Everyday Cooking for a Healthier You

Fats and Sugars

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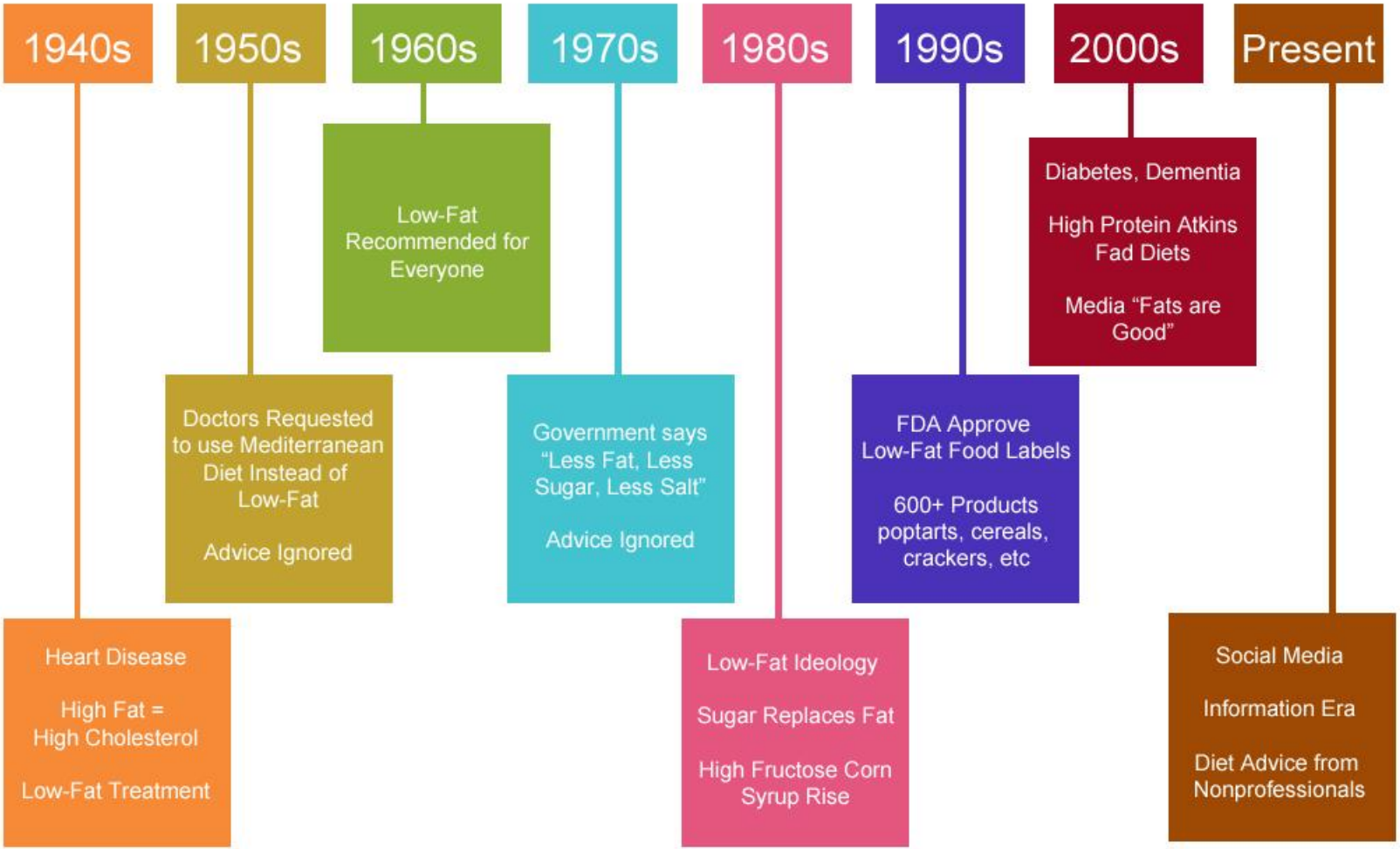
Goals

