wellness activity guide

Unit 1: Nutrition

ages 13–15

Oregon ASK
Afterschool & Summer for Kids Network

OHSU
Balanced Meal

**ACTIVITY DESCRIPTION:** Let’s learn about what makes up a balanced meal: carbohydrates, protein, and fat. Within each of these, some foods are better than others. Then, let’s make nutritious meals combining these 3 macronutrients.

Did you know?

**A carbohydrate** is one of the three main classes of foods that gives you energy and includes sugars, starch and cellulose. The body breaks carbohydrates down into glucose, which is a sugar that fuels your cells. Examples of foods that contain carbohydrates are bread, pasta, beans, potatoes, rice, and fruit. Carbohydrates can be **simple** or **complex**. Simple carbohydrates are shorter molecules and the body breaks them down more quickly so they give you energy for a shorter period of time, but often they have less nutrients than complex carbohydrates. Examples are white bread, cereal, and white flour. Complex carbohydrates are longer molecules and the body breaks them down more slowly, so they give you energy for longer and also have many important nutrients in them. Examples of these are brown rice, whole grain bread, and beans.

**Fat** is another one of these classes that gives you energy and helps your body absorb vitamins. **Healthy fats** are found in foods like avocado, dairy, oil, fish and nuts. While fats can be found in many foods like fried foods, cookies, and other treats, some of the best kinds are **omega 3 fats** which are important for your brain and are in fish, nuts, and plant oils.

**Protein** is the last of these classes which is important for building and maintaining muscle and bones and overall helps maintain the structure of your body’s cells, tissues and organs. Examples of protein rich foods include meat, fish, eggs, dairy products, and soy products. Proteins can be **complete** or **incomplete** which means they either give you all the amino acids (building blocks of proteins) you need at once or not. Complete proteins include meat, dairy, fish and eggs. Incomplete proteins usually come from plants like beans and soy so it is important to eat a wide variety of them if you don’t eat meat.

**SUPPLIES:**
- Pen or pencil
- Internet access if possible
Unit 1: Nutrition
Ages 13-15

STEPS:
1. Read the “Did you know?” section about carbohydrates, protein and fats.
2. Come up with 3 days of meals that you would enjoy, including breakfast, lunch and dinner, that each include carbohydrates, protein, and fat.
3. Look back to the reading section and label each food and if it is a carbohydrate write out if it is simple or complex, if it is a fat see if you can find any healthy fats and omega 3 fats, and label your proteins and complete or incomplete.
4. Next, write out a 2 day menu and see if you can include complex carbohydrates, healthy fats, and complete protein (or multiple incomplete proteins) each day.
5. For any foods you were unsure of, do an internet search and see what types of foods they are.

HOW TO EXPAND:
- Draw a picture of one of the meals you came up with in step 4 and then share it with a classmate or group and explain what kinds of foods these are
- Turn to a partner and compare your menus. Discuss which foods you eat most of, and which foods you eat least of
- Do an internet search to find more examples of complex carbohydrates, healthy fats, and complete proteins. Which do you think you could eat every week? Does your family eat many of these foods?

ADAPTATIONS/GOING VIRTUAL:
- This activity can be done at home
- Instead of sharing with peers, students can share their menu with a family member and discuss how to get more complex carbohydrates, healthy fats, and proteins in their diet

DISCUSSION QUESTIONS:
- Why do you think eating balanced is healthy? What is hard about it?
- Do you think you eat balanced meals? If not, what do you think you need more or less of?
- What macronutrients do you eat the most of? What macronutrients do you eat the least?
FOOD LABELS

ACTIVITY DESCRIPTION: Learn about food labels and explore the nutritional value of foods.

