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## Obesity and Malnutrition in the United States

*“Man, I’m starved,”* you think to yourself when you come home after a hard day at work. *“But, that’s just a figure of speech. There’s no way I could actually be starving. I eat regularly everyday.”* You say this to yourself as you crack open a can of pop and shove a TV dinner in the microwave. *“Heck, if anything, people would say I’m a little overweight.”* You look in the mirror. *“It’s not that bad, a few pounds here and there but who doesn’t have a little baggage hanging around?”* After a few minutes of quietly reminiscing about how you looked ten, even twenty years ago, your wife calls you into the living room to see something the kids pointed out on television. *“Hmmmmmm, maybe I could start exercising, go on walks, little things. Yeah, I could sta-.”* “Oh, my! Will you look at that. . . . .” And all thoughts of starting to work out and get back in shape leave your mind as you sit in front of the TV for the rest of the evening.

What would happen if someone told you that the overweight man in the first paragraph was, in fact, starving? You might chuckle to yourself and think about all the misinformed people in the world. This person didn’t even know that overeating is the opposite of being hungry. But then this person said that you were the one who was misinformed. That overweight man’s body was in fact crying out for proper nourishment, but the cries fell on deaf ears when that man confused hunger and malnutrition. Many people do not realize the difference between these two things, which is a shame because the difference could cost you your life. Hunger is when your body has gone too long without any type of food, whereas malnutrition is when your body is subject to an insufficient or poorly balanced diet. This means that, even though you ate, your body couldn’t utilize those foods to properly provide you with the adequate amount of nutrients you need to thrive.

The world has 1.1 billion overweight people, the same number as underweight people. Because of the efforts made to reduce the underfed population of the world, this number has decreased a little since 1980, but obesity has soared all over the world. A few South American countries and other developing nations have the same obesity population as European countries. Due to the rise in obesity and the success of nutrition programs, some critics are calling for cuts in these programs. Some would even call hunger and obesity a paradox, but it’s not. The effects of hunger and obesity can vary greatly but someone suffering from starvation does have similarities to one who is obese. Only one suffers from hunger, but both are subject to malnutrition. Obesity is more dangerous for adults because it increases the chance for chronic illness including diabetes, hypertension, heart disease, gall bladder disease, and some types of cancer. They are also more prone to fall ill, become disabled, have a shorter life span, and have reduced productivity at the workforce. Hunger and starvation more greatly affects children because it stunts their growth and affects brain development. Proper nutrition depends on a well balanced diet. Too many people in the world do not eat appropriately. In Iowa alone over 60% of our population is afflicted with obesity. We have the 18<sup>th</sup> highest rank of obesity in the United States, and our children are 41<sup>st</sup> in physical fitness. Obesity rates in children have tripled in the U.S. since 1970. The fact that so many children are overweight or obese means that this epidemic is intricately linked to sedentary lifestyles and diet. Normally children have an amazing amount of energy and want to exercise by playing. If they are eating poorly, then they become less active and overweight. If it continues without anyone doing something to stop it they will then become obese. Obesity is not as hazardous as hunger is for children, but because they are now in such poor health at a younger age this generation might be the first one in decades that won’t outlive their parents.

The factors associated with being overweight or obese affect everyone regardless of income or race. In fact one of the variables that is constant with both hunger and obesity and also found all over the world is the issue of poverty. Although most would not expect poverty to be linked with obesity, it is. Those who live at or below the poverty level usually do not live in areas where you can have easy access to healthy foods and dietary supplements may not be available or too expensive to buy. The cheapest foods you can find do not have high nutritional value but are high in fats, sugars, and calories. The poor are consuming an excess amount of these substances which are detrimental to their wellbeing and masking deficiencies of vitamins and minerals. Healthy foods like fish, meat, fresh fruits and vegetables, and whole grains are more expensive and less likely to be found at the convenient stores around where these families live. These areas don't have the large supermarkets that have a variety of goods and brands or the farmers' markets that sell locally grown fruits and vegetables. Transportation to areas that have these facilities may not exist or be expensive. Families that are low on cash often rely on fast-food chains that promote value-sized portions of their unhealthy food. Curing malnutrition is not just eating food but eating the right kinds of foods. Another aspect that contributes to obesity is the fact that these neighborhoods usually do not have safe areas for physical fitness. Thus their residents cannot safely exercise and burn calories, the other half of the weight control solution.

