Dr. Dave Shrock

Chapter 10 - Managing Your Weight

Reaching and Maintaining a Healthy Weight

12th edition: pp. 292-316

with special section on Enhancing Your Body Image: 317-328


with special section on Enhancing Your Body Image: 319-328

obesity trends among U.S. adults

71% of Americans are overweight (1-19% over ideal weight 25> BMI)

Of Americans those 38.0% are obese (30% over ideal weight, or 30 > BMI)

by 2030 it is estimated that over 75% of Americans will be either overweight or obese

500,000 lives are lost each year from being overweight

21% of health care costs are spent on those overweight. A morbidly obese person spends on average $6500-15000 more a year on health care on average, for every 3 lbs. you are overweight, subtract one year of life expectancy.

negative effects of being overweight and obese


2012 obesity rankings

WHO and UCLA studies, Sept. 2012

2012 country rankings of obese nations (30> BMI)

1) Papua New Guinea: 76.8%
18) (1st Industrial): USA: 34%
23) New Zealand: 25%
27) United Kingdom: 25%
31) Canada: 23%

2012 California rankings of obese counties

1) Yuba: 31.6
2) Tulare: 31.4
3) Stanislaus: 30.1%
4) San Joaquin & Merced: 30.0%

Lowest: San Francisco bay area: 16-18%

Contributing factors:

- 25% increase if lack health care
- 25% increase if 1 parent obese
- 30% increase if poor or less educated
- Modesto has highest concentration of fast food outlets in California.

ways to measure body composition


Accurate

Not accurate

Economical and accurate

Accurate
Chapter 10 - Managing Your Weight
Dr. Dave Shrock

Body Mass Index

<table>
<thead>
<tr>
<th>Height (inches)</th>
<th>Weight (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'6&quot;</td>
<td>24</td>
</tr>
<tr>
<td>4'6&quot;</td>
<td>25</td>
</tr>
<tr>
<td>4'8&quot;</td>
<td>29</td>
</tr>
<tr>
<td>5'0&quot;</td>
<td>32</td>
</tr>
<tr>
<td>5'2&quot;</td>
<td>35</td>
</tr>
<tr>
<td>5'4&quot;</td>
<td>39</td>
</tr>
<tr>
<td>5'6&quot;</td>
<td>43</td>
</tr>
<tr>
<td>5'8&quot;</td>
<td>47</td>
</tr>
<tr>
<td>6'0&quot;</td>
<td>52</td>
</tr>
<tr>
<td>6'2&quot;</td>
<td>57</td>
</tr>
<tr>
<td>6'4&quot;</td>
<td>63</td>
</tr>
<tr>
<td>6'6&quot;</td>
<td>70</td>
</tr>
</tbody>
</table>

**Key:**
- Underweight
- Normal weight
- Overweight
- Obese

Caution: the BMI does not take into account body composition or gender

Caution: the BMI does not take into account body composition or gender

Calculating your BMI

**Step 1:** multiply your weight in lbs. by 704.5

**Step 2:** divide this result by your height in inches

**Step 3:** divide the result by your height in inches a second time

**Mathematical formula:**

\[
\text{BMI} = \left( \frac{\text{weight (kg)}}{\text{height squared (m}^2)} \right)
\]

- **Healthy measurement:** 18.5–24.9 BMI
- **Ideal men:** 22–24.9 BMI
- **Ideal women:** 21–23 BMI

Overweight and obesity results from an energy imbalance:
- eating too many calories, and not getting enough exercise

U.S. Surgeon General

Key environmental factors:
- ads for high calories food and snacks, plus increase in fast food outlets
- three recent studies linked sugary drinks to increased obesity
- both adults working means less home cooked meals, with a greater reliance on eating out, or on junk food – 11.3% of calories are from junk food
- automated equipment takes less calories to operate
- spending more time in front of computers or TV. Those who are in front a screen 3 or more hours a day are twice as likely to be overweight
- greater violence and perceived threats increasingly keep young inside for safety
- decline in physical education requirements in schools
- increased poverty drive people to cheaper, often less healthy food, along with less access to healthcare.