SUPPLIES:
- 5 food items with food labels
- Pens and pencils
- Colored pencils or markers
- Internet access*

STEPS:
1. Choose 5 items (either provided or in your home) that have a food label.
2. Without looking at the food labels, see if you can list the foods from greatest to least for each of the following categories: calories, protein, fat, sugar, and vitamins/minerals.
3. For each food item, locate and write down the calories, protein, fat, and sugar and count how many vitamins and minerals are in them (these are located under protein).
4. For each category (calories, protein, fat, sugar, vitamins and minerals) write the foods in order from greatest to least
5. How did the correct list compare to your guesses? Turn to a partner and discuss how correct or incorrect your were
6. Do you notice any patterns of which foods have the greatest or least amount of each category?
7. Draw a picture of the food you think is the most nutritious (healthiest), and which is the least nutritious (least healthy) and compare with your friends.

HOW TO EXPAND:
- Think of what you ate today and look up these foods using this website
- Watch this video about using the food label
  - Can you explain what a serving size and daily value is? Why is this important?

ADAPTATIONS/GOING VIRTUAL:
- If at home, these can be presented to a family member
- Internet access is only needed to do the extensions of this activity
DISCUSSION QUESTIONS:

● Have you ever looked at food labels? When and why or why not?
● What are some of your thoughts when you look at them (is it easy to understand, complicated?)
● Did any food from the activity surprise you in its nutritional content?
**BLOOD SUGAR GAME**

**ACTIVITY DESCRIPTION:** Learn about what controls blood sugar and why it is important not to eat too much sugar all the time.

**SUPPLIES:**
- 2 empty bowls
- Sticky notes or labels
- A bag of sugar
- Newspaper or tarp
- Spoon
- Pen and pencil

**STEPS:**
1. Read the “Did you know?” passage about how blood sugar levels are controlled by the pancreas and insulin
2. Set up a station with newspaper or tarp at the bottom
3. Use a clear cup or bowl to represent the blood and draw a line in an inch from the bottom to represent stable blood sugar levels
4. Assign one person to be food putting sugar into the bloodstream
5. Assign the other person to be the pancreas which uses insulin to take sugar out of the blood and into the body
6. Set up a final bowl to be labeled tissues (which is where the sugar will go when insulin takes it out of the blood stream)
7. Gently have the food person pretend to be fruit start pouring a bag of sugar into the bloodstream
8. The pancreas will slowly spooning sugar from the blood to the body trying to keep the sugar stable at the level of the line
9. Next switch to a more sugar rich meal like a bowl of spaghetti - have the food person start pouring sugar more aggressively into the bowl while the pancreas works to spoon it out of the bowl and keep the sugar level balanced
10. Finally have the food person pretend to be soda - a very high sugar item - and pour the sugar very quickly into the bowl
11. Have the pancreas try to keep up with keeping the blood sugar level stable
12. Now discuss what happens with this very high sugar item?
HOW TO EXPAND:

- If there is any confusion about blood sugar and the pancreas watch this video before the activity
- Learn about diabetes by watching this video
  - In your own words...what is diabetes and why is it important to control it?
- Look up the symptoms of low blood sugar – have you ever experienced this? From what you know about blood sugar levels, why do you think this happens?

ADAPTATIONS/GOING VIRTUAL:
This activity can be completed from home with family members or friends to help play the different parts of the activity.

DISCUSSION QUESTIONS:

- Which foods keep our blood sugar stable? Which foods make it rise?
- What is a sugar high and sugar crash based on what you learned?
- What kind of foods do you think you could eat to keep your blood sugar more stable and avoid sugar highs and crashes?
FOOD COLORS RESEARCH ACTIVITY

ACTIVITY DESCRIPTION: Complete a worksheet about the benefits of eating a variety of colors.

SUPPLIES:
- Worksheet (provided)
- Pen or pencil

STEPS:
- Using the worksheet provided, conduct internet searches to help you complete the blanks
- Next, choose one fruit or vegetable and conduct a thorough search of all the benefits of eating it
- Prepare a short talk highlighting the main benefits of this food and share with a classmate

HOW TO EXPAND:
- Compare and contrast the benefits of fruits and vegetables
- Why is it important to get both? Come up with a short persuasive talk about why we need to eat both fruits and vegetables
- Next, identify what you eat most of – fruits or vegetables? Come up with 3–4 ideas of foods in the category you eat less of that you like and could eat more of

ADAPTATIONS/GOING VIRTUAL:
- From home, this could be completed on the computer, and students can prepare the talk for a parent

DISCUSSION QUESTIONS:
- Why do you think that getting a variety of colors in our diet is important?
- What colors do you eat the most or the least of?
- Do you think getting a variety of colors in your diet is hard? Why or why not?
1. Commonly found in red fruits and vegetables, like tomatoes, _______, a potent antioxidant, can aid with sun protection, protect against certain cancers, and is good for your heart (1).

