Diet & Disease





North America

- Diet has Drastically Changed
- Calorie intake up 23% to 2481 consumed calories
- Increase in Consumption of:
 - Processed Grains + Starches
 - Fats
 - Sugars

Global

- Population 7.4 Billion People
 - 11.2 Billion 2100
- Most common food: Rice



Insulin and Diabetes

By: Lyla Wright



Diet and Diabetes

What is Diabetes?

Diabetes is a lifelong condition that is associated with your blood glucose levels and insulin.

Food consumption increases glucose levels in blood, insulin is then excreted to transport the glucose and signals the liver and muscle cells to take in the glucose.



• Type 1 Diabetes: individuals have autoimmune disorder where body destroys the insulin producing cells, which in turn increases glucose levels throughout the body

• Type 2 Diabetes: Minimal amounts of insulin produced or body not using insulin correctly, thus increasing glucose levels in blood



Diet and Diabetes

Type 1 Diabetes

- Mainly genetic.
- Only 5% of population has condition.



Type 2 Diabetes & Insulin Resistance

- Onset due to physical inactivity and/ or overweight
- Increased body fat contributes to insulin resistance
 - The Numbers
- 2012- 29.1 mill. Americans (9.3% population)
 - 21 mill. diagnosed & 8.1 million undiagnosed
- 1.4 mill Diagnosed each year
- 7th leading cause of death U.S.



Control and Prevention

- Type 1 Diabetes- controlled with proper diet and insulin
- Type 2 Diabetes- (Onset) Can be Prevented by:
 - Adopting diet high in whole grains
 - Consumption of good fats such as vegetable oils, seeds and nuts
 - Decrease consumption of red meat & processed food
 - Regulated Sugar intake and main source come from natural produce
 - Fruits and Vegetables
- Physical Activity increases ability for body to utilize insulinand absorb glucose







Diet & Disease

Cardiovascular Disease and Hypertension

By: Charleen Hsieh



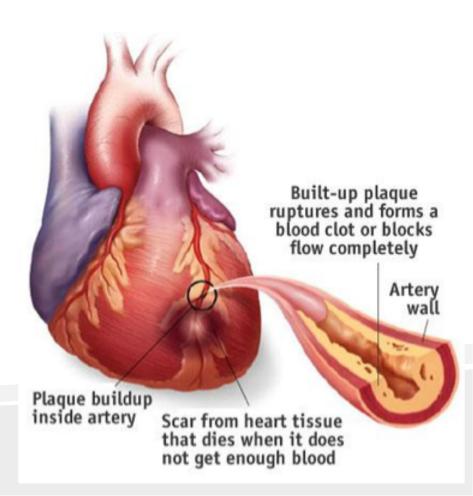
Diet and Cardiovascular Disease

Cardiovascular Disease

 Most common cause of heart disease is the blockage of coronary arteries, which carry blood to the heart. However, it happens slowly, which lead to heart attack

Risk Factors

- Hypertension
- Obesity
- Smoking
- Alcohol Abuse
- Sedentary Lifestyle





Hypertension



High Blood Pressure (BP)

- Blood pressure is determined by the amount of blood pumped by the heart and amount of resistance to blood flow in the arteries
 - More blood your heart pumps and the narrower your arteries, higher the blood pressure
- No symptoms
- Developed over many years
- Uncontrolled high blood pressure increases risk of serious health problems, include heart attack and stroke



Diet with...

Fruits and Vegetables

- 5 portions of fruit and vegetables a day
 - > Fresh
 - > Frozen
 - Dried
 - Juiced
- Dietary Supplements

Starchy Foods

- Porridge
- Peas, beans, and lenti
- Wholegrain Foods



Fats

- Saturated Fats (animal fats)
- Trans. Fats
- Unsaturated Fats

Omega 3

- Fish
- Flaxseed
- Soy and Walnut Oil
- Unsalted Nuts
- Tofu
- Dark Green Vegetables
- Sweet Potato





Nat I Don't Need Sodium

Fun Fact

 Mediterranean Diet may help combat Cardiovascular disease, diabetes, and obesity

EAT LESS CRAP:

C-Carbonated Drinks

R-Refined Sugars

A-Artificial Sweeteners & Colors

P-Processed Foods

EAT MORE FOOD:

F-Fruit & Veggies

O-Organic Lean Protein

O-Omega 3 Fatty Acids

D-Drink Water



- Prepare Food at Home, to control content
- Use less salt when cooking
- Do not add more salt after preparation
- Prepare fresh foods and not pre-packed ones
- Consume products that have no-salt added or low sodium



Diet & Disease

Memory Problems and Alzheimers

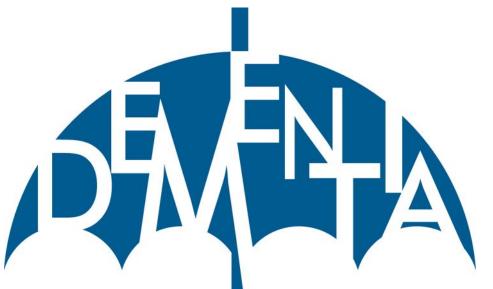
By: Afsoon Hemmati



Diet and Memory

How does one obtain a Memory Problem?

• Memory begins to fade as we progress in age, cause any trauma to our brain, or simply we don't have our brain. Chemical and physical changes in the brain can make basic task and new task difficult to remember.



Alzheimer's the most common form

Huntington's

Mixed Dementia

Parkinson's

Vascular

Frontotemporal Dementia



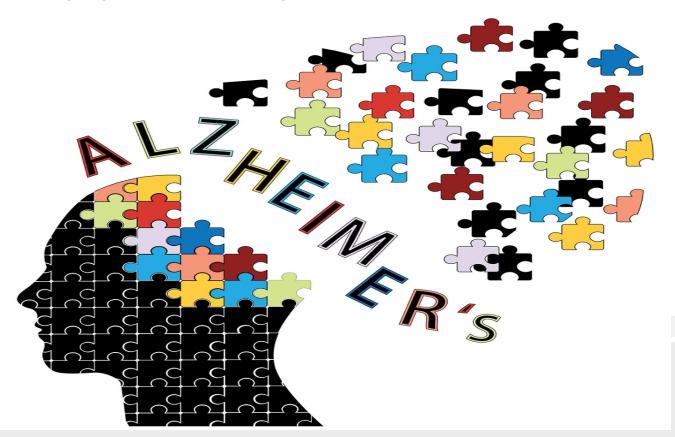
Alzheimer's

The most common form of memory loss from Dementia is Alzheimer's.

Alzheimer's disease is a progressive degenerative disorder that attacks the nerve cells of the brain and results in the loss of memory, deterioration of thinking and language skills, and changes in behavior.

Risk Factors

- Age
- Nutrient Deficiency
- High Cholesterol
- High Blood Pressure
- Diabetes
- Smoking
- Obesity
- Depression
- Alcohol



Prevention of Memory Loss

A Healthy Diet

- Whole Grains
- Fruits & Vegetables
- Fish
- Nuts
- Olive Oil

Supplements

- Folic Acid
- Vitamin B₁₂
- Fun Under the Sun
 - Vitamin D



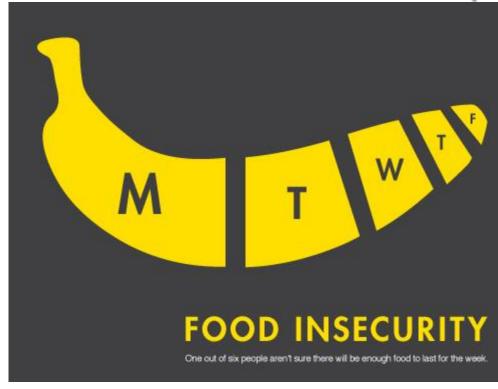
- Physical Exercise
- Stress Management
- Active Social Life
- Engage your Brain
 - Read
 - Do Puzzles
 - Draw
 - LEARN!



