Positive Physical Fitness Philosophies and Regiments Using the After School Healthy Choices Project

The After School Healthy Choices Project aims to increase the prevalence of healthy dietary and physical fitness practices in local school districts throughout grades K-5, starting with the Greater New Brunswick Charter School.

Tag words: Physical fitness, diet in school children, elementary school fitness, Parent Teacher Organization (PTO), Rutgers University, Ethics in Science

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Summary:

Obesity in the United States has become a well-publicized epidemic over the past decade. Previous attempts have been geared towards changing lifestyle habits in adults by way of eliciting warnings regarding possible health detriments, while medical treatments have been focused on treatment of symptoms rather than the cause for the disease itself. Our group believes that it is much more difficult to induce lifestyle changes in adults than it is to instill beneficial physical fitness regiments and dietary choices in children. Thus, we have developed the After School Healthy Choices Project, which is a proposal geared towards educating parents within local PTO organizations in the practices of healthy lifestyles. Our proposal involves informing parents in the Greater New Brunswick Charter School of affordable foods rich in nutritional value, conventional and efficient physical fitness regiments, the benefits of the aforementioned program, and the consequences of an apathetic and physically detrimental lifestyle.
The Issue: Childhood Obesity (K-5):

Problem Overview (RF)

Obesity, a condition known to cause a variety of various cancers, heart disease, type 2 diabetes, sleep apnea, osteoarthritis, high blood pressure, high cholesterol, and lung disease, along with a plethora of other conditions, is the leading cause of preventable death on the planet. Though there are obvious genetic factors that play into an individual’s susceptibility towards excessive weight gain, the most common causes of the condition are an excessive caloric intake and a sedentary lifestyle (i.e. a lack of regular physical activity). The short-term consequences of obesity within children in particular include growth inhibition, high blood pressure levels, high blood lipid content, and defects with sugar metabolism, including hypoglycemia and hyperglycemia (Gidding, et al., 1995). Respiratory conditions have also been known to be associated with obese children, as asthma and obstructive sleep apnea are prevalent in the overweight age groups (Gennuso, et al., 1998).

Longer term physical detriments of childhood obesity include higher risks of hypertension, diabetes, cardiovascular disease, gall bladder disease, and osteoarthritis, all of which appear prevalent during adulthood (Whitaker, et al. 1997). Psychological consequences of childhood obesity include lowered self-image and self esteems, substantial eating disorders, and a lower quality of life in general, in terms of physical health (Davison, et al. 2001). Furthermore, studies have shown that the longer a child remains obese, the more likely the child is to carry over the obesity into adulthood. It has been shown that approximately 20% of four-year olds remain obese into adulthood, while 80% of obese teenagers will likely remain obese as adults. Based on these findings, it appears that the solution to decreasing morbid obesity rates in adults may lie in treating the prevalence of obesity in children (Dietz, W. 1998).

The problem is stark in younger children; childhood obesity has been measured at triple its previous rate over the past three decades. In 2008, the obesity rate amongst children ages six through eleven was 19.6, up from 6.5% in 1980 (CDC). Obesity in children occurs after a child is significant exceeding the normal carrying weight for his or her age or height (Mayo Clinic). Amongst the leading causes of obesity in children are diet, socioeconomic conditions, familial issues,
psychological and societal factors, genetics, diet, and inactivity, all of which are regarded as more important than genetic factors. Based on recent National Health and Nutrition Examination Survey results, the prevalence of obese children in the 6-11 age group had been measured at 15% from 1999-2000 (Ogden, et al. 2002). This signified a drastic increase in obesity rates when compared to earlier surveys, as rates were 5% in 1960 and approximately 11% in 1980. More telling was the increase in ethnic minority groups as compared to Caucasian children; in Hispanic and black elementary school children, double digit increases were seen from 1988-1994 and again in the 1999-2000 survey. This contrasts markedly with the overall 5% increase in obesity rates seen in Caucasian children within the same age group. Such findings in New York City public school systems highlight the racial disparity, as shown in the figure above (AJPH, 2004). The increases appear to imply a socioeconomic correlation between obesity rates and financial stature. Similar results were found and confirmed in National Longitudinal Survey of Youth findings, which investigated similar trends in the 4-12 age groups (Strauss, et al 2001).