2. ________ is found in orange and yellow vegetables like carrots and is important for healthy eyes and plays a role in immune function (2).

3. ________ is a common vitamin that is often taken as a supplement, and is found in citrus and many other fruits. We usually associate it with helping a cold, although this is debatable (2)

4. This color vegetable contains vitamin K and folic acid which is food for your bones, digestion, protection against cancer, and is important for pregnant women. It is ____________ (3,4) 

5. The colors ________ contain anthocyanins and resveratrol, which are antioxidants that help fight inflammation and are good for your brain and your heart (5,6).

6. Write a sentence about the color white and draw a picture of a white fruit or vegetable you can think of.

What colors do you eat every day? What colors would be easy for you to add more of?
SPORTS NUTRITION

ACTIVITY DESCRIPTION: Learn how to properly fuel when you play sports or live an active lifestyle.

Did you know? Fueling before and after you exercise is important because it gives you energy but also helps you repair and build muscle afterwards, helping you get stronger, faster, and more fit so you can improve as an athlete as well as recover and stay healthy. Carbohydrates are a great source of energy before you exercise, and carbohydrates and protein help you recover afterwards (1,2).

SUPPLIES:
- Provided tip sheet
- Pencil or pen
- Paper

STEPS:
1. Read the provided tip sheet for healthy eating with an active lifestyle
2. Come up with 5 physical activity goals that you would like to reach in the next year (ex: make it on the varsity soccer team, start lifting weights, work out 3 times per week,...) and write these down
3. Based on the tip sheet, what are 2 things you think you do a good job at that will support your goals, and what are 3 that you need to work on – write these down
4. Based on the ones you need to work on, write yourself 3 nutrition related goals per week that will help you reach your fitness goals
5. Come up with 3 post exercise snacks that contain carbohydrates and protein that will help you recover. Share them with your class.

HOW TO EXPAND:
- Watch this video about sports performance – what habits do you think you can improve on?
- Read the Protein tip sheet provided – how can you vary your sources of protein?
For youth and adults engaging in physical activity and sports, healthy eating is essential for optimizing performance. Combining good nutrition with physical activity can lead to a healthier lifestyle.

1. Maximize with nutrient-packed foods
   Give your body the nutrients it needs by eating a variety of nutrient-packed food, including whole grains, lean protein, fruits and vegetables, and low-fat or fat-free dairy. Eat less food high in solid fats, added sugars, and sodium (salt).

2. Energize with grains
   Your body’s quickest energy source comes from foods such as bread, pasta, oatmeal, cereals, and tortillas. Be sure to make at least half of your grain food choices whole-grain foods like whole-wheat bread or pasta and brown rice.

3. Power up with protein
   Protein is essential for building and repairing muscle. Choose lean or low-fat cuts of beef or pork, and skinless chicken or turkey. Get your protein from seafood twice a week. Quality protein sources come from plant-based foods, too.

4. Mix it up with plant protein foods
   Variety is great! Choose beans and peas (kidney, pinto, black, or white beans; split peas; chickpeas; hummus), soy products (tofu, tempeh, veggie burgers), and unsalted nuts and seeds.

5. Vary your fruits and vegetables
   Get the nutrients your body needs by eating a variety of colors, in various ways. Try blue, red, or black berries; red and yellow peppers; and dark greens like spinach and kale. Choose fresh, frozen, low-sodium canned, dried, or 100 percent juice options.

6. Don’t forget dairy
   Foods like fat-free and low-fat milk, cheese, yogurt, and fortified soy beverages (soymilk) help to build and maintain strong bones needed for everyday activities.