Contributing factors to being overweight-obese

**Endocrine or hormone influences:**
- An under active thyroid gland is thought to impede a person’s ability to burn calories. Though in less than 2% of people this is the cause of obesity.
- However there is increased study on how some hormones such as ghrelin and leptin may affect appetite.

**Fat cells and predisposition to fatness:**
- Hyperplasia or the large amount of fat cells could be a factor in whether a person is a healthy weight or overweight.
- The initial formation period for fat cells are the last 2-3 months of fetal development and the first year of life.
- A mother’s eating habits are critical, and infants should be at a healthy weight.

Contributing factors to being overweight-obese

Psychological factors:
- Stress induced eating
- Food as a reward
- Foods as a ‘comfort food’

Metabolic changes:
- **Age:** a person’s metabolism slows down beginning in late 20’s-early 30’s, and slows 1-2% a year
- **Genetics:** body composition percentage of bone/muscle.
- More studies are being done on genetic influences
- **Gender:** women have more body fat (5-8%) then men. Women burn fat less quickly then men.

Can a virus make children obese?

This recent study has reignited the speculation that a virus may increase the occurrence of obesity in children.
- **ANDENOVIRUS 36** was first linked to childhood obesity in the 1980’s. Since that time, the childhood obesity has increased 300%.
- Of 124 children tested by the University of California-San Diego, 19 had the ANDENOVIRUS 36 antibodies, and 15 of those were obese.
- On average those with the virus antibodies weighed 35 lbs. more than those who did not.
- Study concludes that the reality of childhood obesity is more complicated than once thought.
**Chapter 10 - Managing Your Weight**

**Dr. Dave Shrock**

---

**Super Sizing and Obesity**

- Food portions have grown in the past twenty years
  - Caloric intake has grown from 1,852 cal to over 2,000 cal per day or 15 lbs. per year!
  - Meal plate size has grown in the past 20 years. Meal plates were once 9” in diameter... now they are 12”
  - In the US we are subject to ‘portion distortion’

---

**What Causes Us to Eat...and How to Control It**

- Keep healthy munchies around: whole grain breads, lower fat cheeses, low sodium crackers
- Keep crunches on hand: apples, pears, carrots, green or red pepper spears all make great snacks
- Quench your thirst with hot drinks: hot tea (caffeinated or herbal), hot chocolate with low fat milk, or low sodium soups are great alternatives
- Choose natural beverages: Water, tomato or fruit juices low in sugar. Put crystal lite or lemon juice in water
- Watch eating too many energy bars when alternatives are available...there are also lower calories bars available or eat nuts
- If you must have chocolate keep it small such as a Hershey ‘kiss’ or dark chocolate has less fat and more antioxidants.

---

**How Fat is Distributed**

- A calorie is a unit of measure that indicates the amount of energy gained from food, or expended through exercise or activity
- 1 lb. of fat = 3,500 calories
- Fat is stored energy. The more active we are, the less we store fat

---

**Soda: Leading Cause of Childhood Obesity**

- 20oz. soda has 17-20 teaspoons of high fructose corn syrup in each serving
- 250 cal. per 20oz. soda = 26 pound gain per year
- American spend $65 billion on sodas year...though that is beginning to decline
- Many sugar laden fruit drinks are not much better.

---

**Tips for Sensible Snacking**

- Keep healthy munchies around: whole grain breads, lower fat cheeses, low sodium crackers
- Keep crunches on hand: apples, pears, carrots, green or red pepper spears all make great snacks
- Quench your thirst with hot drinks: hot tea (caffeinated or herbal), hot chocolate with low fat milk, or low sodium soups are great alternatives
- Choose natural beverages: Water, tomato or fruit juices low in sugar. Put crystal lite or lemon juice in water
- Watch eating too many energy bars when alternatives are available...there are also lower calories bars available or eat nuts
- If you must have chocolate keep it small such as a Hershey ‘kiss’ or dark chocolate has less fat and more antioxidants.
Chapter 10 - Managing Your Weight
Dr. Dave Shrock

