Obesity: America’s Swelling Epidemic
An AGR Thought Piece

Executive Summary

There is no denying that obesity is a major epidemic confronting the health and prosperity of our society. According to the Center for Disease Control, more than one-third of American adults are obese, and about 17 percent of children are obese. Both adult and childhood obesity rates have more than doubled in the last thirty years.

In January of 2013, an AGR team member attended a Harvard Business School Agribusiness Seminar and was introduced to a case study by the school: “H-E-B: Creating a Movement to Reduce Obesity in Texas.” The study inspired AGR Partners to take a look at the American obesity epidemic, how our food system and other factors contribute to the problem, and what solutions portend promise for reversing the dangerous, costly and unsustainable trend.

In summary, we’ve observed that our food system bears some responsibility for contributing to the epidemic in that: 1) mass production of food, beginning in the 1980’s, increased caloric and fat content of America’s diet and, 2) “food deserts”—generally low-income neighborhoods that lack access to fresh, healthy, affordable foods—contribute to the poor food choices of approximately 23 million Americans and lead to what is referred to as “hidden hunger.”

Other factors contributing to skyrocketing obesity rates include cultural influences, emotional eating and the reactive (as opposed to proactive, preventative) nature of our medical system. The financial impact of obesity is an increasingly menacing problem. Obesity is linked to several major health issues, including diabetes and heart disease, which place a heavy burden on the health care system. It is estimated that 9.1 percent of all health care spending in 2008 was spent on obesity.

Several efforts are making strides to turn the tide of the public health and economic threats of obesity. These include private-sector efforts like Michelle Obama’s “Let’s Move” campaign and private-sector programs led by Walmart, H-E-B grocery stores, Subway, and, locally, Paramount Citrus in Delano, CA.

Technological innovation shows promise in the fight against obesity as well. Several companies are promoting devices and programs that help people measure and manage the balance of
caloric intake and calories burned through exercise in an effort to meet personal health goals: NIKE+ Fuelband, Fitbit, and smartphone apps like “MealSnap” and “DailyBurn Tracker.” There are also a dizzying array of diets that have been popularized and promoted to improve health and combat obesity. AGR Partners favors the flexibility and variety of diets like the “Zone Diet,” the “True Food” diet, and the Mediterranean Diet.

Providing tools for good health is important for AGR Partners. To that end, the firm incentives fitness and preventative health care and provides access to a nutritional specialist. Our goal is to maintain healthy, productive employees, and in the process, continue learning about ways we can invest in the food value chain to achieve maximum economic, societal, and environmental benefits.

Please continue reading for more details about our analysis and observations.

**Obesity Overview and Contributing Factors**

Obesity is defined as having a Body Mass Index (BMI) equal to or greater than 30. The 2012 data from the U.S. Center for Disease Control (CDC) showed that 35.7 percent of adults in the United States are obese, up from 27.5 percent in 2010. Currently, childhood and adolescent obesity is approximately 17 percent across the United States, with 18.6 percent of boys and 15 percent of girls being categorized as obese. In June 2013, the American Medical Association (AMA) defined obesity as a disease, stating that: “Obesity is a disease state with multiple pathophysiological aspects requiring a range of interventions to advance obesity treatment and prevention.” Both adult and childhood obesity rates have more than doubled in the last thirty years, making obesity a national issue of concern.

The collective expansion of America’s waistline can largely be attributed to lifestyle: poor food choices and lack of regular physical activity. Many people are unaware of their daily caloric intake or how many calories they should be consuming. A 2000-calorie diet is widely recommended by the FDA and used on food packaging to estimate nutritional value; however, not everyone should eat 2000 calories each day. Several factors affect recommended caloric intake including activity level, weight, age, gender, and weight goals.
Our modern food system has also contributed to the obesity problem. In the 1980s, food products started to be mass-produced and, in general, the caloric and fat content of these foods skyrocketed. The public’s consumption of food, however, did not recalibrate according to the increased caloric and fat content of these convenient foods, nor did their levels of physical activity, thus resulting in an imbalance that has been increasingly wreaking havoc on our country’s health and welfare.

