GET FIT 4 LIFE!

OKLAHOMA 4H YOUTH DEVELOPMENT

PURPOSE

Participants will be able to:

- Make smart food choices lower in solid or hydrogenated fats.
- Understand that the body needs "good" fats to function.
- Understand what the term "high fat" means.
- Understand the long-term negative impact of eating too many "bad" fats in our daily diet.

SUPPLIES/EQUIPMENT NEEDED

Container of Shortening—need at least 65 teaspoons for test tubes and more if participants take part in the activity.

Measuring Spoons—teaspoons
Labeled test tubes with pre-measured fat
Disposable small containers

GOOD VS. BAD FAT

Good—Polyunsaturated (PUFA) contain some fatty acids that are necessary for health—called "essential fatty acids." The monounsaturated (MUFA) and PUFAs found in fish, nuts, and vegetable oils do not raise LDL ("bad") cholesterol levels in the blood. In addition to the essential fatty acids they contain, oils are the major source of vitamin E.

Bad—Solid fats are fats that are solid at room temperature, like beef fat, butter, and shortening. Solid fats mainly come from animal foods and can also be made from vegetable oils through a process called hydrogenation. Bad fats are called "saturated or trans fatty acids."

Animal products containing solid fats also contain cholesterol. Saturated fats and trans fats tend to raise "bad" (LDL) cholesterol levels in the

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UNITS

- FIT FOR LIFE
- IS YOUR PLATE LOADED
- HOW MUCH IS TOO MUCH
- WHAT'S UP WITH THE LABEL
- IS THE GLASS 1/2 FULL OR 1/2 EMPTY
- MOVE IT OR LOOSE IT
- DUMP THE PLUMP
- A WALKING WATER BOTTLE
- GAME ON! FITNESS ACTIVITY SUPPLEMENT

TIME NEEDED

One on One	15 minutes
Group Setting	30-45 minutes

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blood. This, in turn increases the risk for heart disease. To lower risk for heart disease, cut back on foods containing saturated fats and trans fats.

In some cases, the fat in foods is not visible. For example, the fat in fluid milk is a solid fat. Milk fat (butter) is solid at room temperature but it is suspended in the fluid milk by the process of homogenization.

All fats and oils are a mixture of saturated fatty acids and unsaturated fatty acids. Solid fats contain more **saturated fats** and/or **trans fats** than oils. Oils contain more monounsaturated (MUFA) and polyunsaturated (PUFA) fats. Saturated fats, trans fats, and cholesterol tend to raise "bad" (LDL) cholesterol levels in the blood, which in turn increases the risk for heart disease.

To lower risk for heart disease, cut back on foods containing saturated fats, trans fats, and cholesterol.

http://www.choosemyplate.gov/food-groups/oils.html
http://www.choosemyplate.gov/weight-management-calories/calories/solid-fats.html

More about Fats….

Saturated	**Trans**	**Mono-unsaturated/ Poly -unsaturated**
Commonly Found in: Beef, poultry skin, cream, butter, cheese, whole dairy products, palm and coconut oils *Health Effect* • Raises Bad Cholesterol • Weight gain/ Overweight • Increases risk of Heart Disease and diabetes, depression, asthma, sleep apnea, high blood Pressure *Daily Limit:* 7% (140 cals or 16 grams)*	*Commonly Found in:* Baked Goods – cookies, doughnuts etc., Fried Foods – French fries, fried chicken etc. Snack foods – popcorn, crackers, traditional stick margarine Vegetable oils – olive, canola, peanut and sesame *Health Effect:* • Raises bad Cholesterol • May lower good cholesterol • Weight gain/ Overweight • Increases risk of Heart Disease, etc… *Daily Limit: 1% or less (20 calories, 2 grams)**	*Commonly Found in:* Avocados, many nuts and seeds Vegetable oils – soybean, corn, safflower and sunflower; Fatty fish – salmon, tuna, mackerel, herring ad trout; Most nuts and seeds *Health Effect* • Reduces bad cholesterol • May lower risk of heart disease *Daily Limit*: 25 to 35% (500 to 700 cals, or 55 to 77 grams)*

* Calories and grams based on 2,000 calorie day

EDUCATION

1. Ask students to spoon out the amount of fat they think (hypothesis) is in each food item in chart below, including the recommended RDA.
2. Initiate discussion with items noted in "process/evaluation."
3. Show test tubes and let them compare with their earlier "hypothesis."

