Eating for Optimal Weight and Health

Joel Fuhrman, M.D.
The Standard American Diet (SAD)

- Processed foods: 54%
- Animal products: 32%
- Vegetables, fruit, nuts and beans: 11%
- Whole grains: 4%

Source: Economic Research Service, United States Department of Agriculture: Loss-Adjusted Food Availability
Two Types of Nutrients

**Macronutrients**
protein, carbohydrates and fat

**Micronutrients**
vitamins, minerals and *phytochemicals*
Dr. Fuhrman’s Health Equation

\[ H = \frac{N}{C} \]

Health Expectancy = Nutrients / Calories
# Dr. Fuhrman’s ANDI Scores

<table>
<thead>
<tr>
<th>Food</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kale</td>
<td>1000</td>
</tr>
<tr>
<td>Romaine</td>
<td>510</td>
</tr>
<tr>
<td>Broccoli</td>
<td>294</td>
</tr>
<tr>
<td>Tomato</td>
<td>186</td>
</tr>
<tr>
<td>Strawberries</td>
<td>182</td>
</tr>
<tr>
<td>Salmon</td>
<td>34</td>
</tr>
<tr>
<td>White potato</td>
<td>28</td>
</tr>
<tr>
<td>Chicken breast</td>
<td>24</td>
</tr>
<tr>
<td>White bread</td>
<td>17</td>
</tr>
<tr>
<td>White pasta</td>
<td>16</td>
</tr>
<tr>
<td>Olive oil</td>
<td>10</td>
</tr>
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</table>

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Cancer Mortality in Modern Countries


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Deaths From Heart Diseases

Source: American Heart Association – CDC/NCHS.
Annual Soft Drink Consumption in the U.S.

# of 12 oz. cans per person

- 1947
- 1957
- 1967
- 1977
- 1987
- 1997

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Fast Vs. Slow Food:
Caloric Duration in the Blood Stream

Fast Food
(oil and white flour)

Slow Food
(beans and nuts)
Refined Foods Implicated

- Heart disease
- Stroke
- Diabetes
- Uterine cancer
- Breast cancer
- Colon cancer
- Prostate cancer
- Stomach cancer
<table>
<thead>
<tr>
<th>Medium Glycemic Load</th>
<th>Low Glycemic Load</th>
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<tbody>
<tr>
<td>Corn</td>
<td>Lentils</td>
</tr>
<tr>
<td></td>
<td>Apples</td>
</tr>
<tr>
<td>Brown rice</td>
<td>Kiwi</td>
</tr>
<tr>
<td>Sweet potato</td>
<td>Green peas</td>
</tr>
<tr>
<td>Grapes</td>
<td>Butternut squash</td>
</tr>
<tr>
<td>Rolled oats</td>
<td>Kidney beans</td>
</tr>
<tr>
<td>Whole wheat</td>
<td>Black beans</td>
</tr>
<tr>
<td>Mango</td>
<td>Watermelon</td>
</tr>
<tr>
<td></td>
<td>Oranges</td>
</tr>
<tr>
<td></td>
<td>Cashews</td>
</tr>
<tr>
<td></td>
<td>Strawberries</td>
</tr>
</tbody>
</table>
High Protein and Death

• 400% increased risk of cancer
• 75% increased deaths
Calories, Protein and IGF-1

Serum IGF-1 (ng/ml)

<table>
<thead>
<tr>
<th>Calories:</th>
<th>Vegan 1980</th>
<th>CR Society 1772</th>
<th>Western 2505</th>
</tr>
</thead>
</table>

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Increase in serum IGF-1 from a 5% increase in calories from animal/dairy protein.

- Animal products: 3.53%
- Dairy: 6.08%
- Produce: 0%
IGF-1 and Breast Cancer: Pooled data from 17 prospective studies

% Increase in breast cancer risk

Quintile of serum IGF-1

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Animal Product Consumption: Breast Cancer Rates Years Later

Breast Cancer Incidence, 2012

Calories from Animal Products, 1993
Bowel cancer and diet:

World Cancer Research Fund
American Institute for Cancer Research

1000+ studies

Plant-based diet:
whole grains, fruits, vegetables and beans
The Standard American Diet is SAD
A Dietary Model to Create Cancer

• High in
  – meat and cheese
  – refined carbohydrates

• Low in
  – vegetables, fruit, beans, nuts, seeds
## Protein Content (in grams)

