
Presented by:
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Mary Beth Walsh
Susanne Gulino
Let’s THINK and EVALUATE:

What foods do children eat daily and what nutrients are they getting?
How many of these foods are in most children’s diets each day?
How many of these foods are in most children’s diet each day?
How much of this do children in your class drink each day?
How much of these do children drink each day?
Food affects mood.

- **Mood Supporters**
  - Vegetables
  - Fruit
  - Cold Water Fish
  - Nuts
  - Beans
  - Non-fat yogurt
  - Eggs (free-range, organic is best)
  - Whole grains

- **Foods that produce Negative Mood Effects**
  - Sugar
  - White flour
Omega 3s and Mood

- Low levels of DHA (formed from Omega 3s) are associated with depression.

- Sources of Omega 3s include: salmon, mackerel, sardines, walnuts, flax, pumpkin seeds, leafy greens and hemp seeds.
We ARE what we eat.

- Hair
- Skin
- Nails
- Blood
- Organs
- Bones
Leafy greens are lacking in the Standard American Diet (S.A.D.)

Leafy greens provide us with: **Omega 3s**, **Vitamin A** (carotenoids), **B-complex** vitamins, **Vitamin C**, **Vitamin K**, **iron**, **calcium**, **zinc**, **iodine**, **magnesium**, **selenium**, **potassium**, **phosphorous** and all **trace minerals**, as well as **fiber**.
How many of these phytochemicals that prevent disease are in your family’s diet?

<table>
<thead>
<tr>
<th>Phytochemical</th>
<th>Actions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lycopene</td>
<td>Anti-carcinogenic</td>
<td>Tomatoes, red grapefruit</td>
</tr>
<tr>
<td>Isothiocyanates</td>
<td>Inhibit cancer growth</td>
<td>Broccoli, cabbage, cauliflower</td>
</tr>
<tr>
<td>Isoflavones</td>
<td>Block hormonally stimulated cancers, lower cholesterol levels</td>
<td>Soy beans and soy-derived foods</td>
</tr>
<tr>
<td>Anthocyanins</td>
<td>Antioxidants, lower cholesterol, stimulate immunity</td>
<td>Berries, cherries, grapes, currants</td>
</tr>
<tr>
<td>Terpenoids</td>
<td>Antioxidants, antibacterial, prevent stomach ulcers</td>
<td>Peppers, cinnamon, horseradish, rosemary, thyme, turmeric</td>
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</tbody>
</table>
### Phytochemicals

<table>
<thead>
<tr>
<th>Phytochemical</th>
<th>Actions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flavonoids</td>
<td>Anti-oxidants, anti-carcinogenic, protect against heart disease</td>
<td>Broccoli, onions, grapes, apples, cherries, tomatoes</td>
</tr>
<tr>
<td>Phenolic compounds</td>
<td>Anti-oxidants, protect against carcinogenic changes</td>
<td>Nuts, berries, green tea</td>
</tr>
<tr>
<td>Sulfides</td>
<td>Anti-carcinogenic, inhibit blood clots</td>
<td>Garlic, onions, chives</td>
</tr>
</tbody>
</table>
How many phytochemicals do you think are in this meal?
Nutrition Facts from the Source:

### Nutrition Facts for Your McMeal

**Bag a McMeal**

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
<th>Total Fat (g)</th>
<th>Saturated Fat (g)</th>
<th>Trans Fat (g)</th>
<th>Cholesterol (mg)</th>
<th>Sodium (mg)</th>
<th>Carbohydrates (g)</th>
<th>Dietary Fiber (g)</th>
<th>Protein (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca-Cola® Classic (Child)§</td>
<td>110</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>29</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Small French Fries</td>
<td>250</td>
<td>13</td>
<td>2.5</td>
<td>3.5</td>
<td>0</td>
<td>140</td>
<td>30</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chicken McNuggets® (4 piece)</td>
<td>170</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>25</td>
<td>450</td>
<td>10</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>520</strong></td>
<td><strong>23</strong></td>
<td><strong>5</strong></td>
<td><strong>4.5</strong></td>
<td><strong>25</strong></td>
<td><strong>590</strong></td>
<td><strong>70</strong></td>
<td><strong>3</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

