

Chapter 3

Activity 1: Nutrition 101

Fill in the blank

Our bodies are made up of approximately **70 percent water**.

Your brain is roughly **80 percent water**.

Water helps **nutrients** flow into our cells.

Water helps to:

- **Regulate** body temperature
- Flushes **toxins** and excess **fluids** from your body through **urination, perspiration, and bowel movements**.

How much water do we need to drink each day? **Half your bodyweight in ounces throughout the day**

Is it okay to drink liquids with meals? Explain. **No, because too much liquid with meals dilutes your digestive enzymes.**

There are several different types of fats. Please explain the three main types of fat that are contained in food.

- **Unsaturated fats: often referred to as “heart-healthy fats,” these are found in plant sources, like avocados, nuts, seeds and olive oils, as well as in fish.**
- **Saturated fats: found in meat and dairy products, as well as some plant sources, like coconut oil**
- **Trans-fatty acids or trans fats: unsaturated fats that have been altered through the process of hydrogenation. Considered the worst kind of fat, trans fats have been associated with heart disease and other health issues. These types of fats are extremely harmful to your health and beauty and should be avoided in all quantities.**

Good fats assist in the **absorption and transport** of vitamins. Good fats are necessary for a **strong immune system, hormone production, strengthening cell walls, joint lubrication, organ production, a healthy nervous system, and proper brain function.**

What are the two essential fatty acids that must come from foods and include two examples of food sources for each.

- **Omega-6 fats - plant-based oils, such as cottonseed, peanut, canola, sunflower seed, vegetable, wheat germ, grape seed, soybean, sesame seed, and safflower. These oils are also found in almost all packaged foods, including tomato sauce, salad dressing, bread, crackers, cookies, pasta, dried fruit, breakfast cereals, baked goods, and condiments.**
- **Omega-3 fats - fish (wild salmon, spanish mackerel, halibut, sardines), seeds (sacha inchi, chia, hemp, flax), walnuts, algae (chlorella, spirulina, phytoplankton).**

What is the optimal ratio of omega-6 to omega-3 fats in our diet? **2:1**

Even though coconut oil is a saturated fat, please explain why it is considered healthy. **It is cholesterol free and trans-fatty acid free and has actually been shown to help lower cholesterol levels due to its ability to stimulate thyroid function. There are many other health benefits such as raising the body's metabolism, and acting as an antiviral, antifungal and antibacterial agent.**

What are trans fats commonly listed as in the ingredient labels on packaged foods? **partially hydrogenated or hydrogenated vegetable oil.**

Why are trans fats bad for you? **Trans fats create inflammation, cardiovascular harm, liver, kidney, and bowel stagnation, and an accelerated aging process.**

What foods are trans fats found in? **Margarine and shortening, commercial cooking sprays, and other heavily processed vegetable oils such as corn, canola, and peanut oil.**

What are the two main types of carbohydrates and list two examples of each?

Complex carbs: whole grains, beans, and veggies.

Simple carbs: white sugar, white flour, white bread, some whole wheat breads, cookies, sugary snack foods, candy, cake, muffins, crackers, chips, white pretzels, energy drinks, sodas and sweetened soft drinks, and concentrated fruit juices.

What is glucose? **Sugar.**

What is the role of your pancreas when glucose enters your bloodstream?

Your pancreas releases insulin, the master hormone of metabolism. Insulin has lots of jobs, but most importantly it regulates glucose levels by shuttles it to cells to use as fuel.

Excess sugar is stored as glycogen in your liver. What happens when there is too much stored in your liver? **Once your liver is crammed full of glycogen, excess glucose is converted into fatty acids (triglycerides). It then enters the bloodstream and gets stored in your tissues. People who store more fat around their abdominal area are at higher risk for heart disease and diabetes.**

Sugar taxes your **immune system** and is highly **addictive**.

On average, a typical American consumes **150** pounds of sugar per year.

List three added sugars that are commonly found in packaged foods.