- The Story of Fat
- Types of Sugars
- The Effects of Sugar
- Sugars in Foods


1940s
1950s
1960s
1970s
1980s
1990s
2000s
Present
Heart Disease
High Fat = High Cholesterol
Low-Fat Treatment
Doctors Requested to use Mediterranean Diet Instead of Low-Fat
Advice Ignored
Low-Fat Recommended for Everyone
Government says "Less Fat, Less Sugar, Less Salt"
Advice Ignored
Low-Fat Ideology
Sugar Replaces Fat
High Fructose Corn Syrup Rise
FDA Approve Low-Fat Food Labels
600+ Products poptarts, cereals, crackers, etc
Diabetes, Dementia
High Protein Atkins Fad Diets
Media "Fats are Good"
Social Media
Information Era
Diet Advice from Nonprofessionals

History Fat

- **1940s:** Correlation between high-fat diets and high-cholesterol levels, suggesting that a low-fat diet might prevent heart disease in high-risk patients
- **1950s:** Multiple doctors begin recommending the Mediterranean Diet, but was continually ignored.
- **1960s**: Low-fat diet recommended to everyone not just high-risk heart patients
- **1970s:** U.S. Senate Select Committee on Nutrition and Human Need “Too much fat, too much sugar or salt, can be and are directly linked to heart disease, cancer, obesity and stroke…”
- **1980s:** Low-fat approach became an overarching ideology, promoted by physicians, the federal government, the food industry, and the popular health media. Fat in foods replaced with sugar. High Fructose Corn Syrup became popular. Dietary fat was increasingly blamed not only for coronary heart disease but also for overweight and obesity.
- **1990s:** Low-Fat / High Carb Government Standard. FDA approved “low-fat” term for food labels. Within 7 years 600 products certified, many of which were cereal products, including Kellogg's Frosted Flakes, Fruity Marshmallow Krispies, and Low-Fat Pop-Tarts.
- **2000s:** Research continues to show that eating a diet with processed, refined sugars is causing health issues. Diets low-carbs (sugar) and high protein become popular (Paleo, Atkins, Whole30, South Beach, etc)
- **2003:** International dietary studies published in USA showing benefits of eating fat. The Washington Post entitled “The Flip-Flop Files.”
- **2004:** Facebook / Social Media Started.
- **2006:** The New York Times announces: “Low-Fat Diet Does Not Cut Health Risks, Study Finds.” Skeptics both inside and outside the scientific/medical community questioned or outright rejected the low-fat approach, promoting low carbohydrate for both weight reduction and heart health. High Fat Fad diets gain popularity.
- **Present:** Information Overload. People now receive diet information from blogs, friends, family, gyms, etc.

Present Day Fat Knowledge

- **Trans Fat:** Hydrogenated oil, Fried Foods, Shortening. Linked to multiple diseases. Laws have been created to prevent foods being made with.

- **Saturated Fat:** Not as harmful as trans fats, however, is dangerous in large amounts. Is linked to heart disease, cancer, high blood pressure, high cholesterol.

- **Monounsaturated:** Known as one of the “healthier fats.” However, if consumed in high quantities is it linked with early death. Positive health benefits are shown when eaten instead of refined/processed carbs.

- **Polyunsaturated:** Omega-3 & Omega-6 (The only fats our body needs). Needed for the brain, hormone regulation, and organ protection. Positive health benefits are shown when eaten instead of refined/processed carbs.