Yet another contributing factor to the nation’s obesity is the concept of “food deserts,” defined by the USDA as “urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food.” It is estimated that 23 million people in the United States live in areas defined as food deserts, or approximately 7 percent. Low-income and minority populations disproportionately live in food deserts and are more susceptible to obesity because they lack access to nutritional foods. The barriers to nutritional food access can be both geographic and economic; low-income Americans often can’t afford the higher protein foods needed in a balanced diet. In this situation, people consume sufficient calories but fail to strike a nutritional balance, which results in what is known as “hidden hunger.” (AGR addresses the topic of hidden hunger in another Thought Piece.)

The influence of culture is also an important factor to consider. The Harvard case study notes that the cultural impact on obesity is especially prevalent in Hispanic populations, who view some packaged food products and sodas as “luxury” items that can reflect a higher status among peers. Furthermore, an overweight child can be seen as well cared for, thus making weight gain a perceived positive.

Another factor that can contribute to obesity is the subconscious act of “emotional eating.” According to TeensHealth, “Emotional eating is when people use food as a way to deal with their feelings instead of to satisfy hunger.” Emotional eating isn’t triggered exclusively by negative emotions, but also includes the excessive eating that occurs during celebrations and holiday meals. It is a subconscious activity that feeds emotions instead of hunger, which
unnecessarily, and often dangerously, increases a person’s caloric intake. From a very young age, many children learn that candy is a reward for good behavior or performance, and baked goods are doled out to provide comfort. Children then learn to link these foods to success or comfort throughout their life. Research has found that when people are emotionally eating, they do not typically make healthy choices, but rather consume foods rich in fat. The fat in these foods activates chemicals in the brain that makes the person feel content, which satisfies the craving. Ultimately, this perpetuates an unhealthy cycle of satisfying emotional needs through food.\textsuperscript{13}

Finally, it is important to take a look at how we seek and receive medical care. Even though obesity is considered an epidemic in the United States, it is our team’s experience that doctors do not adequately inquire about a patient’s diet or exercise routines. Medical checkups tend to be more reactive than proactive in the sense that most people make an appointment with a doctor to fix an existing medical issue, rather than prevent a future one from arising. Perhaps this is because it is easier to prescribe medication rather than prescribe a complete makeover of dietary and exercise habits. It is also a more straightforward process for insurance companies to cover the costs of medical prescriptions rather than costs incurred by lifestyle changes. However, preventative care is increasingly taking on a more central role in health care. Recently, insurance companies started covering 100\% of the cost of one annual preventative care visit to the doctor. Preventative health care costs also qualify for itemized deductions on IRS tax returns.\textsuperscript{14} Although doctor visits are mainly reactive, people can use a Health Savings Account (HSA) for preventative medical expenses, including assistance with diet and other proactive health care measures.\textsuperscript{15} Hopefully mobile applications like DailyBurn, which allow a user to track and share their diet and exercise statistics, will facilitate an ongoing conversation between patients and their health care professionals, giving doctors more tools to address the root cause of many of our health issues.

**Economic Impact**

The medical and economic issues associated with obesity make this epidemic much more than a personal problem, but one that affects the country at large. Obesity is linked to medical complications such as heart disease, diabetes, and stroke.\textsuperscript{16} With these health risks come higher insurance costs for the employer and more time spent on sick leave, reducing the productivity of an employee and negatively affecting a company’s bottom line. It is estimated, on average, that an employer spends an extra $1,500 per year to employ an obese worker as opposed to a healthy, non-smoking, non-obese worker. The additional spending comes from the increased usage of health care, which drives the premiums up for employers.\textsuperscript{17}
In 2008, health care spending related to obesity was estimated to be $147 billion, or 9.1 percent of all health care spending. On average, an obese person spends $1,429 more—with other estimates as high as $2,741—on health care than a person of average weight. Some estimates state obesity-related health care spending is now as high as 21 percent of total health care spending, with most of these costs being paid by Medicaid and Medicare. It has been estimated that Medicaid spending would be reduced by 12 percent without obesity. To put health care spending in perspective, the U.S. spends roughly $640 Billion and $560 Billion more on health care than K-12 education and defense, respectively.

The upward trend of health care costs creates an absurd future: health care cannot become 100 percent of GDP. Companies, individuals, health care providers, governments, and doctors cannot be held responsible for sustaining this uncontrolled growth in health care costs. Currently, hospitals and doctors are being squeezed and the revenue margins are dwindling, creating an uncertain future for students considering the medical field. Obesity is largely to blame for these decreasing margins.