The population of the United States is about 281 million and is the 3<sup>rd</sup> largest in the world, after China and India, with a growing rate of 0.9 percent per year. People of European, Latin American, and Middle Eastern descent comprise 75.1 percent of America's population. Other groups include those of African origin (12.3 percent), Asian heritage (3.6 percent), and Native American ancestry (0.9 percent). The Hispanic racial group is the fastest growing minority as they make up 12.5 percent of the total population. Members of these ethnic groups can be found anywhere in the country, but the populations do vary by region. Hispanics live mostly in the west and southwest while African-Americans reside mainly in the east and southeast. In Hawaii, 51 percent of the people are Asian or Pacific Islanders. ¼ of the US population is below 18 years of age. Nearly 80 percent of people live in metropolitan areas.

English, or more specifically American English as it is known to other English-speaking nations, is the predominant language and is spoken by most citizens, though many first-, second-, and even third-generation immigrants also speak their native tongue. Indeed, one in seven Americans speaks a language that is not English in their homes.

While the United States has never officially had a state church, about 95 percent of Americans profess to have some religious belief. 80-85 percent of that population is Christian, as many early European settlers were of Christian faith. There are several different Christian churches throughout the country. About 24 percent of the people are Roman Catholic. The 3 largest Protestant groups are Baptists, Methodists, and Lutherans, and more than half of all Americans belong to the other Protestant denominations. Other Christian organizations account for another 3 to 5 percent of the total. There are substantial number of Jews (2 percent), Muslims, Buddhists, and other non-Christian religions as well. Between 40 and 50 percent of Americans are present at religious services weekly. Around 10 percent of the total population says that they have no religious membership but may still have some spiritual conceptions.

The malnourished of the United States are not grouped together in one region or area but are spread around the country and can be found in every town, city, and state. The average American family is hard to describe because it has been changing dramatically over the past generation and the United States has such a diverse racial continuity that it is difficult to say what the heritage of the American way is. A generation ago, the average family would probably have consisted of a mother, father, and two or more children. This family would have often sustained ties to members of the extended family as well. Today, only ¼ of all households are composed of a mother, father, and one or two children. The average age for marriage is 24 for women and 26 for men. Other family structures are more common now,

including families with a single parent or unmarried couples with or without children. One-third of all children are born out of wedlock and they may live with or be cared for by grandparents. This is especially likely if the parent is young and not married. Men were traditionally the breadwinners of the household. Today, half of all working Americans are women. When both the husband and wife work, men are expected to share the household chores even if women still execute most domestic duties. Men play a more important role in raising the children as well. If both parents work, the use of day-care is often necessary. Single-parent families also rely greatly on day care. When elderly individuals get to the point where they cannot take care of themselves, they usually live in retirement communities, nursing institutions, or with their adult children. If they can still live on their own in their own homes they are part of a rapidly expanding division of the population. More than half of young, unmarried adults between the ages of 18-24 live with their parents. The American family is rather mobile and can frequently move from one region to another within the country for various reasons ranging from education, employment, or a change in the living conditions.

Brenda and Michael Whitman have been divorced for 3 years. They have 4 children: Alex-16 years old, Lexie-16 years old (they're twins), Luke-11 years old, and Brooke-7 years old. The children see their mother and father for an equal amount of time each month. Both grandparents are alive on Brenda's side, but only the grandmother is alive on Michael's side. Brenda lives in a suburb of a large metropolitan area and Michael lives in the city. Brenda works as a secretary for a local business and her average income for an entire year is a little over \$40,000. Michael has a management position at the factory he works for and his average income is about \$50,000. Brenda usually makes box dinners and Michael usually eats out or has food delivered. The children eat whatever the parent they're with at the time eats. Both parents have cars and Alex and Lexie share a third one. Alex and Lexie go to the public high school and Luke and Brooke go to the public elementary and middle school. Since the twins are frequently busy with after school activities Brenda and Michael need to hire a babysitter to keep an eye on Luke and Brooke after school and sometimes when they go out at night.