<u>Brown sugar</u>	<u>Lactose</u>
<u>Corn sweetener</u>	<u>Maltose</u>
<u>Corn syrup</u>	<u>Malt syrup</u>
<u>Dextrose</u>	<u>Maple sugar</u>
<u>Fructose</u>	<u>Maple syrup</u>
<u>Fruit juice concentrates</u>	<u>Molasses</u>
<u>Glucose</u>	<u>Raw sugar</u>
<u>High-fructose corn syrup</u>	<u>Sucrose (table sugar)</u>

<u>Honey</u>	<u>Turbinado</u>
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What is gluten? **Gluten is a protein found in wheat, rye and barley.**

List three gluten intolerance symptoms.

- **Diarrhea, especially if it happens often for no apparent reason**
- **Abdominal pain**
- **Bloating and gas**
- **Foul-smelling poop**
- **Depression**
- **Irritability**
- **Joint pain**
- **Mouth sores**
- **Muscles cramps**
- **Skin rash**
- **Neuropathy (tingling or pain in the legs and feet)**

List three gluten-free grains?

- **Amaranth**
- **Buckwheat**
- **Millet**
- **Quinoa**
- **Soba Noodles (made of buckwheat)**
- **Starch vegetables (winter squash, yams, sweet potatoes, etc.)**

How much protein does the World Health Organization recommend we need each day? **5 percent**

What are proteins made up of? **Amino acids**

How many essential amino acids are there? **20**

List five plant foods that are high in protein:

<u>Almonds</u>
<u>Black Beans</u>
<u>Brown Rice</u>
<u>Chickpeas</u>
<u>Hemp Seeds</u>
<u>Lentils</u>
<u>Millet</u>
<u>Oatmeal</u>
<u>Quinoa</u>
<u>Spinach</u>
<u>Sunflower Seeds</u>
<u>Tempeh</u>

Dairy is mucus forming in your body.

Beyond childhood, most people stop producing the enzyme lactase, which is needed to digest lactose, the sugar in milk.

Why are we not able to absorb calcium from cow's milk, and what effect does this have on our body?

There is a lot of phosphorus in dairy products, and it binds to the calcium in your digestive tract and makes most of the calcium impossible to absorb. Dairy products are extremely acidic forming in the

body, and the increased acid load in the body causes you to lose calcium from your bones, since calcium is an alkaline mineral and neutralizes the acidity.

What are the best sources of calcium? dark leafy, green vegetables, as well as sea vegetables, nuts and seeds.

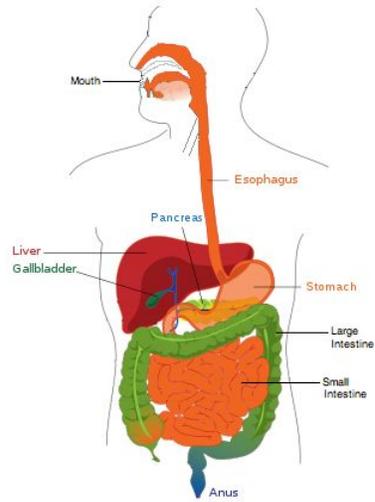
List three dairy alternatives:

<u>Almond milk</u>	<u>Seed or nut cheese</u>	<u>Coconut milk yogurt</u>
<u>Coconut milk</u>	<u>Goat's milk cheese</u>	<u>Kimchi</u>
<u>Hemp milk</u>	<u>Sheep's milk cheese</u>	<u>Probiotic</u>

The root cause of almost all chronic disease starts in your gut.

Identify the following on the diagram below:

- Esophagus
- Liver
- Pancreas
- Gallbladder
- Stomach
- Large Intestine
- Small Intestine



What are three benefits of probiotics

- Improve digestive functions, helping to eliminate constipation and diarrhea
- Improve liver function
- Improve resistance to allergies
- Increase energy
- Improve the absorption of nutrients
- Help eliminate bloating