7. Balance your meals
   Use MyPlate as a reminder to include all food groups each day. Learn more at www.ChooseMyPlate.gov.

8. Drink water
   Stay hydrated by drinking water instead of sugary drinks. Keep a reusable water bottle with you to always have water on hand.

9. Know how much to eat
   Get personalized nutrition information based on your age, gender, height, weight, current physical activity level, and other factors. Use SuperTracker to determine your calorie needs, plan a diet that’s right for you, and track progress toward your goals. Learn more at www.SuperTracker.usda.gov.

10. Reach your goals
    Earn Presidential recognition for reaching your healthy eating and physical activity goals. Log on to www.presidentschallenge.org to sign up for the Presidential Active Lifestyle Award (PALA+).
Vary your protein routine

Protein foods include both animal (meat, poultry, seafood, and eggs) and plant (beans, peas, soy products, nuts, and seeds) sources. We all need protein—but most Americans eat enough, and some eat more than they need. How much is enough? Most people, ages 9 and older, should eat 5 to 7 ounces* of protein foods each day depending on overall calorie needs.

1. Vary your protein food choices
   Eat a variety of foods from the Protein Foods Group each week. Experiment with beans or peas, nuts, soy, and seafood as main dishes.

2. Choose seafood twice a week
   Eat seafood in place of meat or poultry twice a week. Select a variety of seafood, including those that are higher in oils and low in mercury, such as salmon, trout, and herring.

3. Select lean meat and poultry
   Choose lean cuts of meat like round or sirloin and ground beef that is at least 93% lean. Trim or drain fat from meat and remove poultry skin.

4. Save with eggs
   Eggs can be an inexpensive protein option and part of a healthy eating style. Make eggs part of your weekly choices.

5. Eat plant protein foods more often
   Try beans and peas (kidney, pinto, black, or white beans; split peas; chickpeas; hummus), soy products (tofu, tempeh, veggie burgers), nuts, and seeds. They are lower in saturated fat and some are higher in fiber.

6. Consider nuts and seeds
   Choose unsalted nuts or seeds as a snack, on salads, or in main dishes. Nuts and seeds are a concentrated source of calories, so eat small portions to keep calories in check.

7. Keep it tasty and healthy
   Try grilling, broiling, roasting, or baking—they don’t add extra fat. Some lean meats need slow, moist cooking to be tender—try a slow cooker for them. Avoid breading meat or poultry, which adds calories.

8. Make a healthy sandwich
   Choose turkey, roast beef, canned tuna or salmon, or peanut butter for sandwiches. Many deli meats, such as regular bologna or salami, are high in fat and sodium—make them occasional treats only.

9. Think small when it comes to meat portions
   Get the flavor you crave but in a smaller portion. Make or order a small turkey burger or a “petite” size steak.

10. Check the sodium
    Check the Nutrition Facts label to limit sodium. Salt is added to many canned foods—including soups, vegetables, beans, and meats. Many processed meats—such as ham, sausage, and hot dogs—are high in sodium. Some fresh chicken, turkey, and pork are brined in a salt solution for flavor and tenderness.

* What counts as an ounce of protein foods? 1 ounce lean meat, poultry, or seafood; 1 egg; ¼ cup cooked beans or peas; ½ ounce nuts or seeds; or 1 tablespoon peanut butter.
ADAPTATIONS/GOING VIRTUAL:
This activity can be completed at home.

DISCUSSION QUESTIONS:
● Do you play any sports and if so what are some goals that you have for that sport?
  ○ How would proper nutrition help you reach those goals?
● What do you think would happen if you don’t fuel well when exercising?
● What about when you do fuel well? What are the benefits of being fueled and getting stronger for exercise?
● Which of your body parts need to be strong for the type of exercise you like doing?
TAKE OUT MAKEOVER

ACTIVITY DESCRIPTION: Let’s learn about how to make healthier choices with takeout food so that you can still enjoy eating out.

