Beef, Wildflower Honey, Water, Sea Salt, Black Pepper, Garlic Powder.



The image shows a portion of a product package for Wagyu Beef Steak Strip. The text on the package includes "WAGYU BEEF STEAK STRIP", "6G PROTEIN | GLUTEN FREE", and "MADE WITH 100% GRASS FED BEEF".



A small green logo depicting a stylized figure in a dynamic pose, possibly a runner or a person in motion, located in the bottom right corner of the product image area.

# Thank you!

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*thank  
you!*

Questions? Comments? Want to learn more?

Interested in personal training or small group training?

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