3,4,5,6

Fat Daily Limits

- **Total Dietary Fat 25% - 35%**
- **Trans Fat:** 0% of Diet
- **Saturated Fat:** Less than 6% of total dietary intake.
- **Monounsaturated:** Approximately 15% of total dietary intake
- **Polyunsaturated:** Approximately 10% of total dietary intake

3,4,5,6

Fat Daily Limits

Total 25% - 35%
Trans 0%
Sat 6%
Mono 15%
Poly 10%

- **2,000 Calorie Diet 1 Gram Fat = 9 Calories**
- **Trans Fat:** 0% of Diet
- **Saturated Fat:** 2,000 x .06 = 120 calories 120 calories / 9 calories per gram of fat = 13 grams
- **Monounsaturated:** 2,000 x .15 = 300 calories 300 calories / 9 calories per gram of fat = 33 grams
- **Polyunsaturated:** 2,000 x .10 = 200 calories 200 calories / 9 calories per gram of fat = 22 grams

3,4,5,6

Foods Containing Fat

1 Gram Fat = 9 Calories

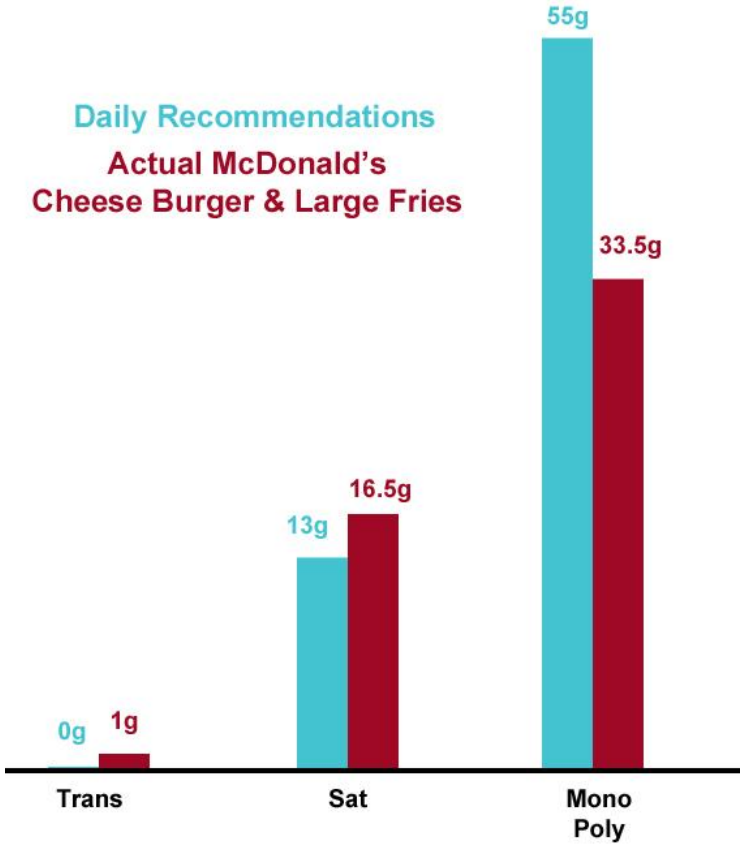
Total 25% - 35%
Trans 0% **0 Grams**
Sat 6% **13 Grams**
Mono 15% **33 Grams**
Poly 10% **22 Grams**

- **Trans Fat:** Fried foods, shortening, hydrogenated oil
- **Saturated Fat:** Red meat, coconut oil, cheese, butter, ice cream
- **Monounsaturated:** Vegetable oils (such as olive, canola, sunflower, soy, and corn), nuts, seeds, avocado, and fish
- **Polyunsaturated:** Vegetable oils (such as olive, canola, sunflower, soy, and corn), nuts, seeds, avocado, and fish

