ORFACS Conference 2016

Julie Jacobs – Nutrition Educator
Linus Pauling Institute
Healthy Youth Program
Linus Pauling Institute (LPI)

- LPI is a research institute at Oregon State University investigating the role that vitamins, essential minerals (micronutrients), plant-based chemicals, and dietary supplements play in enhancing human health and preventing chronic disease.
- LPI’s mission is to promote optimal health through cutting-edge nutrition research and trusted public outreach.
- “Advancing healthspan, not just lifespan, is our passion!”
Linus Pauling

- At the Linus Pauling Institute, we follow in the footsteps of our founder, Dr. Linus Pauling.
- Outgoing and public-minded
- Humanitarian
- Scientists should communicate with the public
- Make knowledge & research accessible for all to benefit.
- Outreach and communication are essential to the LPI mission.
The Healthy Youth Program was developed in 2009 in response to the alarming increase of childhood overweight and obesity in the United States.

- Childhood obesity is one of the most serious public health challenges of the 21st century.
- Childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years.

~ World Health Organization, 2016, and Centers for Disease Control and Prevention, 2015

~ Graphic from Leadership for Healthy Communities, A Robert Wood Johnson Foundation Program
Health Effects

Overweight and obesity are associated with increased risk for cardiovascular disease, diabetes, and more than a dozen types of cancers.

~ Centers for Disease Control and Prevention, 2015
At the Healthy Youth Program...

- We believe that it is an investment in our future to give all children opportunities to eat healthful, nourishing foods. In our experience, kids are more willing to eat healthful foods when they grow it and cook it themselves. As part of LPI’s public outreach, we offer hands-on cooking, nutrition, and gardening programs for youth and their families.
At the Healthy Youth Program...

- We offer cooking & nutrition classes for youth and families
  - Fresh Grown Cooking for Kids – Ages 6-11
  - Master Chefs & Super Chefs – Ages 11-15
  - Simply Delicious at Pediatrics Offices – Family Class – All Ages

- We offer pre-school parent/child interactive classes focused on healthy lifestyle habits
  - Healthy Sprouts – Ages 3-5

- We manage three school gardens in Corvallis where we host several after school programs and summer camps
  - Garden Clubs

- Our mission is to empower youth and their families to achieve optimal health through hands-on education.
Master Chefs

Research findings suggest that cooking programs can have a positive influence on children’s food preferences, attitudes, and behaviors.

Master Chefs brings hands-on nutrition education to teens through a fun and interactive cooking class.

Goals
-Expose youth to healthful foods
-Teach them how to prepare these foods
-Teach kitchen safety and basic nutrition

To build teen excitement around cooking, the final day of each session culminates with a team cooking competition!
Super Chefs – Snack Attack

In partnership with BGCC 65% of these teens are low-income
• 36% are minorities
• 28% come from single-parent households

These classes include lessons on nutrition and kitchen safety—empowering teens by boosting confidence in the kitchen.
Recipes used in the classes are:
• Simple
• Low-cost
• Use healthful, nourishing ingredients
• Focus on vegetables/fruits, whole grains, and minimal sugar
The mission of Family and Consumer Sciences Education is to prepare students for family life, work life, and careers in Family and Consumer Sciences by providing opportunities to develop the knowledge, skills, attitudes, and behaviors needed for:

- Strengthening the well-being of individuals and families across the life span.
- Becoming responsible citizens and leaders in family, community, and work settings.
- Promoting optimal nutrition and wellness across the life span.