The simple message of eating a low-fat, low-cholesterol diet is now out of date. Disease is not linked with eating a lot of fats but with eating the wrong types of fats. It is also still important to limit your cholesterol intake, but it isn't nearly the villain it's made out to be. Cholesterol in the blood stream is most important because high levels greatly increase the risk of heart disease. The average person makes 75 percent of their blood cholesterol in their liver and only 25 percent is absorbed from food. Researchers have found that the biggest influence on blood cholesterol level is the mix of fats in the diet. Saturated (mostly animal fats) and trans fats-hydrogenated oils are the bad fats because they raise your blood cholesterol level whereas unsaturated fats like polyunsaturated and monounsaturated fats derived from plants are the good fats because they help to reduce the risk of heart disease.

Carbohydrates are an important part of a healthy diet. They give the body energy to perform physical activities and proper organ function. The best sources of carbohydrates are fruits, vegetables, and whole grains. They give the body essential vitamins, minerals, fiber (heralded for helping reduce the chance of heart disease, diabetes, diverticular disease, and constipation), and a mass of important phytonutrients. Carbohydrates come in a variety of different forms but the most common ones are sugar, starch, and fiber. Some diets like the Atkins, South Beach, and other low-carb diets are not particularly good for your body. The long term effects of eating little or no carbohydrates are not known and could be dangerous.

There is little solid fact about protein. We know that you need to eat about 9 grams of protein for every 20 pounds daily to keep from breaking down your own tissues. People around the world don't get enough protein which causes a condition called kwashiorkor. This protein malnutrition can cause growth failure, loss of muscle mass, decreased immunity, weakening of the heart and respiratory systems, and death. Digesting protein creates acids which are neutralized by calcium and other buffers. Eating too

much protein, recommended by the low-carb or no-carb diets, may cause the body to take calcium from the bones. Women who eat more than the average intake (95 grams per day) were 20 percent more likely to break a wrist over a 12-year period than those who eat an average amount (lower than 68 grams per day). These results show that long-term high-protein diets should be used with caution, if at all. Vegetarians need to be aware that not all protein is the same. Most animal protein is complete but fruits, vegetables, grains, and nuts lack one or more amino acids that the body can't make from scratch or modify from others. Animal and vegetable proteins have about the same effect on health but how it is cooked or packaged could make it detrimental to your body.

Eating an abundance of fruit and vegetables can help you stave off heart disease and stroke, control blood pressure and cholesterol, prevent some types of cancer, avoid diverticulitis, and safeguard against cataract and macular degeneration, two frequent causes of vision loss. Even adding only one extra serving a day can help you reduce your risk of heart disease by 4 percent, yet most Americans only get 3 servings of fruits and vegetables a day, not including potatoes which should be considered a starch. The recommended amount is 5-13 servings depending on your calorie intake. Juicing your fruits and vegetables can help you to meet the recommended servings; however it would be most beneficial to your health to eat them in their "whole" form because the pulp is what contains the fiber. Variety is also as important as quantity. No one fruit or vegetable has all the nutrients valuable to your health.

Do you need to take a multivitamin if you eat a healthy diet? Previously, researchers would have said no, but now scientists have realized that an intake greater than the minimum daily requirement for some vitamins may actually prevent heart disease, osteoporosis, cancer, and other chronic diseases. The customary multivitamin doesn't come close to making up for an unhealthy diet. It only provides a dozen or so vitamins to retain health, a measly silhouette of all the nutrients you can get by eating fruits, vegetables, and whole grains. Instead, this vitamin supplement acts as a nutritional safety net and is the least expensive health insurance you can buy.

The food nutritional quality is one reason why my family might work harder or do overtime to achieve enough income to purchase better brands of food and dietary supplements. If you can't afford to buy foods with a high nutritional value, it does contribute to economic problems, including the obesity crisis that has come up all over the world. People are in poorer health so everyone's health insurance has gone up due to all the diseases caused by obesity or malnourishment. Adults who are obese are less productive at work putting a strain on the business and its other employees to pick up the slack.