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Protein Content (in grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinach (frozen, one cup)</td>
<td>7</td>
</tr>
<tr>
<td>Collards (two cups)</td>
<td>8</td>
</tr>
<tr>
<td>Peas (frozen, one cup)</td>
<td>9</td>
</tr>
<tr>
<td>Almonds (3 oz.)</td>
<td>10</td>
</tr>
<tr>
<td>Broccoli (two cups)</td>
<td>10</td>
</tr>
<tr>
<td>Tofu (4 oz.)</td>
<td>11</td>
</tr>
<tr>
<td>Sesame seeds (half cup)</td>
<td>12</td>
</tr>
<tr>
<td>Kidney beans (one cup)</td>
<td>8</td>
</tr>
<tr>
<td>Sunflower seeds (half cup)</td>
<td>9</td>
</tr>
<tr>
<td>Chickpeas (one cup)</td>
<td>10</td>
</tr>
<tr>
<td>Lentils (one cup)</td>
<td>10</td>
</tr>
<tr>
<td>Ground beef (4 oz.)</td>
<td>22.8</td>
</tr>
<tr>
<td>Chicken drumstick</td>
<td>25.4</td>
</tr>
<tr>
<td>Whole milk (one cup)</td>
<td>7.7</td>
</tr>
</tbody>
</table>
G-BOMBS

GREENS  BEANS  ONIONS  MUSHROOMS  BERRIES  SEEDS

Foods for Permanent Weight Loss and Optimal Health
Cruciferous Vegetables and Longevity

Study of 134,796 Chinese adults
Cruciferous Vegetables
Lower Risk of Cancer

• 50% reduction in breast cancer

• 57% reduction in colon cancer

Beans
Beans and Longevity

inositol pentakisphosphate – (IP-5)
→ will not allow tumors to grow

Beans twice a week, 50% reduction in colon cancer
Beans and Longevity

8% reduction in death for each 20 grams (2 tbsp) beans
Onions and Cancer

Highest consumers of onions:

• 56% reduction of colon cancer
• 73% reduction of ovarian cancer
• 88% reduction of esophageal cancer
• 71% reduction of prostate cancer
• 50% reduction in stomach cancer

Onions’ Beneficial Content

Allinase — Heat Sensitive Enzyme

Sulfides    Flavonoids    Chromium
Quercetin    Fructo-oligosaccharides
Mushrooms
Mushrooms are an Integral Part of the Human Immune System

Angiogenesis Inhibitors

Aromatase Inhibitors

Antigen-Binding Lectins (ABL)
Berries and Pomegranate

• Lower blood pressure
• Lower glycemic effect of other foods
• Protect the brain
• Powerful anti-cancer effects
Seeds

flax  chia  sesame

Lignans fight cancer
Dietary Lignans Slow Tumor Growth

• After being diagnosed with breast cancer, women ate a control or flax-containing muffin daily (32-39 days)

➔ Significant tumor cell death and decreased tumor cell proliferation in flax group

Lignans Enhance Breast Cancer Survival

<table>
<thead>
<tr>
<th>Lignans (mg/day)</th>
<th>% Risk reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 0.155</td>
<td>0</td>
</tr>
<tr>
<td>0.155-0.227</td>
<td>6%</td>
</tr>
<tr>
<td>0.227-0.318</td>
<td>49%</td>
</tr>
<tr>
<td>&gt; 0.318</td>
<td>71%</td>
</tr>
</tbody>
</table>

One tablespoon of flaxseed = 21.4 mg lignans!
Tomatoes
Tomatoes Reduce Prostate Cancer, Cooked Tomatoes Protect Even More

- Lycopene reduces risk of
  - pancreatic cancer
  - colorectal cancer
  - breast cancer
  - lung cancer

- 50% reduction in prostate cancer

Dr. Fuhrman’s Nutritarian Food Pyramid

- **BEEF, SWEETS, CHEESE & PROCESSED FOODS**
  - Rarely

- **EGGS, OIL, FISH & FAT-FREE DAIRY**
  - Rarely

- **SEEDS, NUTS & AVOCADOS**
  - 10-40%

- **WHOLE GRAINS & POTATOES**
  - 20% or less

- **FRUITS**
  - 10-40%

- **BEANS/LEGUMES**
  - 10-40%

- **VEGETABLES**
  - 1/2 Raw and 1/2 Cooked
  - 30-60% of calories

*Excludes white potatoes.

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Dr. Fuhrman’s Nutritarian Food Plate

- **Vegetables**
  - Half Raw and Half Cooked
  - 30-60% of calories
- **Beans**
  - 10-40% of calories
- **Fruits**
  - 10-40% of calories
- **Seeds & Nuts**
  - 10-40% of calories
- **Whole Grains**
  - 20% or fewer calories
- **Process Foods, White Rice, White Flour, Factory-Farmed Animal Products**
  - Avoid, limit, or eliminate

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Nutritarian vs. Standard Diet

**Nutritarian Diet**
- Vegetable-based
- Lots of fruit, beans, seeds, nuts
- Oil used sparingly
- Animal products 0-3 times a week
- Nutrient-dense calories