<table>
<thead>
<tr>
<th>National Standards for Family and Consumer Sciences Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2.1 Analyze the effect of nutrients on health, appearance, and peak performance.</td>
</tr>
<tr>
<td>14.2.2 Analyze the relationship of nutrition and wellness to individual and family health throughout the life span.</td>
</tr>
<tr>
<td>14.2.3 Analyze the effects of food and diet fads, food addictions, and eating disorders on wellness.</td>
</tr>
<tr>
<td>14.2.4 Analyze sources of food and nutrition information, including food labels, related to health and wellness.</td>
</tr>
<tr>
<td>14.3.1 Apply various dietary guidelines in planning to meet nutrition and wellness needs.</td>
</tr>
<tr>
<td>14.3.2 Design strategies that meet the health and nutrition requirements of individuals and families with special needs.</td>
</tr>
<tr>
<td>14.3.3 Demonstrate ability to select, store, prepare, and serve nutritious and aesthetically pleasing foods.</td>
</tr>
<tr>
<td>14.4.1 Analyze conditions and practices that promote safe food handling.</td>
</tr>
<tr>
<td>14.4.5 Analyze food borne illness factors, including causes, foods at risk, and methods of prevention commercially and by individuals and families.</td>
</tr>
</tbody>
</table>
Food as Fuel:
Good Food, Good Mood

Feeling good – mind & body with the foods you eat and the choices you make!

Julie Jacobs – Nutrition Educator
Linus Pauling Institute
Healthy Youth Program
What did you eat most recently?

How do you feel?
• Are you still hungry or too full?
• Do you feel – Energized or tired?
• Is your brain feeling clear and ready to function?
• Is your body feeling strengthened and ready to move?
• Which food groups did you eat?
Eat for your body
Different foods have different actions in your body.

Who can name the any of the 6 Major Nutrients?

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Primary functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Dissolves and carries nutrients, removes waste, and regulates body temperature</td>
</tr>
<tr>
<td>Protein</td>
<td>Builds new tissues, antibodies, enzymes, hormones, and other compounds</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>Provides energy</td>
</tr>
<tr>
<td>Fat</td>
<td>Provides long-term energy, insulation, and protection</td>
</tr>
<tr>
<td>Vitamins</td>
<td>Facilitate use of other nutrients; involved in regulating growth and manufacturing hormones</td>
</tr>
<tr>
<td>Minerals</td>
<td>Help build bones and teeth; aid in muscle function and nervous system activity</td>
</tr>
</tbody>
</table>
### Macronutrients

<table>
<thead>
<tr>
<th>NUTRIENT</th>
<th>FUNCTIONS / BENEFITS</th>
<th>FOOD SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
<td>Source of energy, helps body use other nutrients</td>
<td>Cereals, fruit, vegetables, breads, sugars, milk, honey, cakes, cookies, pies, pasta</td>
</tr>
<tr>
<td>Fats</td>
<td>Energy source, maintain body temperature, helps transport fat-soluble vitamins</td>
<td>Margarine, butter, oils, cream, shortening, nuts, bacon, olives, whole milk</td>
</tr>
<tr>
<td>Proteins</td>
<td>Help build and repair body tissues, balance body chemicals, supply energy</td>
<td>Meat, poultry, fish, milk, cheese, nuts, dried peas and beans</td>
</tr>
</tbody>
</table>
Micronutrients
Know what your brain needs to function?

- What foods do you think “power” your brain?
- What foods do you think your brain can use most efficiently?

- Your brain runs primarily on carbohydrates. In fact, while it only accounts for 2% of your body weight, your brain uses 50% of the glucose your body needs as fuel.

- Complex carbohydrates – like whole grains and starchy vegetables – take longer for your body to break down into glucose.
  - This means these carbs offer a longer-term, more sustainable source of energy for your brain.

- Your brain also needs water, vitamins and minerals to run properly.
Eat for Healthy Skin

What to Eat & Drink for Healthy Skin!

• Water – Hydration is KEY
• Low-Fat Dairy – Vitamin A
• Blackberries, blueberries, strawberries, and plums – Antioxidants
• Salmon, Walnuts, Canola Oil, and Flax Seed – Essential fatty acids
• Healthy Oils, like cold pressed olive oil – Vitamin E
• Whole-wheat products like bread, muffins, and cereals; turkey, tuna and brazil nuts – Selenium
• Green Tea – Anti-inflammatory properties

Eat for Energy
To get the most energy from your food, eat “Real Food” at every meal and snack.