SUPPLIES:
- Internet connection*
- Pencil or pen
- Worksheet Provided
- Paper

STEPS:
1. Read the provided USDA tip sheet on making healthy takeout swaps
2. Look up the menu for 3 of your favorite takeout restaurants and write down what type of food the restaurant serves and 5 meals you usually get
3. Using the tip sheet, see if you can make those meals healthier or swap them for a healthier version and write those swaps next to your usual order

HOW TO EXPAND:
- Go around the room and share your tips with other classmates.
- Take a picture or scan your swaps to put together a healthy takeout guide

ADAPTATIONS/GOING VIRTUAL:
- If done from home, you can take a picture or scan your pages and share with friends or combine them in a shared document online
- *If you don’t have internet access see if you have find togo menus from restaurants in your area

DISCUSSION QUESTIONS:
- How do you feel about making healthier swaps for takeout food?
- Do you think the suggested swaps are still enjoyable?
- What is your favorite thing about getting takeout? Can you still do that while swapping for a healthier option?
Make your takeout healthier

With smart choices and small changes, these tips can help make your favorite Asian-inspired meals work for you.

Look for veggies
Pick dishes that highlight veggies, like chicken and broccoli or a vegetable stir-fry. Be mindful of the type and amount of sauce used.

Try steamed foods
Many foods can be steamed rather than fried. Steamed dumplings and rice are lower in saturated fat than the fried versions.

Adjust your order
Most restaurants are happy to accommodate your requests. Ask that your food be cooked with less oil or half the sauce.

Add sauces sparingly
Sodium in soy sauce and calories from added sugars in duck and teriyaki sauces can add up quickly, so be mindful of how much you use.

Use chopsticks
Unless you’re an expert, eating with chopsticks can help you slow down and recognize when you’re full so you don’t overeat.

Based on the Dietary Guidelines for Americans
Go to ChooseMyPlate.gov for more information.
WHAT IS EMULSIFICATION?

ACTIVITY DESCRIPTION: Let’s learn about what emulsification is, how it can be done, and what foods go through this type of processing. Let’s use what we learned about macronutrients to figure out which ones these foods are high in.

Did you know? Emulsification is when two liquids that usually don’t mix together are mixed. This is called an emulsion. Some foods are emulsified because it makes them look or taste better (for example mayonnaise is an emulsion). Additionally, our digestive system is also able to emulsify foods. We do this in the small intestine to help us break down fats. Emulsion works when an emulsifier (like bile in our digestive system) allows for fats to be separated into tiny droplets so that they are spread evenly throughout a liquid instead of not mixing (think of when you mix oil and vinegar - what happens?).

SUPPLIES:
• Baking tray or plate
• Whole milk
• Dish soap
• Food coloring

STEPS:
1. Pour a layer of milk onto the baking tray or plate
2. Gently drop a drops of food coloring onto the milk (spread them out so that there are some drops of food coloring all over the tray)
3. Add drops of dish soap on top of the food dye and watch what happens
4. Record your observations
5. If you know that milk contains fat and that dish soap is an emulsifier, what do you think is happening?
6. If you’re not sure, watch one of the expansion videos to see if you can figure it out!

HOW TO EXPAND:
• Watch this video on Emulsion
• Watch this video to learn about bile and emulsification
• Ask your friends and family as to why they think oil and water don’t mix. Record their responses, taking note if responses were said more than once. Watch this video as to why oil and water don’t mix
ADAPTATIONS/GOING VIRTUAL:
If you’re unable to obtain materials for this activity, watch this video of the experiment and see if you can explain why it happened.

DISCUSSION QUESTIONS:
1. Why do you think emulsifying fats helps us with digestion?
2. Can you think of examples of liquids that don’t mix? What do you think would happen when you add an emulsifier?
3. Why is bile important for digestion?
CREDIT/SOURCES:

BALANCED MEAL

FOOD LABELS

BLOOD SUGAR GAME

FOOD COLORS RESEARCH ACTIVITY


**SPORTS NUTRITION**


**TAKE OUT MAKEOVER**


**WHAT IS EMULSIFICATION?**

1. 