Prepare test tubes and labels for each of the following foods/meals. Measure out solid, melt and pour into tubes. Once it has congealed. Stopper tube	Grams of fat—all grams of fat have been translated into teaspoons (Tsp) of shortening.		Teaspoons of shortening—1 Tsp of shortening equals 4 grams of fat.
Recommended Daily Allowance (RDA) of Fat	65 grams of fat	=	16.25 tsps.
Big Mac Meal Value Meal with large fries	63 grams of fat	=	15.75 tsps
Burger King's BK Fish sandwich	32 grams of fat	=	8 tsps
Taco Bell's Taco Salad	52 grams of fat	=	13 tsps
One cup of ice cream	25 grams of fat	=	6.25 tsps
One regular size Milky Way	10 grams of fat	=	2.5 tsps
Apple	zero fat	=	0 tsps

Cis and trans fatty acid chains assume very different shapes (cis fatty acids are bent, while trans fatty acids are straight), and have different effects on the body.

Cis fatty acids occur widely in nature, and are found widely in plant food sources. Many unsaturated fatty acids found in natural sources are essential to normal health. These include the essential omega-3 fatty acids.

Trans fatty acids in the diet are almost exclusively man-made, and in recent years have been found to be associated with increased cardiovascular risk

GET FIT 4 LIFE STATION

The activity above can be used as a Get Fit 4 Life station. Place disposable cups or bowls, shortening, teaspoons, paper towels and a copy(ies) of the instruction sheet on page 6 on the table. All supplies except shortening and paper towels are in the Get Fit 4 Life Equipment/Supply Kit. Participants will choose one item from the list and fill their disposable container with the amount of fat they think is in that food item. Participants can self-check the test tube with their food item to compare what they thought versus the actual amount of fat. If funds are available to purchase the food items listed above, that would make a great visual to add to the station!

RECREATION

Scrambled Food Spelling Game

Equipment/Supplies:

- None

Instructions:

1. Participants will be challenged to spell and use their physical bodies to create letters.
2. Divide the group into teams of 6-10 people. The bigger the groups the bigger the words which can be spelled.
3. Provide a large area for each team where the leader can see both teams clearly.
4. The leader will call out a food and at the leader's start, the team will line up and spell the word using only their body. The team can choose how they create the letters. When the team finishes, they yell together, "DONE!" The team members must then spell the word out loud so the leader can check their work to determine if they were correct. (Note: For younger participants, the leader may need to write the food on a chalkboard or easel paper for them to see. Some words may be too difficult for 3-5 graders!)
5. The team who spells the word correctly earns a point. If the leader checks a team's spelling and it is wrong, the other team gets a chance to see if their word is spelled correctly.
6. The leader will keep track of the points for each team. Below are food words that include 6, 7, 8, 9 and 10+ letters. Use the list of foods that is appropriate for the number of people on the teams.

Extend the learning: As food words are used in the activity, you can ask participants if they have tasted the food, did they like it or not, do they know how it is prepared? Does it contain fat? What kind? If you have the resources, choose some of the more unusual foods like lobster, papaya, artichokes or quiche and conduct a taste test.