- **Eat This!**
  - Fruits and vegetables
  - Lean protein
  - Healthy vegetable based fats
  - Whole grains
  - Low-fat dairy

- **Avoid These…..**
  - Processed foods
  - Sugary snacks
  - Too much caffeine
  - Gimmicky “energy” bars and drinks whose ingredient lists look like a science experiment
  - Sports drinks like Gatorade (unless you are doing intense and long bouts of exercise 90+ minutes)
Eat for Your Mood

Whole Foods
• In a recent study of close to 3,500 men and women published in the British Journal of Psychiatry, those who reported eating a diet rich in whole foods in the previous year were less likely to report feeling depressed than those who ate lots of desserts, fried foods, processed meats, refined grains and high-fat dairy products.

Fruits and Veggies
• Previous studies have shown that antioxidants in fruits and vegetables and omega-3 fatty acids in fish are associated with lower risk of depression.
• Folate, a B vitamin found in beans, citrus and dark green vegetables like spinach, affects neurotransmitters that impact mood. It’s possible that the protectiveness of the whole-food diet comes from a cumulative effect of these nutrients.

http://www.eatingwell.com/nutrition_health/mind_body_spirit_center/7_foods_to_boost_your_mood_naturally?page=8
Carbohydrates:

- Despite persistent myths to the contrary, carbs don’t make you fat and they can boost your mood. In a new study in the *Archives of Internal Medicine*, people who for a year followed a very-low-carbohydrate diet—which allowed only 20 to 40 grams of carbs daily, about the amount in just 1/2 cup of rice plus one piece of bread—experienced more depression, anxiety and anger than those assigned to a high-carb diet that focused on low-fat dairy, whole grains, fruit and beans. Researchers suspect that carbs promote the production of serotonin, a feel-good brain chemical. Also, the challenge of following such a restrictive low-carb diet for a full year may have negatively impacted mood.

Eat for Your Mood

http://www.eatingwell.com/nutrition_health/mind_body_spirit_center/7_foods_to_boost_your_mood_naturally?page=8
Added Sugars

What is Added Sugar?

- Sugars in your diet can be naturally occurring or added.
  - Naturally occurring sugars are found naturally in foods such as fruit (fructose) and milk (lactose).
  - Added sugars are sugars and syrups put in foods during preparation or processing, or added at the table.
- Sugars are added not just to sweet foods; like cookies or granola bars, but also to many savory foods; like marinara sauce and bread.
Healthy kids are sweet enough

Kids age 2-18 should have **less than 25 grams** or **six teaspoons** of added sugars daily for a healthy heart.

Source: American Heart Association statement. Added Sugars and Cardiovascular Disease Risk in Children
Added Sugars

- How much is too much?
- An important fact to keep in mind when reading nutrition labels:
  4 grams of sugar ≈ 1 teaspoon

---

**Campbell’s Meat Sauce**

**Nutrition Facts**

- Serving Size: 1/2 cup (120mL)
- Servings Per Container: about 10

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories</th>
<th>Calories from Fat</th>
<th>% Daily Value**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>260 cal</td>
<td>16 cal</td>
<td>2%</td>
</tr>
<tr>
<td>Total Fat</td>
<td>1g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Polyunsaturated Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium</td>
<td>670mg</td>
<td>29%</td>
<td>17%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>10g</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>2g</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Sugars</td>
<td>9g</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Protein</td>
<td>1g</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Ingredients:**
- Tomato puree, water, tomato paste, onion, tomato powder, spices, salt, dehydrated garlic, sugar, salt, citric acid, monosodium glutamate, natural flavor.
- Contains 2% or less of corn syrup, salt, malt flavor, modified corn starch, molasses, palm oil, cinnamon, natural and artificial flavor, BHT for freshness.

---

**Kellogg’s® Raisin Bran Crunch®**

**Nutrition Facts**

- Serving Size: 1 Cup (53g)

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories</th>
<th>Calories from Fat</th>
<th>% Daily Value**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>230 cal</td>
<td>10 cal</td>
<td>2%</td>
</tr>
<tr>
<td>Total Fat</td>
<td>1g</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Polyunsaturated Fat</td>
<td>0g</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium</td>
<td>140mg</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>45g</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>3g</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Sugars</td>
<td>19g</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Protein</td>
<td>4g</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Ingredients:** Whole grain wheat, sugar, raisins, rice, wheat bran, whole grain oats, brown sugar syrup, glycerin, contains 2% or less of corn syrup, salt, malt flavor, modified corn starch, molasses, palm oil, cinnamon, honey, natural and artificial flavor, BHT for freshness.

