

Nutrition 411

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What is a "healthy" body weight?

Accepted standard:
Body Mass Index of 18.5 - 24.9
BMI: $\text{weight (\#)} / \text{height (inches)}^2$
multiplied by 703

Apples vs Pears

Increased waist circumference -
35" in women or 40" in men
Associated with greater risk for:
Type 2 diabetes, heart disease,
high blood pressure, sleep apnea

What causes people to gain weight?

- Genetics
- Environment
 - Sedentary lifestyle
 - Higher calorie intake
 - Stress

Examples of Portion Distortion

McDonald's meal 1960:

hamburger	280 calories
fries (2 oz.)	210 calories
coke (8 oz.)	<u>100 calories</u>
	590 calories

McDonald's meal 2004:

Big Mac	590 calories
fries (6 oz.)	540 calories
coke (32 oz.)	<u>410 calories</u>
	1540 calories

Chipotle

Chicken burrito with tortilla, chicken, rice,
beans, cheese & salsa: **1,000 calories**

Vegetarian burrito with tortilla, rice, beans,
cheese, guacamole & salsa: **1,120 calories**

Chicken burrito "bol" with chicken, black beans,
lettuce & salsa: **430 calories**

Cold Stone Creamery

6 oz. sweet cream ice cream	380 calories
10 oz. size (regular)	640 calories
14 oz. size (large)	890 calories
6 oz. Italian sorbet	170 calories
6 oz. sweet cream yogurt	220 calories

Mix-Ins: **100 - 150 calories each**
Waffle cone or bowl: **160 calories**

What are you drinking???

In 1976, soft drinks passed MILK to become
the most popular beverages in the U.S.

On average, each person in the U.S. consumes
54 gallons per year (89,030 calories).

Other sugary beverages ("juice" drinks,
sweetened cappuccinos and frappuccinos, etc.)
and alcoholic beverages contribute calories.

What is needed to lose excess body weight (adipose)?

An energy (calorie) deficit of about 3500 calories is needed to lose one pound of body fat.

Where do we get energy?

- Carbohydrate 4 calories/gram
- Protein 4 calories/gram
- Fat 9 calories/ gram
- Alcohol 7 calories/gram

A 5-10% decrease in weight produces health improvements.

Americans spend over \$40 billion yearly on diet products and programs.

Do diets work?

Study (JAMA, 1/05) comparing Atkins, Ornish, Weight Watchers and Zone diet plans for one year.

- 160 subjects
- 22-72 years of age
- BMI between 27 and 42
- Had one cardiac risk factor such as elevated LDL, blood pressure, blood sugar or low HDL
- Purpose was to determine effectiveness & sustainability for wt. loss

Results for subjects who stuck with it for one year:

- 5-10% weight loss
- Decreased waist size
- Improvement in cardiac risk factors
- No significant difference between diet groups

Drop out rates at one year:

- | | |
|-------------------|-----|
| ■ Ornish | 50% |
| ■ Atkins | 48% |
| ■ Weight Watchers | 35% |
| ■ Zone | 35% |

The researchers concluded that adherence is the most important factor and individuals need to be matched to a diet plan they can stick with.

Those who included exercise plus the diet had the best results.

Weight loss maintenance:

Lessons from successful losers

National Weight Control Registry

- >5000 participants
- Average of 67# weight loss
- Maintained for an average of 6 years
- Lost weight using a variety of diets/programs

Features in common:

- **Exercise:** average of 1 hour of moderately intense activity daily.
Equal to about 4 - 5 miles of walking.
Researchers feel this is the most important factor in wt. maintenance.

- **Self-monitoring:** the participants weigh themselves often and keep food diaries.

They have a specific action plan if weight increases.

- They eat a sustainable, healthy diet: mainly low-fat, high carbohydrate.

They watch portion sizes and eat "heavy" foods (high fiber, high water foods).

- **Support systems:**

Research shows that frequent contact with a health provider or a support group helps people achieve and maintain wt. loss.

- The participants eat Breakfast.

Research shows that people who skip breakfast eat more calories later in the day.

- They focus on the positives of being healthier and feeling better about themselves.

No "poor me". They develop positive attitudes about food and exercise.

Eating for disease prevention

"Let food be your medicine,
and your medicine be your food."

- Hippocrates

Greek Physician
(460-377 BC)

Large population studies from a variety of countries demonstrate that a plant based whole foods diet reduces heart disease and cancer & enhances longevity.

Phytochemicals ("Fight-o-chemicals")

Natural plant compounds such as antioxidants, fibers & plant pigments.

Found in fruits, vegetables, nuts, legumes, herbs, spices and whole grains.

More than 900 health-enhancing phytochemicals have been discovered.

They act by decreasing inflammation, stepping up production of anti-cancer enzymes, detoxifying carcinogens, altering hormone action, inhibiting oxidation, etc.

Other whole food benefits . . .

- Omega-3 fatty acids in fatty fish, flax seeds, walnuts and canola oil
- Plant sterols in nuts, seeds, legumes
- Conjugated linoleic acid (CLA) in beef, lamb and dairy products

Whole Food Combinations for Disease Prevention & Treatment

- DASH Diet Study (1997):
Found that a diet rich in fruits, vegetables, low fat dairy, whole grains, nuts & legumes and moderate in lean protein sources lowered blood pressure within days.

Whole Food Combinations for Disease Prevention & Treatment

- A Canadian study (2003) found that a diet combination of soluble fiber, soy protein, plant sterols & almonds reduced LDL cholesterol levels by 35% in subjects with high cholesterol.

Take home message . . .

"Those who think they have no time for healthy eating will sooner or later have to find time for illness."

Edward Stanley
(1826-1893)