Intro - Group 6

**Attention Getter:** We have an all-encompassing obesity problem in the United States. Between the years 2000 and 2018, the prevalence of obesity in America has increased from 30.5% to 42.4% According to the CDC. Obesity is diagnosed when your BMI is 30 or higher, this slide is what an individual with a 30+ BMI looks like. **\*show slide\***

**Relevance:** Over 1/3 of American adults are obese. This means that out of the 25 people in this room, over 8 of us are statistically likely to become obese, according to healthline.com. The real issue with obesity is that it causes tangible problems for obese people, not only in the here and now, but also years down the line. We’re talking about diabetes, high blood pressure and sugar, heart attack, sleep apnea, certain cancers, problems with movement, sore joints, mental illnesses like depression, and most importantly an early death.

**Preview of main points:** This doesn't have to be our future. In this presentation we aim to raise awareness about the leading causes of obesity, the demographics it attacks, and how to defeat obesity with diet and exercise.

**\*Ask the audience what they think the leading causes of obesity in America are\***

Body

**Main Point 1:** We know that obesity is a problem in the US, but what is the cause? Is it due to lack of exercise or from large portion sizes? Is it genetic? Let us look at some possible causes.

**Sub point A:** Obesity can be genetic or behavioral/environmental. More often than not, obesity is a mix of the two. Let’s take a look at obesity due to medical conditions. A few recent studies according to obecitymedicine.org have shown that genetics could contribute anywhere from 40-70% with more than 50 genes being heavily correlated to obesity. According to the Mayo Clinic, complications like Prader-Willi syndrome, Cushing syndrome, and Hypothyroidism are examples of genetic predisposition to obesity. Other medical problems, like arthritis, also can lead to decreased activity, which may result in weight gain.

**Sub point B:** Environmental factors or behavioral factors play a large role in obesity as well. These are the sorts of things that are learned, not inherited through our genes. What sort of lifestyle do you live? Do you eat salads or burgers? Do you enjoy exercising or watching TV? All of these lifestyle choices you make affect your health, and you mainly learn these things from your parents.

**Sub point C:**, Kids of overweight parents have an 80% chance of being overweight themselves according to obecitymedicine.org. This leads to an interesting question. If obesity runs in the family, is it genetically inherited or is it due to the environmental factors within the household? Eventually healthcare technology will be able to reduce the effects of genetic predisposition to obesity, in the meantime, the only way to reduce the risk of obesity is to eliminate behaviors and environmental factors that lead to obesity. That means we America has to change its relationship with food from within the home.

**Transition:** Now that we have talked about some of the causes of obesity, we can take a closer look at what areas are most affected, and why this might be.

**Main Point 2:** The United States is known for being fat compared to other countries. One reason this may be is due to our huge portion sizes. According to Public Health.org, Americans ate 20% more calories in 2000 than they did in 1983, thanks to a boom in meat consumption. Today, each American puts away 195 Pounds of meat each year, compared to just 138 pounds in the 50’s.

**Sub Point A:** According to the CDC, obesity mainly affects the poor. This is widely regarded as the poverty-obesity paradox. The number of obese people in 1st world nations is inversely correlated to the median household income. What this means is that we see States with lower incomes have higher levels of obesity and vice versa.

**Sub Point B:** It has mostly been an issue in the south but over time the prevalence of obesity has spread to other states. Trends of obesity may be related to the economy. As we know most healthy foods are more expensive than junk food, so poor individuals have a higher prevalence of obesity. Over the past few years our economy has seemingly done well but obesity has still spread further throughout the United States. In fact, our GDP per capita has been increasing steadily for decades. People in the U.S. have been making more money per household each year, but yet obesity rates have still risen. This is most likely due to inflation. Even though people’s wages have gone up, the costs of products have gone up even more. Even though more people are making more money, rises in the cost of living has made it more difficult to afford healthy food options.

**Transition:** Now that we know some of the causes of obesity and what areas are most affected, let’s look at what can be done through diet and exercise.

**Main Point 3:** A good diet is crucial to staying in shape or losing weight. As hopefully everyone here understands, if you burn more calories than you consume, you lose weight. Fat is easier than muscle for your body to expend and so mainly fat is lost. But caloric intake is not the only dietary factor in losing weight. The quality of food and daily macronutrients play a role as well.