---

**Campbell’s Meat Sauce**

Sugar Tubes Lesson

- Make your own:
  - Empty test tubes
  - Clear or white labels
  - Sugar
  - Nutrition label info for popular foods
    - Serving size
    - Calories
    - Amount of sugar and/or added sugar (grams and/or teaspoons)
And Later in Life…..

- If you eat healthy foods, keep moving and make healthy habits now…..
- You will still be healthy!
  - Fewer Diseases
    (Cancer, diabetes, heart disease, high cholesterol)
  - Higher Self Esteem
  - Feel and Look Younger for Longer!
CHOICE

- Being healthy and eating well is a series of choices.
- If one meal ends up being unhealthy, that does not mean to give up for the day or the week.
- Each time we choose to eat nutritious foods, exercise or perform a healthy habit, we are adding WORTHWHILE minutes, days or even years to our lives.
Snack Attack!

Power Spheres
This is a great snack to stay energized after exercise. These yummy treats are high in magnesium which is important for muscle recovery and bone health.

**Serves 20**

**Ingredients**

- ½ cup dried apricots
- ½ cup dried apples
- 3 brown rice cakes
- ¼ cup pumpkin seeds
- ¼ cup sunflower seeds
- ½ cup rolled oats
- ¾ cups honey
- ¼ cup peanut or almond butter
- ½ cup shredded, unsweetened coconut
- ½ cup semi-sweet chocolate chips

**Nutrition Facts**

<table>
<thead>
<tr>
<th>Amount per Serving</th>
<th>Calories from Fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories 170</td>
<td>80</td>
</tr>
<tr>
<td>% Daily Value*</td>
<td></td>
</tr>
<tr>
<td>Total Fat 9g</td>
<td>14%</td>
</tr>
<tr>
<td>Saturated Fat 3g</td>
<td>15%</td>
</tr>
<tr>
<td>Trans Fat 0g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium 15mg</td>
<td>1%</td>
</tr>
<tr>
<td>Total Carbohydrate 22g</td>
<td>7%</td>
</tr>
<tr>
<td>Dietary Fiber 2g</td>
<td>8%</td>
</tr>
<tr>
<td>Sugars 16g</td>
<td></td>
</tr>
<tr>
<td>Protein 4g</td>
<td></td>
</tr>
<tr>
<td>Vitamin A 2%</td>
<td></td>
</tr>
<tr>
<td>Vitamin C 0%</td>
<td></td>
</tr>
<tr>
<td>Calcium 2%</td>
<td></td>
</tr>
<tr>
<td>Iron 6%</td>
<td></td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

<table>
<thead>
<tr>
<th>Calories</th>
<th>Fat</th>
<th>Saturated Fat</th>
<th>Cholesterol</th>
<th>Sodium</th>
<th>Total Carbohydrates</th>
<th>Dietary Fiber</th>
<th>Total Sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000</td>
<td>25g</td>
<td>8g</td>
<td>25g</td>
<td>2,400mg</td>
<td>30g</td>
<td>2g</td>
<td>30g</td>
</tr>
</tbody>
</table>

**Directions**

1. Combine apricots, apples and rice cakes in a food processor, and pulse to a fine texture.
2. Transfer mixture to a large bowl.
3. Next, pulse pumpkin seeds, sunflower seeds, and oats until well combined.
4. Add seed mixture to fruit mixture.
5. Add honey, nut butter, coconut and chocolate chips, to the seed and fruit mixture.
6. Stir until well combined and chill in the refrigerator for 1 hour.
7. Roll into golf ball sized spheres. Wrap and refrigerate for a quick snack on the go or after exercise.
While We Snack - Let’s Chat….Get into Groups!

Fast Food Comparisons

- Do you ever eat fast food?
- What do you like to eat from fast food restaurants?
- Is there a healthy alternative you could try?