**distorted body images**

- We live in a 'obesogenic' society that promotes the increased intake of food!
- We have become food phobic often compulsive eaters of poor quality food.
- Average women: 5’10” – 115 lbs - 22 yrs old – 16.39 BMI
- Average women fashion model: 5’10” – 115 lbs - 22 yrs old – 16.39 BMI
- Historically men & women were portrayed as heavier
- ‘Rubenesque’ was a term given to portraits painted by 15th century Belgian Baroque painter of velvupous full figured women
- 25% of women & men who diet don’t need to.

**keys to successful weight management**

*Make a plan:*
- Establish short-long term plans
- Look for balance: intake v. exercise

*Change your habits:*
- Expand your food choices
- Eat smaller portions and slow down
- Eat breakfast! Helps you make better choices through day
- Keep healthful snacks around
- Utilize resources and have a support family, support group

*Incorporate exercise:*
- Be active...even small amounts help
- Vary your activity...find what you enjoy
- Make it a fun break...go with friends.

**exercising off your pounds**

**managing your weight**

*setting realistic goals*

- Establish enjoyable, doable eating and exercise routines
- Initially focus on small goals to become more healthy and fit
- Establish maintainable and realistic goals
- Make it a lifestyle...not just a temporary diet
- Seek out the support of family, friends, and professionals
- Don’t make food the central focus of your life
- Become a responsible consumer:
  - Read food labels, buy healthy foods
  - Eat responsibly and use self-control
  - Think long term, and make the commitment.

**drastic diets...beware!**

- VLCD’s (very low calorie diets) any diets below 1200 calories are damaging to the body because without enough energy to maintain normal functions of the body, the body begins to shut down.
- The human body will hoard calories when food is re-introduced, having the negative effect...called the yo-yo effect.
- Be aware of diets that claim substantial weight loss in a short period of time...these depend on dehydration, not permanent weight loss.
- Be wary of stomach stapling, gastric bypass, (next slide) liposuction, and ‘miracle’ drugs and potions which claim miracles...the dieting industry is a 33 billion dollar industry for a relatively simple concept: energy consumed ≈ energy expended

**surgery considerations**

- With nearly 60 million American’s obese, the amount of drastic surgeries to limit calorie absorption has increased over 120% in three years
- Beware...this is not a panacea: not only does it have health risks including death, it will change a person’s life style and quality of life drastically
- Possible side effects: 2.5-0.1% chance of death; malnutrition, uncontrolled bowls & vomiting (dumping syndrome), cramps, and osteoporosis
Who's at risk? Predominantly younger middle class women (10%) who manifest over body image, and/or seek control of some facet of their lives. Depression and other addictive behaviors may also accompany eating disorders.

Over 24 million Americans suffer from an eating disorder...20% of those with a serious eating disorder will die from it!

- **Anorexia Nervosa**: self-starvation motivated by intense fear of gaining weight. Often victims never feel 'thin enough' and identify themselves as 'too fat'.

- **Bulimia Nervosa**: victims often binge eat, the vomit shortly after to lose the calories they just acquired. Victims are also obsessed with weight gain, though are less apparent because their weight may vary only slightly from the normal weight range.

- **Binge Eating Disorder**: victims will binge eat, but do not purge. Consequently they are often clinically obese. Emotional factors may play a role in binge eating.

**eating disorders: treatment**

- The first concern is to stabilize the victim's health.
- Long term diet therapy with psychological, social, and environmental treatment involving family, friends, and other significant people in their lives.
- Emphasis on developing new eating patterns, building self-confidence and other ways of dealing with life's challenges.
- Support groups can learn about eating disorders and help person gain an accurate perspective.
- Be honest with your concerns and firm with your actions.
- Be a good role model of healthy eating patterns.
- Tell someone about your concerns for the person; friends are the first line of action!