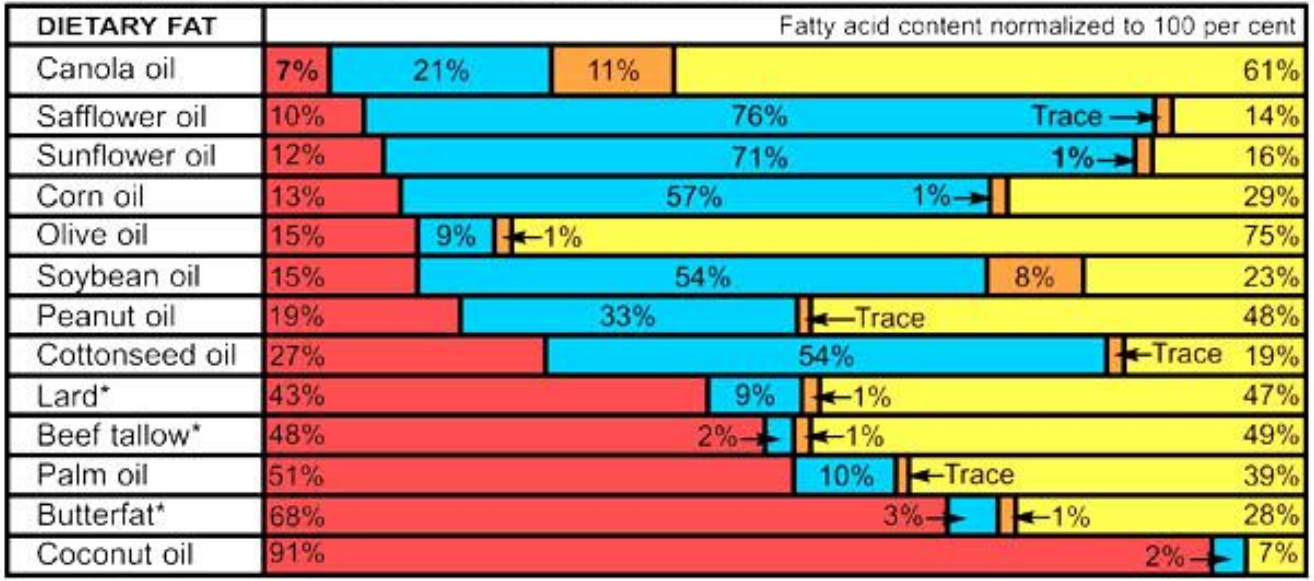
3,4,5,6

McDonald's Cheese Burger & Large Fries

- **Trans Fat:** 1 gram / 0 grams (Total 1 gram)
- **Saturated Fat:** 13 grams / 3.5 grams (Total 16.5 grams)
- **Monounsaturated & Polyunsaturated:** 12 grams / 21.5 grams (Total 33.5 grams)



Comparison of Dietary Fats



* Cholesterol Content (mg/Tbsp): Lard 12; Beef tallow 14; Butterfat 33. No cholesterol in any vegetable-based oil.
Source: POS Pilot Plant Corporation, Saskatoon, Saskatchewan, Canada June 1994

SATURATED FAT

MONOUNSATURATED FAT

POLYUNSATURATED FAT

Linoleic Acid

Alpha-Linolenic Acid
(An Omega-3 Fatty Acid)

CANOLA COUNCIL OF CANADA 400-167 LOMBARD AVENUE WINNIPEG MANITOBA CANADA R3B 0T6

Sugars (Carbohydrates)

Simple Sugars

- Glucose, Fructose, and Galactose

Sugar (glucose + fructose)
Lactose - Dairy Sugar (glucose + galactose)

Fruit, Milk, Sugar, Sauces, Soda, White Bread/Pasta, Treats

Complex Carbs

- Starches
- Fiber

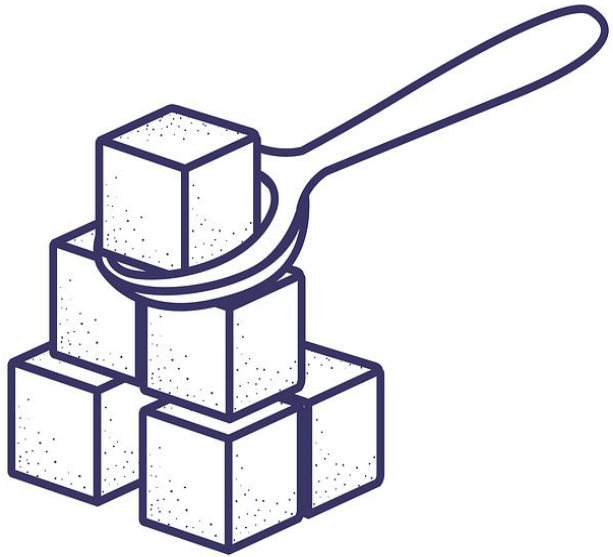
Fruit, Vegetables, Whole-Grain Bread/Pasta, Nuts, Seeds, Rice, Legumes/Beans,

Sugars (Carbohydrates)

“Added Sugars” are Simple Sugars
(table sugar, sucrose, agave nectar, cane sugar, honey, maple syrup, HFCS, barley malt, dextrose, dextrin, corn syrup, sorghum gum, etc. etc.)