Food Insecurity, Obesity, Eating Disorders and Bone & Joint Loss

By: Djavan (DJ) Herring

Food Insecurity



Trends North America

- Low food Security → Obesity
 - High Calorie Food → Low Food Secure Population
- 43 Million Americans
 - 15 Million of those Children

Trends Globally

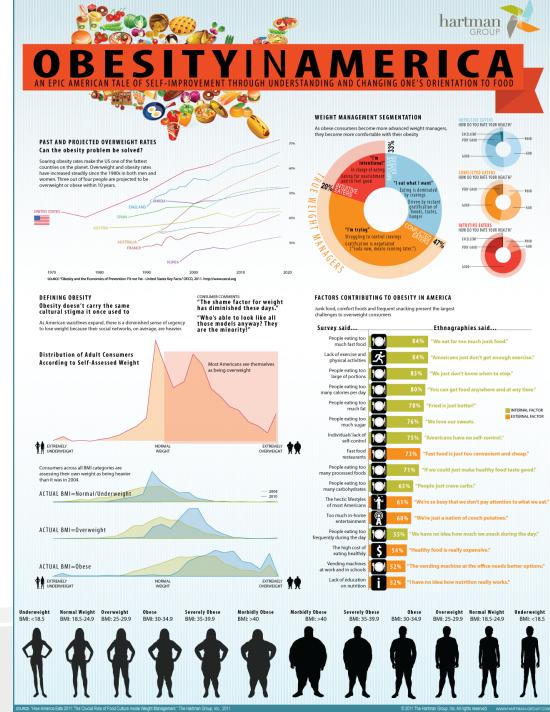
- 1 Billion people malnourished
- 833 million Food Insecurity
- 92% of Hunger Related Deaths due to recurring hunger or malnutrition



- Obesity- excessive body fat accumulates which adversely affects health.
 - 35% women
 - 33% Men
- Commonly abundant in individuals with diabetes, hypertension, heart disease and stroke, respiratory and renal disease and sleep apnea.

Global Epidemic

- 1.9 Billion Adults 18 years and older overweight
- 600 Million of those obese
- 41 Million Children under 5 overweight or obese



Eating Disorders

Anorexia Nervosa

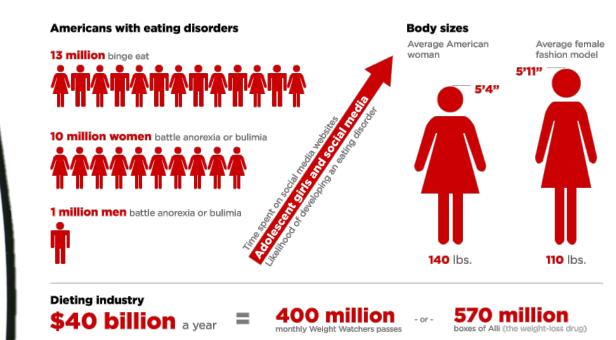
- Extremely low body weight
- Food restriction
- Distorted body image
- Thinning of bones

Bulimia Nervosa

- Worn tooth enamel
- Acid reflux
- Electrolyte imbalance

Binge Eating

 Massive Amount of Food Consumption in a period



Eating-disorder related hospitalizations

(increase from 1999 to 2006)

18% overall 37% among men 119% among children under 12 years old

Children

80% of all 10 year olds are afraid of being fat



42% of all 1st through 3rd grade girls want to be thinner





Bone and Joint Loss

Osteoporosis

53 Million Americans

 $50+ \rightarrow 38\%$ of women

 \rightarrow 8% of men (increase at age of 70)

Lack of High Calcium Foods

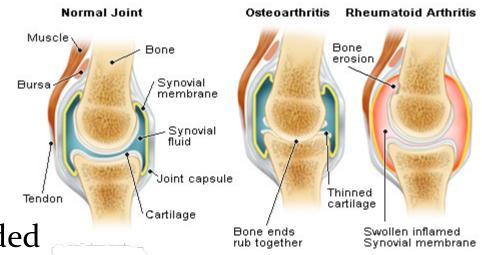
• Body does not absorb Calcium, 1200mg needed

• Lack of physical activity

Anorexia → Menstrual issues → Osteoporosis



• Rheumatoid Arthritis- Autoimmune disease where body immune system attacks its own joint 1.5 Million Americans





Meal Manager

• Maintaining a Proper Diet is essential in the prevention of many diet related diseases.

#ProfessorLisagor

- ✓ Balance
- ✓ Moderation
- ✓ Variety
- ✓ Exercise