There are several explanations being presented for the surge in child obesity rates. One proposal points at the abolishment of recess in many elementary schools since 1987, which serves as a hub for physical activity and fitness in school children. However, these reasoning remains as an inadequate explanation, as 90% of elementary schools still have some form of recess throughout the day (Pellegrini, 1995). Thus, it appears that the problem may lie in the physical fitness and education programs themselves within public elementary school systems. Recent research conducted regarding the effectiveness of physical education programs in elementary schools has demonstrated a negative view in terms of obesity prevention and the promotion of physical fitness. Current guidelines state that elementary school students should participate in physical education activities daily and stay active during at least 50% of that time, studies have shown that children stay active far less than 50% of PE time (Nader, 2003). Several programs have been developed in response to this ongoing threat of inept regimented physical education by combining PE with health and environmental issues, some of which have been shown to possibly improve fitness while reducing obesity (Gortmaker, et al. 1999). Unfortunately, there are no ongoing studies that have monitored elementary school physical education and its role in the onset of obesity on a national level (Datar and Sturm, 2004).

A study conducted in 2004 found that one hour of additional physical education decreases body mass index in overweight and at risk in kindergarten and first grade school girls. The study concludes that the expansion of physical education programs in elementary schools may present an effective method for preventing future onset of obesity, as well as the lowering of obesity in current children within the aforementioned age groups. Research suggests that the expansion of physical education beyond the realms of what is currently offered at most elementary school districts can have drastic implications. Increasing physical education activity to 5 hours per week may decrease the level of obesity in K-5 girls by 43%, while reducing the number of overweight children in the age group by 60%. There seems to be less of an effect on male children, due possibly to the social tendency of the gender group within the age range to voluntarily participate in physically rigorous activity. Nevertheless, other beneficial health implications for both gender types may benefit from the avoidance of long-term consequences that obesity presents. An issue that school boards currently face when attempting to institute new programs is the ambiguity they have received in regards to a solution. The Center for Disease Control (CDC) recommends five days a week of physical education, while other research groups
have shown that the current state of physical education is subpar and nearly worthless. Due to the economic climate and pressure to increase academic performance as a whole, many school administrators are attempting to abolish PE programs in order to conserve money and focus more on schooling. This has resulted in only 16% of kindergarten children receiving physical education daily in 1998, with 13% receiving less than once a week (Datar and Sturm, 2004).

References: (Problem Overview)


The Paradigm (MS)
Currently schools are all over the place from doing nothing at all to creating extensive nutritional programs, sending home health referrals if a child is over his or her Body Mass Index, and lastly extending Physical Education time. Currently the most direct way to reduce childhood obesity has been eliminating sugary drinks in vending machines. Also sugary snacks were replaced by fruits and vegetables which was another great way to lower obesity. Some school s have created nutritional programs and started making breakfast available to children. In one study, these programs have halved the amount of obesity over a two year period but have not eliminated obesity altogether. The government has started rewarding certain schools for creating such programs. However the lack of making sure children are participating in PE class has lead to many schools reducing days for PE class altogether. PTO’s are currently not taking direct control of the situation. However many parents are starting to get involved more with their child’s nutritional needs (especially if they receive a health watch card from their children’s schools). These cards that have been implemented in some schools tell the parents that their child’s BMI is above the averages. A list of averages as well as healthy solutions is sent home. While some parents initially react negatively toward these warning signs, eventually come around and try to make a better life for their children. As of now the government is responsible for the reinforcement of making sure the children have PE classes, however this can change if PTOs push for such changes such as stricter inspection of PE classes and more classes a week in total. PTO’s can also push for breakfast programs especially for lower income schools. Studies have shown that such programs have helped lower income families provide healthier options for breakfast and have indirectly lowered obesity rates (in lower income communities). The darkest regions are where the breakfast programs would work the best. This is because the low income families have trouble providing healthy breakfasts. Therefore the schools can provide such programs and can fight hunger of children who have not eaten a full breakfast. Here are some of the places where changing the vending machine contents will be beneficial. If the dark green states would remove energy drinks from their school’s vending machines, this might lower the amount of gallons of soft drinks. As seen many different parts of the country as well as different ethnic, social, and economic demographics all have different issues. Some parts cannot afford breakfasts, while others can but are choosing to serve the wrong foods. PTOs can be targeted in specific areas depending on what the needs of the area are. Currently PTOs are heavily relying on education because most of the changes in business and school relations are government enforced.