- Less than 25 grams per day
- 4 Grams = 1 Teaspoon

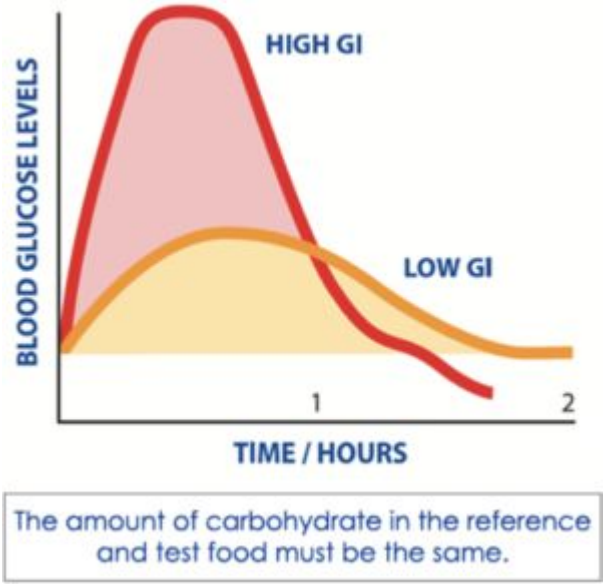
25 grams / 4 grams = 6.25 Teaspoons



Glycemic Index

Foods High GI Increase Blood Glucose

Foods Low GI Do Not Increase Blood Glucose



Food Low - Medium GI Rating

Most Fruit and Vegetables

Whole-wheat, Rye, Sourdough Bread

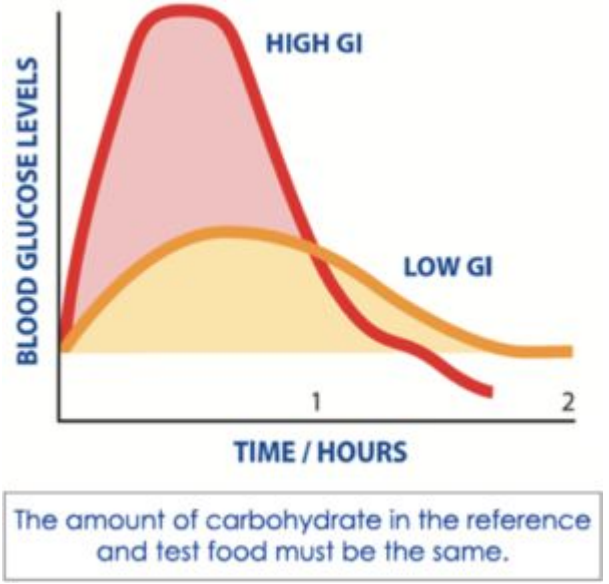
Bran, Grape Nuts, Muesli

Beans, Peas, Lentils

Popcorn (air pop, no fat)

