Obesity: A Public Health Problem

Chronic Condition Management

Presented by UIC-CON
Objectives

- Comprehend the scope of obesity as a public health problem
- Learn about various measuring tools to screen for obesity
- Understand the complexity of contributing factors to obesity
- List the risk factors of individuals who are obese
- Identify various weight loss strategies (e.g., diet, exercise, medication, surgery, etc.)
- Identify bariatric equipment for the home
- Identify community resources
In 2008, the medical care costs of obesity were $147 billion. Persons who are obese have medical care costs that are $1,429 higher than those of normal weight. In 2010, more than 72 million U.S. adults were obese. Healthy People 2020 has several objectives on nutrition and weight status including:

- Increase the proportion of adults who are at a healthy weight range
- Reduce the proportion of adults who are obese
- The national goal is for the obesity rate to be less than 15% in each state. However, no state has even come close to meeting that goal. Instead, there were 12 states with an obesity rate of 30%. In 2000, no state had an obesity rate that high.
Public Health Problem in Illinois

- In 2013, Illinois was ranked the 24th most obese state (28.1%) in the country.
- In 2011, 36% of adults in Illinois were under/normal weight, 37% were overweight, and 27% were obese.
- Adult males (44.7%) are more likely to be overweight than females (29.1%).
- Black/African-American adults have a higher percentage of obesity (39.5%) than White/Caucasian adults (26.2%).
- Adults making between $15,000 to $34,999 are more likely to be obese than under/normal weight adults (23.9%).
- Obesity affects individual’s mental health. “A higher percentage of adults who are obese suffer from a depressive disorder than adults who are overweight and adults who are under/normal weight.” Adults who are obese are more likely to have activity limitations (31.5%) due to health problems and require special equipment (11.8%).
- In 2012, 25.2% of all Illinois adults were physically inactive.
- The State of Illinois spends approximately $3.4 billion in direct healthcare costs related to obesity.
The Centers for Disease Control and Prevention (CDC) state, “Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems.”

Obesity is defined as a Body Mass Index (BMI) > 30 kg/m.
Assessment: Body Mass Index (BMI)

- BMI is calculated from the measured weight and height of an individual. Waist circumference is considered an acceptable alternative to measuring BMI.

- **Healthy weight: 18.5 to 24.9**
  Example: A woman 5’5” tall and 132 lbs. has a BMI of 22.

- **Overweight: 25 to 29.9**
  Example: A man 5’9” tall and 176 lbs. has a BMI of 26.

- **Obese: 30 or greater**
  Example: A woman 5’6” and 198 lbs. has a BMI of 33.

*Online BMI calculator:*

*Mobile App: My BMI calculator*
Contributing Factors to Obesity

- Energy imbalance: Eating too many calories and not getting enough physical activity. (Consuming more than you are expending.)
- Body weight is the result of genes, metabolism, behavior, environment, culture, and socioeconomic status.
- Genes can directly cause obesity in disorders such as Bardet-Biedl syndrome and Prader-Willi syndrome.
- Behavior and environment play a large role causing people to be overweight and obese. These are the greatest areas for prevention and treatment actions.
  - Fast food is more readily available and environments to foster physical activity are lacking.
Some Americans have less access to stores and markets that provide healthy, affordable food such as fruits and vegetables, especially in rural, minority and lower-income neighborhoods.

Restaurants, snack shops, and vending machines provide food that is often higher in calories and fat than food made at home.

There is too much sugar in our diet. Six out of 10 adults drink at least 1 sugary drink per day.

It is often easier and cheaper to get less healthy foods and beverages.

Foods high in sugar, fat, and salt are highly advertised and marketed.
Obesity Promoting Society cont.

- Many communities are built in ways that make it difficult or unsafe to be physically active:
  - Access to parks and recreation centers may be difficult or lacking and public transportation may not available.
  - Safe routes for walking or biking to school, work, or play may not exist.
  - Too few students get quality, daily physical education in school.
- Unhealthy eating and exercising behaviors start when your young.
Expanding Waistline Raises Risks

- Coronary heart disease
- Type 2 diabetes
- Cancers (endometrial, breast and colon)
- Hypertension (high blood pressure)
- Dyslipidemia (i.e., high total cholesterol or high levels of triglycerides)
- Stroke
- Liver and Gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis (a degeneration of cartilage and its underlying bone within a joint)
- Gynecological problems (abnormal menses, infertility)

**Comorbid medical conditions are associated with higher use of healthcare services and costs among obese patients. Obesity has been shown to decrease life expectancy by 6 to 20 years.**
MFP Risk Assessment

- #37-38: Participant at risk for unplanned ER visit and/or hospitalization.
- #45: Participant requires a special diet.
- #48: Participant takes 9 or more medications.
- ADL risks under *Medical Complications* domain
- Specific health conditions under *Medical Complications* domain
Interventions

- There is no simple solution nor one lone solution to the obesity epidemic.
- Recommended approach is an intensive, multicomponent behavioral interventions including:
  - Behavioral management activities, such as setting weight-loss goals
  - Improving diet or nutrition and increasing physical activity
  - Addressing barriers to change
  - Self-monitoring
  - Strategizing how to maintain lifestyle changes
- This approach has shown positive results including weight loss, improved glucose tolerance, and other physiologic risk factors for cardiovascular disease.
- Bariatric (weight loss) surgery is another option too.
Poll Question #1

60% of American adults consume, at least, one sugary drink per day.