The nutritional quality of the food we eat is probably the biggest factor in why we are obese. If you eat unhealthy foods on a regular basis your body will pay for it. The situation should not be very severe because the only thing we really need to change is our eating habits, but without the proper information being publicized people continue to confuse nutrition education so it becomes a very disastrous condition. We need to substitute fast food and processed goods chocked full of preservatives with fresh goods and more organically grown food. Most of the problem is the mindset we have. We don't want to take the time or we think we don't have the time to make a good home-cooked meal, so we just eat out and the cheapest places to eat out are the fast food chains. Unfortunately most of the food that is better for you is either more expensive or you don't think it tastes as good. The impoverished people and those who live in developing countries are at a disadvantage because they don't have the right types of food and dietary supplements readily available to them or they are too expensive to buy.

The food nutrition factor does not have any particular trends. It is easier to find better goods at your local grocery store but there are also much more packaged and processed goods out there now as well. The most dominant trend that this factor has shown is based on who buys these goods. If more people ate fish, meat, fresh fruits, vegetables, and whole grains and served them in ways that didn't add unnecessary calories and fats to them the world would be a healthier place. However, it still wouldn't

mean that there wouldn't be any obese people because if you don't exercise and do physical activity it would be harder to have your weight under control. The fact that more people realize how to maintain a healthy lifestyle means the situation is improving moderately but it is still nowhere near the goal of having a great majority of the citizens be in good health. The obesity problem shows that we need to get the word out to people and make it easier to achieve this healthier status.

Improving or even resolving this factor by having beneficial goods readily available to every citizen at a low price would mean that every family would have more of their income to spend on other things. They would get all the nutrients their body needs and make it more unlikely that they would get sick or have cancer or diseases. Improving on this factor would help to preserve the environment if people went about it in the right way. If the farmers, fishermen, and other producers kept the ecosystem in mind as they did their work, planting more organically grown food would be better for the environment. Also we would want the fish and meat that we would eat to be healthy and thriving, so we wouldn't want to pollute the environment and possibly end up eating those pollutants we put in the environment. If good nutritional quality was available to everyone it would benefit the poor and those living in developing countries by giving them accessibility to a proper balanced diet. It would also profit small farmers. They would not need to pay as extensively for pesticides or other equipment that they would no longer need to use.

To effectively cure malnutrition would require a very intricate solution. Many different organizations would need to band together and work for the betterment of all people not just a select few. To start with food itself and how it's grown two different fields of expertise would need to build a better bridge between them: the food production experts, who decide what foods to grow and how to do it, and the nutritionists who know what foods people need to have better health. Everyone needs to look beyond growing a single crop because it is the most disease resistant and produces a high yield, and start looking at growing foods for their nutritional value. This means convincing everyone from policy makers to agronomists to extension workers to consider nutrition as part of their agricultural planning. This is where the media and public information organizations would come in. It would be their job to provide the people of the world with the proper information about nutrition and show everyday citizens how they could help their fellow man and why it is important that they do so. Also, research into growing bio-engineered crops could reduce the chance of micronutrient deficiencies. By identifying foods that are naturally high in micronutrients scientists could use conventional breeding to introduce those traits into super-nutritious hybrid foods.

The next logical step would be to make these healthier foods more readily available to the general public, including the poor areas of our country and our world. We need to make transportation to large grocery stores that have the lowest prices, greatest range of brands, package sizes, and quality choices, and farmers markets with freshly grown fruits and vegetables available and reasonably priced. Exacerbating the problem is the fact that poor families, especially those in urban areas, do not have a safe place to exercise and burn calories, an essential part to the weight control solution. We can start by building on the tried-and-true nutrition programs which increase access and benefits for food stamps, child nutrition programs, and support access to nutritious food through supermarkets and farmers markets in low-income neighborhoods. Cities should make low-income neighborhoods safer and provide more sidewalks, bike paths, and other alternatives to cars so opportunities for exercise are increased.

Malnutrition, whether it is obesity or hunger, can be conquered not only in the United States but all over the world if everyone helps not only themselves but also those around them. It wouldn't make sense not to try because even if you or your family are not afflicted with some type of nutrition deficiency you still have to pay for those that are through higher insurance costs and lowered productivity in the workforce, which will cause a lower standard of living. Most people do not even realize how much this problem affects them and their entire country. If the right information and help is publicized people will

understand how much of a problem malnourishment is and how it affects them personally, not just some stranger they will never meet. To come out victorious everyone needs to join forces to combat this ailment, and the world will be a better place once we have.

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