**Sub point A:** A good diet is super important! A twenty-year study by Mozaffarian et al. involving over 120,000 healthy women and men, determined that weight change was most strongly associated with the intake of potato chips, potatoes, soda, and unfortunately red meat. The researchers concluded that eating processed foods higher in starches, refined grains, fat, and sugar is associated with weight gain. Foods associated with weight loss were vegetables, whole grains, fruits, nuts, and yogurt. Researchers also acknowledged that a reduction in caloric intake is the number one way to lose weight, and healthier foods are not only more nutrient rich, but because they are less calorie dense, they help people consume less calories overall.

**Sub point B:** Not only are healthy foods important in losing weight and being healthy, but the types of macronutrients in a diet are important as well. Macronutrients are things like protein, carbs, and fat. Another study published in the New England Journal of Medicine involved over 800 overweight adults who had already lost some weight. Participants were then assigned one of five diets to prevent weight regain over a 26-week period: A control diet and a mix of high/low protein with high/low glycemic-index foods.(The higher the glycemic index, the higher your blood sugar becomes when your body processes the food). The low-protein-high-glycemic-index diet resulted in significant weight gain. Participants who incorporated more protein in their diet and who ate less foods with a high glycemic-index lost more weight than other members in the study. These results show that a small increase in protein and a small decrease in foods with a high glycemic index like potatoes, bread, bagels, tacos, beer, and corn-syrup, among many other foods lead to weight loss.

**Sub point C:** Finally,most people already know that cardio is the best type of exercise to lose weight. But cardio is horrible. According to Stanley Wu at the University of Florida, there is another type of exercise that is proven to burn fat at a higher rate than cardio. High Intensity Interval Training is a type of cardio training where you run using 110% of your energy for a short amount of time, like 20 seconds, and then jog at 50% of their energy for a longer period of time, like 2 minutes. Then you would repeat this cycle about five or six times. HIIT provides a great alternative to traditional cardio because workouts do not take as long, it is more effective, and if you’re like most people, jogging for 45 minutes can be super boring. HIIT is a non-boring version of cardio.

**Sub Point D: What discourages people from dieting or exercising?**

Like Jackson said, there are economic factors, but there are other reasons as well:

* 1. **Healthy food doesn't taste as good as bad food.**
  2. **Healthy food is harder to find**, you have to go search for it and take time reading nutrition facts.
  3. **Healthy food is more expensive**.
  4. **Staying on a good diet and consistent exercise is hard**. You either need an accountability partner, love working out and eating right, or be veeeery disciplined.
  5. **Time management**. It takes longer to cook a good 2 or 3 days worth of meals than it is to get fast food. Also, working out can take up a decent chunk of time as well.
  6. **Physical trainers are expensive**.
  7. **Stress** can make people feel overwhelmed. As I’m sure we all know, when we are feeling overwhelmed it makes it that much harder to get things done.
  8. **Accountability buddy.** Not everyone who wants to lose weight has a friend that wants to work out with them, or teach them
  9. **Self-consciousness**. “Everyone else in the gym looks so much better than me”.

In order to get more people in the gym, we have to eliminate most, if not all of these factors. We have to make working out consume less time, we have to make healthy foods more accessible, and make the gym more accessible.

Conclusion

**Transition**: We’ve seen how people can become obese either behaviorally or genetically, the different demographics that obesity disproportionately affects, and how a good diet and exercise can have a huge impact on losing weight. So learning all of these factors about obesity in the U.S., our group was armed with enough facts about the situation that we felt confident we could propose some solid solutions to obesity.

1. Better diet education in inner city and rural schools. Where those populations are hit the highest with obesity.
2. More honest marketing to the general public. So many advertisements prey on people looking to lose weight, but advertise a product that is complete garbage. **\*here show some dishonest advertisements\***
3. Bio-engineered foods like Impossible Meat will eventually start blowing up, and hopefully provide a delicious and nutritious alternative to McDonalds.
4. Technology could help us find workout buddies, even if we are not real life friends with these people. What if K-State had an app where you could find a workout partner. or follow along during a workout by using something like Zoom?

**Final Thoughts:** It’s ironic that during a time where humanity has been the most advanced regarding treatment of sicknesses, obesity and the complications associated with it remains the only illness that has been trending up as other diseases trend down. Hopefully with the advancement of technology, medicine, and psychology we can start finding solutions to reverse that trend. Thank you.

**\*Ask the audience for questions\***

if no one asks a question:

**\*Ask the audience if they learned anything\***

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