**Responses to Obesity**

Several initiatives have been enacted by the government with the purpose of educating people about obesity and reducing the occurrence of this epidemic. Michelle Obama launched a campaign, “Let’s Move,” in 2009 with the goal of instilling healthy living habits among children so that they may grow up in a healthier environment.

The initiative stands upon five pillars: 1) creating a healthy start for children, 2) empowering parents and caregivers, 3) providing healthy food in schools, 4) improving access to healthy affordable foods, and 5) increasing physical activity. One of the main goals of Michelle Obama’s initiative is to reduce the sodium and sugar content of foods by 25 and 10 percent, respectively.
Another initiative is the Healthy Food Financing Initiative (HFFI), established in 2009 to eliminate food deserts in the United States. This initiative provides over $400 million to make healthy food more accessible to people in low-income urban and rural areas without a grocery store.\(^{25}\)

In addition to government initiatives, there are also private sector programs and efforts. Wal-Mart has stated that they will provide healthier foods at lower prices by 2015, including reducing sodium by 25 percent and sugar by 10 percent in many of the goods they sell.\(^{26}\) This initiative coincides with Michelle Obama’s Let’s Move campaign and allows Wal-Mart to be at the forefront of the fight against obesity. Wal-Mart also announced in 2011 that it would open 275 to 300 stores in food deserts over a period of five years, which is estimated to provide more than 800,000 people with access to healthy foods that they did not have before.\(^{27}\) Although this is a promising start, there are still 22.2 million people that will remain in food desert areas after these new stores open.\(^{28}\)

Another corporation that has been successful in its efforts to combat obesity is H-E-B, a chain of grocery stores located in Texas and Mexico. Through research, H-E-B discovered five key barriers to healthy eating: 1) the perception that healthy food costs more, 2) the idea that healthy foods do not taste as good, 3) confusion/contradictions about what is a healthy food, 4) strong preference for traditional and familiar foods, and 5) not knowing how to cook. Once these five barriers were recognized, H-E-B began their fight against obesity by first targeting their employees and then broadening their efforts to encompass their customers.\(^{29}\)

H-E-B began by building a culture of health within their organization. Executive vice president of drug/general merchandise and format development, Roxanne Orsak, had worked for H-E-B for 20 years when she came to the realization in 2008 that she was living an unhealthy lifestyle and was overweight. She embarked on a personal transformation to exercise and eat nutritious, healthy meals. Orsak lost 50 pounds. With a new lease on life, Orsak broached the delicate conversation topic of weight with 20 of her fellow colleagues in 2009. Orsak profoundly impacted her colleagues’ health and well-being: 15 of the 20 people she spoke with changed their diet and exercise habits to become healthier individuals. One of her colleagues had just been diagnosed with Type II diabetes and high cholesterol—two very common issues associated with obesity—and Orsak’s conversation motivated him to ultimately shed 150 pounds. The informal crusade that Orsak launched led to several company-wide initiatives focused on weight loss, including the “Slim Down Showdown,” a weight loss competition among H-E-B employees. Once this culture of health was well-established among H-E-B employees, they unveiled efforts targeted to their customers.\(^{30}\)

Their first customer effort targeted the low-income Hispanic population, 37 percent of their customer base, and a group more prone to obesity.\(^{31}\) In 2012, H-E-B rolled out a campaign to
educate consumers with better product labeling. H-E-B also offered discounts and special offers on healthy foods to incentivize the purchase of healthier foods. Additionally, H-E-B engaged their customers in healthy activities, such as free health screenings once a month and shopping tours with a dietician. In 2013, H-E-B introduced icons and labels on their products to inform people of foods that are a fiber source, gluten free, organic, heart healthy, sugar free, low saturated fat, and low sodium in order to clearly identify healthier options.32

In the Central Valley of California, where AGR Partners is based, several local initiatives and efforts are seeking to combat obesity. In 2011, Paramount Citrus—located in Delano, CA—started incentivizing healthy eating by subsidizing the price of healthy, high-quality options through its on-site cafeteria. For example, a chicken salad costs significantly less than a hamburger. The rural town of Delano has few options for lunch, so Paramount’s healthy cafeteria is a significant improvement for its employees. Paramount believes that its investment in healthy food options will have positive returns in lower health care costs related to obesity.