A) True
B) False
Healthy Eating

1. Find out what you eat and drink
   - Create a daily food diary
   - Compare your list to what you should be eating and drinking

2. Find out what to eat and drink
   - Access available online resources such as Choose My Plate, http://www.choosemyplate.gov/
   - Track daily food and drink consumption using mobile apps, My Daily Plate

3. Make better food and drink choices
4. Reduce caloric intake
Healthy Eating: Choose My Plate

- Half of your plate should be **fruits** and **vegetables**.
- Consume **whole grains** (e.g., whole wheat flour, oatmeal, brown rice).
- Choose lean or low-fat **meat** and poultry.
- Switch to fat free or low fat (1%) **milk**.
- Select oils that are plant based (e.g., canola, olive, sunflower) rather than animal based (e.g., stick margarine, butter, shortening).

  - For women between the ages of 31-50, daily intake should include 2 ½ cups vegetables, 1 ½ cups fruit, 6 ounces of grains, 5 ounces of protein, and 3 cups of milk.
Consult primary care provider before starting a new exercise program. Individuals should be monitored closely by their primary care provider when starting a new diet and exercise program.

Physical activity contributes to weight loss, decreases abdominal fat and improves cardiorespiratory fitness.

Consider flexibility training, balance training, aerobic exercise, and resistance training.

Walking is the best place to start for an individual who is morbidly obese.
  - Purchasing a good pair of walking shoes is critical.
  - Swimming is also another very good exercise.
  - Group fitness and/or having an exercise buddy are good motivators for exercise.
  - Assist individuals with developing weight loss goals that are realistic and achievable.
1. Determine the recommended daily calorie count
   - Online resource: Mayo Clinic Calorie Counter,
     [http://www.mayoclinic.org/calorie-counter/itt-20084939](http://www.mayoclinic.org/calorie-counter/itt-20084939)
   - Mobile app: My Fitness Pal – Calorie Counter & Diet Tracker
   - Example: 5’7” + 180 lbs. + male + somewhat active = 2300 calories/day

2. Decrease portion sizes
   - Estimate portion sizes by using known objects:
     - 3 ounces of beef = width of a deck of cards
     - ½ cup cooked spaghetti = size of a fist
     - ½ cup of ice cream = size of a tennis ball

3. Eat fewer empty calories
   - These calories include sweets (e.g., cakes, cookies), sodas, pizza, ice cream, sausages, and hot dogs. (Basically, most of what you ate over the holiday weekend!)

4. Focus on foods you need
   - My Plate
Healthy Eating & Exercise

5. When eating out, make better food and drink choices
   ▪ Don’t blow your calorie and financial budget!
   ▪ Order foods either steamed, broiled or grilled.
   ▪ Avoid foods with the following descriptive words: fried, sautéed, creamy, breaded, battered, or buttered.
   ▪ Order dressings, syrup, and sauces “on the side”.

6. Enjoy more home cooked meals
   ▪ Search for free or low-cost cooking classes in the community

7. Increase level of physical activity
   ▪ 150 minutes (5 days a week for 30 minutes) of moderate-intensity aerobic activity a week is recommended.

8. Decrease screen time
   ▪ Track daily screen time including watching television, using the computer, etc.
   ▪ Add screen time budget to financial and calorie budget
   ▪ Engage in physical active while watching television (i.e., jumping jacks, sit-ups, lifting weights)
   ▪ Keep in mind consumption of empty calories and portion control while engaging in screen time
According to the Gallup report in 2010, 23.2% individuals who are obese were also diagnosed with depression.

- Address emotions that trigger overeating. Depression is commonly associated with obesity and vice versa (bi-directional relationship).
- Keep a food diary and reflect on feelings related to food consumption.
- Identify healthy coping strategies to reduce stress.
- Arrange counseling services to assist in developing healthy coping strategies, discussing body image and enhancing feelings of self-worth.
- Be aware of stigma associated with obesity.
- Connect with support group(s) in the community.
Illinois Support Groups for Obesity

- The Bariatric Surgery Support Group
  Victory Memorial Hospital, Waukegan
- Bariatric Buddies
  BroMenn Medical Conference Center, Normal
- Bariatric Surgery Support Group
  St. Joseph Hospital, Chicago
- Trinity Bariatric Center – Support Group
  Trinity Medical Center Moline Education Center, Moline
- Why Weight
  MacNeal Hospital, Berwyn
FDA Approved Weight Loss Medications

*Short-term medications (taken up to 12 weeks)
- Phentermine (Adipex-P, Oby-Cap, Suprenza, T-Diet, Zantryl) - most common drug for weight loss in the U.S.
- Benzphetamine (Didrex)
- Diethylpropion (Tenuate, Tenuate Dospan)
- Phendimetrazine (Adipost, Bontril PDM, Bontril Slow Release, Melfiat)

- These drugs interact with chemicals in the brain to suppress one’s appetite.