**Standard Diet**
- Grain based
- Lots of dairy and meat
- Oils = major caloric load
- Animal products 2-4 times a day
- Nutrient-poor calories
More Greens, More Beans, More Nuts and Seeds

means

dramatic lowering of glycemic load and diabetic and cardiovascular parameters

## Diabetes Study on a Nutritarian Diet

<table>
<thead>
<tr>
<th>Metric</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td># on diabetes meds.</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>BMI</td>
<td>34.4</td>
<td>26.8</td>
</tr>
<tr>
<td>HbA1C</td>
<td>8.15%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Systolic blood pressure</td>
<td>148</td>
<td>121</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>170.6</td>
<td>103.4</td>
</tr>
</tbody>
</table>

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Effectiveness of Cholesterol Lowering Methods

% Decrease of LDL Cholesterol

- Mediterranean: 6%
- Atkins Diet High Protein: 6%
- American Heart Association: 16%
- Low Fat Vegetarian: 26%
- Medications Statin Drugs: 33%

Nutritarian
## Patient Results – after 6 weeks

<table>
<thead>
<tr>
<th></th>
<th>Total Cholesterol</th>
<th>LDL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>Peggy</td>
<td>249</td>
<td>150</td>
</tr>
<tr>
<td>Eugene</td>
<td>247</td>
<td>156</td>
</tr>
<tr>
<td>Keith</td>
<td>237</td>
<td>158</td>
</tr>
<tr>
<td>Maria</td>
<td>283</td>
<td>168</td>
</tr>
</tbody>
</table>
Average Weight Loss, 90% Adherence

BMI 30 and above
BMI 25-29

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Average BP Change and Dietary Compliance n=105

<table>
<thead>
<tr>
<th>Systolic Change</th>
<th>Diastolic Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;90% Compliant (N=56)</td>
<td>&gt;80% But &lt;90% Compliant (N=49)</td>
</tr>
</tbody>
</table>

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“I lost 105 lbs and went from a ‘cardiac cripple’ to a healthy, happy human being.”
## Julia, 10 years later

**Could not walk one block**

### Before
- 3 heart attacks in 3 months
- 5 angioplasties in 3 years
- 225 lbs
- 10 medications
- Could barely walk
- Never liked vegetables

### Now
- Conquered toxic cravings
- Weighs 120 lbs
- Off medications
- Walks 3 miles everyday
- Able to enjoy natural flavors of food
- Kale is favorite vegetable

“I enjoy every day of my life now. I exercise. I garden. I cook. I do everything that I couldn’t do for more than 10 years of my life. I look healthy. I feel healthy. It’s good health from within. It’s wonderful. I’m having a love affair with Dr. Fuhrman’s nutritarian diet. You have to just do it. Keep your eyes on the prize.”
Ronnie Lost 140 lbs. in 12 Months!

“I would not want anyone to go through what I have had to endure in my struggle before I learned about Dr. Fuhrman. DON’T WAIT until you have a medical tragedy happen to you! Start your new life today!!!”
<table>
<thead>
<tr>
<th></th>
<th>July 2008</th>
<th>July 2009</th>
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</thead>
<tbody>
<tr>
<td><strong>Weight</strong></td>
<td>300 lbs</td>
<td>160 lbs</td>
</tr>
<tr>
<td><strong>Blood pressure</strong></td>
<td>161/110 (on meds)</td>
<td>115/70 (no meds)</td>
</tr>
<tr>
<td><strong>Waist</strong></td>
<td>58&quot;</td>
<td>33&quot;</td>
</tr>
<tr>
<td><strong>Cholesterol</strong></td>
<td>228 (on meds)</td>
<td>132 (no meds)</td>
</tr>
<tr>
<td><strong>Triglycerides</strong></td>
<td>312</td>
<td>63</td>
</tr>
<tr>
<td><strong>LDL</strong></td>
<td>148</td>
<td>75</td>
</tr>
</tbody>
</table>
Question 1

What percentage of calories in the American diet is made up of refined, processed foods?

1. 27%
2. 41%
3. 54%
4. 64%
Question 2

Name five common foods or food types which have exhibited a dramatic association with lower rates of common cancers.

1. Cruciferous vegetables, yellow/orange vegetables, beans/legumes, poultry, dairy foods
2. Cruciferous vegetables, mushrooms, tomatoes, beans/legumes, berries
3. Cruciferous vegetables, beans/legumes, mushrooms, tomatoes, rice
4. Cruciferous vegetables, whole grains, berries, mushrooms, poultry
## Results

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2</td>
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<tr>
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<td></td>
<td></td>
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</tr>
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Question 3

Name the three characteristics of mushrooms associated with their high degree of protection against breast cancer.

1. Aromatase inhibitors, glucosinolates, lignans
2. Angiogenesis inhibitors, antigen-binding lectins, ellagic acid
3. Lignans, ellagic acid, glucosinolates
4. Aromatase inhibitors, angiogenesis inhibitors, antigen-binding lectins