These efforts to encourage healthy eating demonstrate that Americans are not averse to healthy foods, but that these foods are often not readily available and/or are unfamiliar due to cultural, geographic, or economic barriers. Through recently launched health and nutrition campaigns and digital tools, Americans are beginning to learn the difference between empty calories and nutritious meals and how maintain a healthier lifestyle.

“*You Can’t Manage What You Can’t Measure*”

One of the first food companies to begin publicizing caloric content and nutritional value on menus was Subway. Subway assigned a numeric value to each sandwich and allowed people to substitute ingredients on sandwiches that make for healthier choices. Over time, they have also introduced healthier options and separated their menu into categories to make it easier for customers to identify which sandwiches are the healthier choices.33

Many other restaurants followed suit and it is now commonplace to see nutritional values posted on menus, enabling consumers to know more about the foods they choose to ingest. Publicizing the caloric content has also made its way to dine-in restaurants, like Chilis34, Applebee’s35, and California Pizza Kitchen.36 From this movement, came cell phone applications that allow people to track what they eat. “Meal Snap” is one such application, allowing the user to take pictures of their meals, then estimating the calories of the meals and tracking caloric consumption over time.37 Another application that monitors calorie consumption is the “DailyBurn Tracker,” which allows the user to track caloric intake and customize fitness plans to achieve their weight loss and health goals. AGR has
found this application to be both effective and educational because it takes a simple approach to weight loss and a healthy lifestyle.  

In recent years, several companies have made a big push to promote awareness of caloric intake and the benefits of staying active. Nike released a product called the NIKE+ Fuelband, with the slogan, “Life is a sport. Make it count.” NIKE+ Fuelband tracks daily activity, allows individuals to set goals, see their progress, and stay motivated with achievements and rewards that are unlocked as goals are exceeded. This product is an extension of existing Nike+ products that allow customers to track activity through electronic devices like Nike watches and Apple iPods and iPhones. All the Nike+ products are designed to help people monitor their daily activity and correlate that physical activity with a healthy lifestyle.

Fitbit, a company that began in 2007, also designs products that help individuals monitor activity and calories burned, along with other features that promote a healthy lifestyle. Fitbit developed three wireless trackers—the Flex, the Zip, and the One—that log users’ physical activity, similar to Nike+ Fuelband. The Fitbit devices then wirelessly sync to a cell phone application or website, where the data then connects with other tools such as weight loss plans, achievement incentives, and the ability to compete with friends. In addition to the wireless monitors, Fitbit also has a wifi smart scale that tracks weight, BMI, and body fat percentage so individuals can monitor their progress.

Each of these efforts are promoting healthy living through methods that are accessible, simple, and motivational. Despite these companies’ best efforts, the question remains: Will this growing awareness create a “trend shift” in Americans’ diet and exercise habits?

What is the Right Diet?

A multitude of diets have recently been popularized and promoted to improve health. But among the dizzying array of options, which is right? Each of these diets may prove effective for some people, however, it is unclear which is the best. Some diets are low in carbohydrates, high in protein and high in fat, while others promote high consumption of carbohydrates, low protein, and low fat. Through AGR Partners’ own research and experimentation with diet, we find that the “Zone Diet”—developed by Berry Sears and described in his book Omega Rx Zone—makes sense. The Zone Diet takes a
balanced approach to consumption: moderate quantities of carbohydrates, proteins, and monounsaturated fats, with a high dose of pharmaceutical grade fish oil to supplement daily meals. In order to reach “the zone,” there are three dietary components: insulin control, calorie restriction, and supplementation with fish oils. Controlling insulin levels allows an individual to have control over good hormones, called eicosanoids, which affect the entire body, from the heart to the brain. An imbalance of insulin levels can be linked to most chronic diseases. Because this diet is based on moderation and not extremes, it is easier to follow and maintain for a long period of time, and therefore, can be more effective.\(^4^1\)

The “True Food” diet, created by Dr. Andrew Weil, seems to be another good diet, aimed at helping to prevent heart disease, Alzheimer’s and Parkinson’s Diseases, age-related disorders, and autoimmune diseases. True Food is an anti-inflammatory diet based on a food pyramid that helps people to select and prepare foods in a way that reduces inflammation, the cause of several serious diseases. The pyramid promotes frequent consumption of fruits and vegetables at the base of the pyramid, and permits moderate consumption of healthy sweets and wine at the small peak of the pyramid.\(^4^2\)