*This drugs are not on the Illinois Medicaid Preferred Drug List, http://www2.illinois.gov/hfs/SiteCollectionDocuments/pdl.pdf
FDA Approved Weight Loss Medications

*Long-term medications* (*taken for months or years*)
- Orlistat (Xenical and Alli) – stops 1/3 of the fat from food ate from being absorbed (decreases fat absorption).
- Lorcaserin (Belviq) – suppresses appetite by interacting with serotonin receptors in the brain.
- Phentermine-Topiramate (Qsymia) – suppresses appetite (topiramate is used as a seizure medication, but used in a smaller dosage to treat obesity in combination with phentermine)

*This drugs are not on the Illinois Medicaid Preferred Drug List, http://www2.illinois.gov/hfs/SiteCollectionDocuments/pdl.pdf
Off-label medications (drugs approved by Illinois Medicaid)

- Bupropion (Wellbutrin) – commonly used to treat depression; interacts with chemicals in the brain.
- Metformin (Glucophage) – commonly used to treat Type II Diabetes Mellitus; decreases the amount of sugar absorb from food.
Bariatric Surgery

- In 2008, 220,000 individuals with severe obesity had weight loss surgery.
- Medicare has approved bariatric surgery for individuals with severe obesity (BMI 40 kg/m²) or individuals with a BMI ≥ 35 kg/m² with comorbid conditions.
- Two types of weight loss surgeries:
  - Restrictive (restricts the amount of food in your stomach):
    - *Gastric Banding*: A small portion of the stomach is partitioned off using a band; food passes through small pouch first; before moving into the larger portion of the stomach.
    - Adjustable Gastric Banding (Lap-Band): An adjustable band placed around the neck of the stomach creating a small pouch for the food to pass through the larger portion of the stomach.
    - Vertical Banded Gastroplasty (Stomach Stapling): Window cut in the upper portion of the stomach with staples around the window and a small portion partitioned off with staples to the rest of the stomach; band around window creating a small, narrow sleeve for the food to travel through to the small intestine.
  - Malabsorptive (prevents digestive system from absorbing all nutrients):
    - *Gastric Bypass Surgery (Roux-en-Y)*: A small pouch is created out of the stomach; stapled and detached from the rest of the stomach; reconnected to a lower section of the small intestine forming a Y.

*Medical animated videos of these surgeries can be found on the WebMD video channel.*

*Medicare and Medicaid Managed Care Plans may cover surgery if you meet certain conditions.*
Bariatric Surgery: Upside and Downfalls

- Last resort procedure after all other strategies attempted.

**Upside**
- Significant weight loss (lose up to 60% of their weight)
- Decreases health risks significantly (e.g., diabetes, cardiac and pulmonary conditions)

**Downfalls (mild to serious risks)**
- Nausea, vomiting, diarrhea, wound infections, abdominal hernias, blood clots, potential gastric leaks from surgery, myocardial infarction, and/or bleeding ulcers
Poll Question # 2

Approximately what percentage of individuals, who are obese, are also diagnosed with depression?

A) 50 %
B) 5%
C) 13%
D) 23%
Bariatric Equipment

- Most durable medical equipment comes in a bariatric size including wheelchairs, walkers, shower chair, lifts, hospital beds, transfer benches, etc.
- Most bariatric equipment has a weight limit between 300 – 900 lbs.
- Obtain a referral for physical therapy to complete a home safety evaluation to ensure the width of the doorways and entrance to individual’s residence are adequate. Also, PT can recommend the appropriate bariatric equipment needed.
- Direct support staff working with individuals who are morbidly obese should use proper equipment and body mechanics when assisting these individuals with their daily care needs (i.e., bathing, dressing, toileting, transferring).
- Poor body mechanics can lead to musculoskeletal injuries, strains, sprains, and excessive spinal loading.
- Train direct support staff on proper use of equipment and body mechanics.
Other Consumer/Client Resources

- Obesity Society, [http://www.obesity.org/resources-for/consumer.htm](http://www.obesity.org/resources-for/consumer.htm)
- Fooducate, [http://www.obesity.org/resources-for/consumer.htm](http://www.obesity.org/resources-for/consumer.htm)
- Obesity Action Coalition, [http://www.obesityaction.org/blog](http://www.obesityaction.org/blog)
- Daily Strength, [http://www.dailystrength.org/health_blogs/index/index/condition/163/category/85](http://www.dailystrength.org/health_blogs/index/index/condition/163/category/85)
Recap: MFP Mitigation Plan

- Address dietary changes
- Add exercise to daily routine
- Address emotional health along with physical health
- Explore community resources
- Purchase appropriate equipment
- Discuss with primary care provider about weight loss medication and/or surgery.
The title of this presentation is *Obesity: A Public Health Problem*. Although I spent much of this presentation focused on the individual’s responsibility to fight obesity.

- What responsibility does the community hold in fighting obesity?
- How can we encourage individuals to become more involved in addressing this public health problem?
"Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has.” - Margaret Mead, anthropologist
Questions
References


References