References
Youth obesity statistics
Our Mission:
By Josel Evans

The Afterschool Healthy Choices Project main goal is to educate elementary school children in working to be healthy and fit physically, by making right choices when it comes fitness and health. We will show students the benefits of exercising and eating healthy, and the outcomes that may occur if not followed.

The Afterschool Healthy Choices team will attempt to persuade the local Parent-Teacher Organization to start an after school activity which attempts to help interested children in living a life that can lead to a healthier one. It will be a fun and entertaining event for children that will involve exciting activities and interesting instructions, and also provide healthy substitutes that can be consumed instead of sweets or chips.

In the end, our hopes are to make this a national program run by faculty or even students themselves who want to continue living healthier and teach other students in need. A very successful local agenda can help end a national crisis that can help the future generations at an early age.
Financial Aspect:
by Peter Fields

For the financial part of our project everything from a place to rent a small office to the type of food we are going to promote at our after school healthy choices project must be accounted for. A small office could run us about $900 a month and about $50 a month on miscellaneous items like staples, paper, and stamps. For our transportation, our staff would purchase a van for about $8,500 and pay about $300 dollars a month on gas. Food, tables, and brochures for our project would run about $1500 a month. As a form of raising money we can sell healthy yogurt, granola bars, fruit as an income of about $500 a month. We can also sell small booklets on easy ways to lose weight for a few dollars apiece.

The Service Project: Education

Several school administrators and Parent/Teacher Organization members in the New Brunswick and North Brunswick area have been contacted via e-mail in order to determine their receptivity towards the after-school program. Due to the current worldwide economic climate, coupled with the status quo of the New Jersey state budget (or lack thereof) and Gov. Chris Christie’s newly installed policy towards funding cuts in public school districts, there is a massive concern towards the installation of any new programs. Despite our best efforts towards alleviating these concerns by promising a cost-free service for the school, state, and district, our group has yet to be prosperous in finding a receptive administration. The Greater New Brunswick Charter School remains our target location due to its proximity to Cook College, but other options will be explored further if they demonstrate sufficient openness to enacting such a program. Attached in the appendix is a copy of the generic template letter sent out via e-mail to contact school administration and PTO members, as well as a copy of our proposal.

According to the US census bureau there are 95615 public/secondary schools in the US. There are about 29273 private schools. The National Institute of Education did a survey where they surveyed 49700 schools and found that about 56% of them had some form of formal after-school program. As student enrollment increased, the number of afterschool programs rose as well. City schools had the highest percentage of afterschool programs (about 71%). This may be because in cities, the purpose of such programs is to keep kids under watch and active so they are not tempted by gangs or wrong-doers in the streets. The programs we wanted to implement are more in towns and in rural areas. Both these locations have the least amount of afterschool programs with about 48 and 49% respectively. Some of these programs are fee based and that is one of the reasons why students in low income households do not attend the afterschool programs.