Dairy

Meat



Food High GI Rating

All White Bread and Pasta

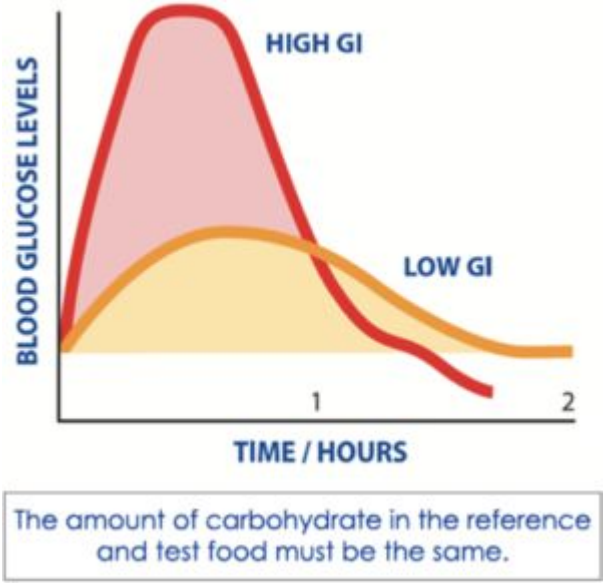
Sugary Cereals

Crackers

White Rice

Potatoes

Dried Fruit



White Bread (75%) vs. Apple with Skin (98%)

- Fructose is metabolized in liver and doesn't increase blood sugar levels

- Fruit
  - Fiber, Nutrients, and Antioxidants
  - Complex Carb Takes More Effort to Digest = Lower GI

- White Bread
  - Contains Small Amounts of Fiber, Nutrients are Removed, and Raises Blood Sugar Levels

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Sugars (Carbohydrates)

Agave

- 95%-99% Fructose
- Low GI 12/100
- Fatty Liver Disease
- Increases Triglycerides
- Highly Processed

High Fructose Corn Syrup

- 55% Fructose
- High GI 73/100
- Fatty Liver Disease
- Increases Triglycerides
- Highly Processed

Honey

- GI Index 68/100
- More Sugar than table sugar per serving
- Need to eat at least a cup to get nutrient benefits (278 grams of sugar)
- Has Medical Benefits

Maple Syrup

- GI Index 68/100
- Need to eat at least 5 tablespoons to get nutrient benefits (70 grams of sugar)

12,13,14,15,16,17,18,19

Alternative Sweeteners

- Most are not metabolized in the body and so, are generally considered safe for consumption.
- Limits should be considered because they desensitize your sweet taste make fruits and sweet vegetables taste bland.

Low-Calorie Sweetener	Brand Names	Sweetness as compared with sugar	Intake* (maximum number of tabletop sweetener packets per day)
Aspartame	Equal®, NutraSweet®, Sugar Twin®	200 times sweeter than sugar	75**
Acesulfame-K	Sunett®, Sweet One®	200 times sweeter than sugar	23
Saccharin	Sweet'N Low®, Sweet Twin®, Necta Sweet®	200-700 times sweeter than sugar	45
Sucralose	Splenda®	600 times sweeter than sugar	23
Neotame	Newtame®	7,000-13,000 times sweeter than sugar	23
Advantame	No brand names	20,000 times sweeter than sugar	4,920

*An Acceptable Daily Intake is the maximum amount of a substance that can be consumed daily over the course of a person's lifetime with no appreciable health risk, and is based on the highest intake that does not lead to observable adverse effects. Calculations are based on a 132 pound individual.

**People with a rare hereditary disease known as phenylketonuria (PKU) have difficulty breaking down phenylalanine, a component of aspartame, and should limit their intake of phenylalanine from all sources, including aspartame.

Basil and Spinach Pesto

- 1/3 Cup of Fresh Basil Leaves (approximately 7 leaves)
- 2 Cups of Fresh Spinach
- 1 Garlic Clove Slightly Chopped
- Juice from 1 Small Lemon
- 1/4 Cup Canola Oil
- 1/4 Cup Parmesan Cheese or Pine Nuts
- Pinch of Salt and Pepper

- Combine Everything into a Food Processor or Blender Until Completely Mixed

Cilantro and Spinach Pesto

- 1/2 Cup Cashews
- 2/3 Cup of Fresh Cilantro
- 2 Cups of Fresh Spinach
- 1 Garlic Clove Slightly Chopped
- 3 Leaves from Green Onion
- Juice from 1 Small Lime
- 1/2 Cup Canola Oil
- Pinch of Salt and Pepper

- Soak Cashews in water for 20 minutes
- Combine Everything into a Food Processor or Blender Until Completely Mixed

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