Recent research gives us more food for thought: eating more fish, rich in omega-3 fatty acids, can lower the risk of premature death in older adults. According to a study by the Harvard School of Public Health (HSPH) and the University of Washington, eating more omega-3’s may be able to lower overall mortality risk by 27 percent and heart disease risk by 35 percent. The health benefits of fish have been publicized for years, but this study is the first to research the link between omega-3s and mortality as a whole. There are three fatty acids—DHA, EPA, and DPA—identified as being associated with a large reduction in the overall mortality rate. DHA is most strongly correlated with the reduction in risk for Coronary Heart Disease (CHD), while EPA reduces fatality from heart attacks, and DPA reduces the risk for stroke. The Harvard study found that the strongest health improvements are seen in individuals that go from consuming little or no fish to about two servings per week.\(^4^3\)

Consuming a Mediterranean Diet—rich in olive oil, nuts, beans, fish, fruit, vegetables, and wine—has also been shown to prevent heart attacks and strokes in people of high risk. A recent study found that approximately 30 percent of heart attacks and strokes could be prevented in high-risk people by switching to the Mediterranean Diet. The diet suggests eating at least three servings of fruit and two servings of vegetables a day, fish at least three times a week.
legumes—beans, peas, lentils—three times a week, white meat as opposed to red, and up to seven glasses of wine a week (if part of normal routine).44

Amid the clamor of dietary “do’s” and “don’ts,” we are heartened by the research and demonstrated success of many of these diets, and moreover, the flexibility and variety that many of the diets promote as they invite Americans to make healthy choices and turn the tide in our national fight against obesity.

**AGR Partners Approach**

AGR takes a three-pronged approach to a healthy workplace through a fitness program, a specialty insurance plan, and access to a nutritional specialist. The fitness program includes a gym membership for families and the subsidization of a Fitbit or other such device for employees. In order to remain eligible for the gym membership, it must be used at least 50 times a year, promoting weekly exercise at the gym. AGR’s insurance plan (a high deductible plan) includes a Health Savings Account (HSA), to which the company contributes along with an employee contribution. With a high deductible plan and an HSA, AGR believes it can motivate better personal and preventive health care efforts. For example, an employee with high cholesterol would be incentivized to alter their diet and exercise habits to resolve the health issue rather than take expensive cholesterol medication through a high-deductible insurance plan. AGR believes that making healthy lifestyle choices is a more powerful and sustainable approach to resolving the majority of health issues facing Americans. Rather than spending money on high health care premiums, AGR encourages investment in the flexible HSA account, whose tax-free funds can be used for preventive health care.

AGR also makes available a nutritional specialist to work with the AGR team to educate team members about healthy food choices and develop health/nutrition plans that will be effective for team members.

With this three-pronged approach, we aim to provide the necessary tools and incentives to enhance the health of our team, increase productivity, and lower health care costs through proactive preventative measures. Also, given that our focus is investing in the food value chain, understanding where nutrition trends are going can help us best allocate our capital for the greatest reward.
Conclusion

The Harvard case study has brought to the forefront both the growing issue of obesity and what can be done to combat it. However, despite efforts of government and private sector leaders, there is still much work to be done. Obesity and the costs associated with it continue to escalate at an alarming rate. Ground zero in the crusade against obesity is raising awareness and promoting accessible ways for Americans to make healthier choices. But even if every American understood the links between obesity, related diseases, and the economics of it; and even if each American understood the relationship between calorie consumption, exercise and weight gain/loss, the true key to ending the obesity epidemic resides in the personal motivation of individual Americans navigating their priorities. And therein lies the challenge: inspiring a healthier tomorrow.

About AGR Partners

AGR Partners is a private equity firm that cultivates long-term growth in companies seen as indispensable assets of the agriculture and food value-chain. AGR facilitates late-stage growth, strategic acquisitions, and ownership transitions via non-controlling investments in private and public companies. AGR targets mature companies in investment grade countries, equity or convertible debt structures, and an investment target size of $10-75 million. The firm is headquartered in Visalia, California, but its team and Advisory Board are represented across the globe.

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