Our group will create a program that lowers obesity through the afterschool programs in suburban and city fringe schools (as those are the closest to us). There are about 214000 students enrolled in town programs and 1477000 students in the urban fringe programs. Because so many kids are enrolled in programs, targeting these programs with our healthy lifestyle plans is probably the best way to tackle the problem. Our plan would be tailored by the individual staff that is fun for each school. The staff running should incorporate a small lesson for healthy lifestyle (kept no longer than five to ten minutes), an optional healthy snack, and then a long active period of playing sports or other games. Most schools here in the New Brunswick area offer afterschool programs and some even have sister programs that affiliated with the schools.
Here is a map of the current situation of all the programs in New Brunswick alone.

Families can look at the website njafterschool.org to find the programs that fit their needs. As most of the schools offer programs in this area, most families would probably just go with the one at their children’s school.

Two studies were found from


Appendices:

- Basic template letter sent to the Greater New Brunswick Charter School, Center School, and Irving Primary School, all within the realms of New Brunswick and North Brunswick:

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To whom this may concern,

   We are a group of students from Rutgers New Brunswick University that is currently involved with a physical fitness improvement agenda under the direct supervision of Professor Julia Fagan. We are currently looking to work with local elementary schools around the New Brunswick/North Brunswick areas in order to investigate and improve upon the status qua of elementary school programs. We have developed a program which would be entirely cost free to the school district and would work with the PTO and ensuring our children develop the proper life style. This would also serve as a benefit to the parents by improving their daily physical regiments. If this is something that we could possibly develop or if you are interested in, Please contact us at ruethics2@gmail.com.

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Editorials:

A Cheeseburger and Fries: The Deadly (Unheralded) Epidemic
by Richard Frani

Smoking cigarettes is responsible for the deaths of nearly 500,000 Americans every year. Legislation has been passed that bans the advertisement of smoking-related products, while advertisement campaigns have been produced that attempt to prevent future generations from smoking while attempting to persuade current smokers into cessation. The act of smoking cigarettes is a choice made by an individual; thus, any attack on the grounds of the action would borderline the realms of moral presumption. However, it has been deemed that sufficient damage is/has been done to society as a whole by the action of smoking that a moral outcry has effectively been produced.

People know exactly what they are getting into when they pick up that cigarette and light up for the first time. They make the choice to smoke, and regardless of whether or not one’s moral perspective is for or against the action, another person does not have any reasonable right to criticize the other person’s decision (so long as it doesn’t affect their own interests or disposition). But what about America’s number 1 cause of preventable death- obesity?

Obesity is the leading cause of preventable death in the world and the second leading cause of death in the United States, the first being tobacco use (Lancelet 366:1197-1209). Though biological and hereditary factors have been implicated, the main cause of obesity is still recognized as an excessive caloric intake, making one’s dietary choices a significant determining factor in one’s body weight. The average American adult male (5’10 height, 160 pounds) is recommended to consume about 1500-2000 calories per day. A burger fries, and cola from the average fast food joint accounts for roughly half of the daily recommended caloric intake, as well as over half of the recommended daily sodium and saturated fat intake. A glass of whole milk accounts for almost half of the daily recommended saturated fat intake. Over time, just like smoking and drug use, intake of such foods will lead to incurable and life-threatening diseases and conditions. Why then, do people still continue to eat the way they do without remorse, regardless of known consequences? Why do parents continue to feed their children fast food, junk food, and high-calorie low-nutrient foods? This is a condition prevalent even in the most affluent of households.

It’s the same reasoning behind the prescription drug epidemic occurring in today’s youth. Illegal drugs such as heroin and cocaine have already achieved their negative social stigmas through years of education, moral ad campaigns, and history books. The pills that are ingested by drug users today have a positive association with them by deeming themselves medication rather than drugs; thus, users feel no moral guilt when using them, regardless of the health effects or societal repercussions. The cheeseburger, high in saturated fat and calories, has yet to develop the same negative social stigma as cigarettes, alcohol, or illegal drugs, and yet it has proven itself to be just as deadly or even more so. Until we can educate future generations and develop a lifelong commitment to dietary knowledge and aptitude, a happy meal from McDonald’s will continue to be America’s top unheralded epidemic.
**After-School Weight Loser Program**  
by Pete Fields

Everyday children are stuffing their faces with unhealthy and greasy foods. I feel the reason for this is because people are not informed with healthy nutrient facts that could help them make better decisions when buying or preparing meals. Another factor is the easy access to fast food restaurants like Wendy’s, Burger King and McDonalds. People are constantly buying lunches and dinners at these restaurants and basically everything on the menu is unhealthy.