6 LETTER FOODS	7 LETTER FOODS	8 LETTER FOODS	9 LETTER FOODS	10 OR MORE LETTER FOODS
TOMATO	CHICKEN	CUCUMBER	ASPARAGUS	BLACKBERRY
RADISH	POPCORN	BROCCOLI	BLUEBERRY	STRAWBERRY
TURKEY	BISCUIT	MUSHROOM	RASPBERRY	CAULIFLOWER
LEMONS	BURRITO	PORKCHOP	SPAGHETTI	CROISSANTS
MUFFIN	CHOWDER	SANDWICH	SWEET CORN	WATERMELON
HOTDOG	LETTUCE	TORTILLA	DUMPLINGS	BUTTERMILK
SALMON	LOBSTER	MEATLOAF	CRANBERRY	BLACK BEANS
SQUASH	PANCAKE	LAMB CHOP	GREEN PEAS	CANTALOUPE
QUICHE	WAFFLES	COLESLAW	PINEAPPLE	GRAPEFRUIT
SHRIMP	SAUSAGE	CRACKERS	KIWIFRUIT	GREEN BEANS
YOGURT	ORANGES	AVACADOS	MUSHROOMS	FRENCH BREAD
NACHOS	SPINACH	EGGPLANT	BROWN RICE	VERMICELLI
PAPAYA	OATMEAL	SARDINES	RICE PILAF	QUESADILLA
ALMOND	BRISKET	SCALLOPS	HAMBURGER	ARTICHOKES
FAJITA	BOLOGNA	SOYBEANS	NECTARINE	MOZZARELLA
OYSTER	CARROTS	BUCKWHEAT	CHOCOLATE	APPLE SAUCE
CREPES	PICKLES	CINNAMON	CASSEROLE	BLACK OLIVE
PEANUT	HALIBUT	ROSEMARY	ANCHOVIES	KIDNEY BEAN
KEBABS	VENISON	APRICOTS	SWORDFISH	MAPLE SYRUP
HOMINY	PUMPKIN	KIELBASA	CRAB CAKES	WHEAT BAGEL

PROCESS/EVALUATION

Questions you might ask…

- Is there such thing as good and bad fats? What would qualify as good and bad? Explain about saturated, trans, non-unsaturated and Poly-unsaturated. Brainstorm and list foods under each heading.
- What effect could "fats" have on a persons health? Make a list of diseases and health problems resulting from eating too much of the wrong kind of fat. Trans fatty acids in the diet are almost exclusively man-made, and in recent years have been found to be associated with increased cardiovascular risk

  Fatty acids are contained in "good" fats—mono-unsaturated/polyunsaturated. Fatty acids are a form of fat critical to several vital functions of life, including energy production, cell membrane integrity, brain development, and metabolism.

Cooperative effort of

OKLAHOMA STATE UNIVERSITY EXTENSION

4-H YOUTH DEVELOPMENT

Walmart

REFERENCES

Choose MyPlate, United States Department of Agriculture, www.choosemyplate.gov.

Heart Health Center, http://heartdisease.about.com.

Oklahoma
Cooperative Extension Service
4-H Youth Development
205 4-H Youth Development Bldg
Stillwater, OK 74078-6064

Phone: 405-744-8891
Fax: 405-744-6522
http://oklahoma4h.okstate.edu/

DUMP THE PLUMP

- CHOOSE ONE OF THE FOODS LISTED BELOW.
- HOW MUCH FAT (IN TEASPOONS)DO YOU THINK IS IN THAT FOOD?
- USE THE TEASPOONS TO MEASURE OUT SHORTENING INTO YOUR DISPOSABLE CONTAINER.

- CHECK YOUR MEASUREMENT AGAINST THE ACTUAL AMOUNT OF FAT IN THE TEST TUBE LABELED WITH YOUR FOOD ITEM.
- RETURN THE SHORTENING TO THE BIG CONTAINER AND THROW AWAY YOUR DISPOSABLE CONTAINER.

⇒ BIG MAC MEAL VALUE MEAL WITH LARGE FRIES

⇒ BURGER KINGS BK FISH SANDWICH

⇒ TACO BELLS TACO SALAD

⇒ ONE CUP OF ICE CREAM

⇒ ONE REGULAR SIZE MILKY WAY

⇒ APPLE

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