% Daily Value**:

|                | - | 35 | 24 | -  | 8  | 25 | 23 | 12 | - |

Let’s look at an ingredients list.
Do these both qualify as “fruit”?

or
Ingredients to avoid:

- High Fructose Corn Syrup/Sugar
- Hydrogenated or partially hydrogenated oils = trans fatty acids
- Artificial colors and flavors
- Additives
- Preservatives
Sugars hide in “not-so-obvious” places.

**Ingredients**: Unbleached Enriched Wheat Flour, Water, Whole White Wheat Flour, **High Fructose Corn Syrup**, Wheat Gluten, Cornmeal, Yeast, Salt, Monoglycerides, **Preservatives** (Calcium Propionate, Sorbic Acid, Guar Gum, Citric Acid, Soy Flour)

**READ LABELS!!!**
High Fructose Corn Syrup: Just Another Sugar or Worse?

- The January/February 2008 issue of *Nutrition Action* reported that HFCS is no worse than sugar (but that sugar is harmful).

- The results of a study funded by the Center for Advanced Food Technology of Rutgers University that were presented at the 234th annual meeting of the *American Chemical Society*, linked HFCS to diabetes in children.
Hydrogenated or Partially Hydrogenated Oils = Trans Fat

- Raises LDL
- Raises triglycerides
- Lowers “good” HDL cholesterol
- Makes blood cell fragments “stickier” and more likely to form blood clots.

This adds up to the potential for heart disease. Trans fat has also been linked to cancer.
What nutrition is there in this cookie?

Oreos Ingredients:

Sugar*, flour, hydrogenated soybean oil, cocoa, high fructose corn syrup*, whey, corn starch, baking soda, salt, soy lecithin, vanillin (artificial), chocolate

*Two types of sugar ingredients!
## Typical Processed Foods

<table>
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<tr>
<th>Food</th>
<th>Trans Fat (grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunkin Donut</td>
<td>6</td>
</tr>
<tr>
<td>Burger King French Fries</td>
<td>5</td>
</tr>
<tr>
<td>Nabisco Oreos</td>
<td>2</td>
</tr>
<tr>
<td>McDonald’s Chicken McNuggets</td>
<td>3</td>
</tr>
<tr>
<td>Orville Redenbacher’s Popcorn</td>
<td>3</td>
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*From *Eat, Drink, and Be Healthy* by Walter C. Willet, M.D. with Patrick J. Skerrett*
Are there any of these in an Oreo?

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ScienceDaily (Jul. 25, 2006) — Poor nutrition early in life can impair neural development, leading to lower IQ in humans and flawed song learning in birds. Recent evidence indicates that many organisms can offset some of the changes associated with early poor nutrition by modifying their physical development. For example, poorly nourished children can undergo a period of accelerated growth once their diet improves, ultimately appearing normal as an adult. But such compensatory measures may come at a price, with cognitive or other developmental disabilities emerging later in life.
The brain needs many different nutrients.

- The neurons must be fed.
- The body’s messengers, the neurotransmitters, are made from the amino acids in **proteins**.
- Over half the brain is **fat**. Fat also regulates memory and mood (Omega 3s).
- **Carbohydrates** provide the brain fuel.
- **Water** is needed for concentration and mental alertness.
Food Affects Behavior

- A carefully designed controlled study in the UK, found that **common food dyes and a preservative (sodium benzoate)** were found to increase **hyperactive behaviors and inattention** in three-year-olds and children eight and nine.

- Sugar increases the release of adrenaline in children.
ADHD

"...a trial of a preservative-free, food coloring-free diet is a reasonable intervention."

-- American Academy of Pediatrics, February 2008
They ARE what they eat.