Our goal is to set up an after school program where kids can learn the healthy way to eat. We plan to have helpful pamphlets for the kids to read as well as different foods to eat. Our mission is to hopefully inform the children at an early age because it is much easier to train a child to eat correctly instead of trying to have them change their diets in their teenage years or even 20’s.

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**My Big Fat Editorial**  
by Mohit Sahni

Currently schools are all over the place from doing nothing at all to creating extensive nutritional programs, sending home health referrals if a child is over his or her Body Mass Index, and lastly extending Physical Education time. Presently the most direct way to reduce childhood obesity has been eliminating sugary drinks in vending machines. Also sugary snacks were replaced by fruits and vegetables which was another great way to lower obesity. Some schools have created nutritional programs and started making breakfast available to children. In one study, these programs have halved the amount of obesity over a two year period but have not eliminated obesity altogether. The government has started rewarding certain schools for creating such programs. However the lack of making sure children are participating in PE class has lead to many schools reducing days for PE class altogether. PTO’s are currently not taking direct control of the situation. However many parents are starting to get involved more with their child’s nutritional needs (especially if they receive a health watch card from their children’s schools). These cards that have been implemented in some schools tell the parents that their child’s BMI is above the averages. A list of averages as well as healthy solutions is sent home. While some parents initially react negatively toward these warning signs, eventually come around and try to make a better life for their children. As of now the government is responsible for the reinforcement of making sure the children have PE classes, however this can change if PTOs push for such changes such as stricter inspection of PE classes and more classes a week in total. PTO’s can also push for breakfast programs especially for lower income schools. Studies have shown that such programs have helped lower income families provide healthier options for breakfast and have indirectly lowered obesity rates (in lower income communities).

Many different parts of the country as well as different ethnic, social, and economic demographics all have different issues. Some parts cannot afford breakfasts, while others can but are choosing to serve the wrong foods. PTOs can be targeted in specific areas depending on what the needs of the area are. Currently PTOs are heavily relying on education because most of the changes in business and school relations are government enforced.
If we were to implement a program that creates a balance between educating kids and having them actually burn off calories through fun active games, this combination could help solve the problem of obesity in the youth of the US. Furthermore a program like the one we implement also can work with the school cafeteria to reduce waste. If the school cafeteria has healthy snacks or can make a healthy snack out of left over’s (for example peanut butter or nuts), the kids and the cafeteria will benefit and it will not cost the school any more to further run efficient afterschool programs. Although New Jerseys governor has decided to cut programs all across the state, (not just school programs but programs in every niche of every industry) many afterschool programs are still operating and bringing in more children all the time. Changes should be made to these existing programs so more children benefit and we can create a healthier America.

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A Change for the Future
Josel Evans

Today, a majority of elementary school children are unhealthy and have habits that will lead to an unhealthy life and future. To make the best of the future, children have to start sooner rather than later in order to become healthy and even successful. A good body image is a good key to success and being intelligent and fit are both pros.

The After-School Healthy Choices Project goal is to inform children of healthy alternatives they can eat that are tasty and good for the body. Along with that, we work with the children to exercise doing fun and interesting activities that are sure to get children moving and looking better. However, we are aware that parents play an important role in the foods children eat, so we even plan to go a step further and reach out to parents through brochures and packets that will also educate parents.

> This plan working with after-school programs already in place will be a successful and life changing experience for many of the children involved. Hopefully a few schools in the Middlesex County area can affect the state and maybe even the nation one day. All it needs are people willing to do some work for children and start at a young age that is important to mental and physical health and development.