# RU Lunches: The Fast and Easy Way to a Healthy Lifestyle

RU Lunches is a dynamic website that provides parents with easy to follow instructions on how to create a healthy environment for their child.

Tag Words: Lunches; Healthy Lifestyle; Obesity; Nutrition; Exercise Habits; Lunch Recipes; Active Lifestyle

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# **Summary**

Obesity remains a growing issue in America. In 2004, it was found that 32.1% of adults' ages 20-74 were obese compared to 13.3% in 1980 (Williamson). This trend is astounding considering that it is just a comparison of 20 years and that the percentages continue to rise. Specifically, cases of childhood obesity have shown continual increase in recent years. Through our studies on the topics of childhood diet and exercise habits we have developed a solution that can help curb this problem of rising obesity rates in children. We have created a website providing information that encourages parents to develop healthy eating habits for their children. Our website can be found at www.rulunches.weebly.com, and offers lunch recipes that have been designed to be great tasting, healthy, and easy to make for children. In addition there is information to encourage an active lifestyle.

# The Issue: Obesity

# The Problem of Childhood Obesity

Childhood obesity is an indication of a lifetime issue with weight (Galvez). Therefore the importance of forming healthy habits early in life is crucial. In addition, childhood obesity leads to many secondary effects such as low self esteem. It has also been found that both obesity and hypertension are correlated with decreased cognitive functioning in middle age (Elias). By providing parents with information about all the aspects of obesity such as decreased cognitive function, hopefully the parents will be more motivated to encourage healthy behavior.

Obesity is the result of individual's decisions, but is largely impacted by the environment. Habits are formed largely based on what the individual is exposed to (Galvez). In the case of children, they are influenced by both parents' habits and school. The impact of parents' habits is highlighted in the fact that "children with one obese parent face two times the risk of becoming obese adults, compared with children whose parents are not obese" (Salinsky). This could be due to the environment established, the example provided by the parents and genetics. In addition it has been found that parents who are involved in choosing their child's food result in healthier food than if the child were to chose (Klesges). The easiest way to prevent the trend of obesity in children would be to educate parents on how to provide an environment to encourage healthy habits for their children. The website would educate and provide healthy alternatives for parents to help their children prevent obesity.

In addition, the website will be able to provide alternative lunch meals as opposed to those at the cafeteria. It has been found that children eating at the cafeteria are at a 47% greater chance of being obese (Veugelers). Just by eliminating soft drinks, is a very effective method of avoiding obesity. Example menus will serve as a guideline for parents who would like to provide more nutritious meals for their children.

# The Importance of Physical Activity

Physical inactivity can be incredibly detrimental to the health and wellness of children as well as adults. Numerous studies show that inactivity is more related to childhood obesity than diet alone. Research has shown that increasing physical activity alone, even with no or minimal changes in body composition, will dramatically improve health markers. In addition, with kids sitting and playing video games or watching TV more and more, strange injuries usually found in older individuals are occurring in children and adolescence. For example, children that spend a lot of time sitting and being inactive develop very tight hip flexors. Placing the legs and hip in a seated position for long periods of time can actually shorten the hip flexor muscles making them tighter and increasing they're pull on the lumbar vertebrae of the spine. As they get older this condition can now make them prone to slipped and herniated spinal disks at young ages. Serious low back injuries such as this were typically seen as being a problem in old age, but childhood inactivity has made it a serious concern for many teenagers. This is one of many orthopedic problems associated with childhood obesity and inactivity as it is common for overweight children to complain of joint pain. A lot of this joint pain may be due to altered coordinative and walking abilities attributed to inactivity and extra weight.

The Weight Control Information Network provides some guidelines on how to make children more physically active. They make suggestions for parents such as setting a good example and being active around children and planning family activities that get kids out of the house such as trips to the park or zoo. They also suggest such things as involving children in household chores and limiting TV and video game time. Involvement in sports and other physical activities can also be beneficial.

As previously mentioned, the President's Council on Physical Fitness and Sports has published research findings that prove that physical activity has a protective effect on many of the problems associated with obesity. That is to say, physical activity alone can have a dramatic effect on one's health, even if no outwardly visible effects are yet seen.

Physical activity will not only improve health, but will absolutely improve body composition and weight. This is something that probably hits home more than anything else for most people. Physical activity can help a person to get the body they desire. With children, involvement in sports can dramatically improve aerobic fitness and help them lose weight.

Something little known by most people is that weight lifting, given a dose/response ratio, will have the same or better body composition effects as aerobic exercises such as running. Also, weightlifting, contrary to most people's beliefs, is low impact and can have hugely beneficial effects on bone and joint strength, helping children with orthopedic issues. The benefits to safe and supervised weight lifting in older children are abundant. In addition to all the benefits, weight lifting will often times be of a great benefit to overweight children because they are more likely to stick to it. Children enjoy doing things that they are good at, and from my own experience I have noticed that overweight children are not quick, they are not fast, but they are strong!

# Sources of Nutrients and Their Roles in Cognitive Function

<u>Iron</u>- Functions in transport of oxygen to the brain, red blood cell formation and also enhances the ability to concentrate. Common sources include: spinach, asparagus, clams, beans, peas, enriched bread, and cereals (Pollitt, 1993)

<u>Protein-</u> Provides the amine acid tyrosine needed for the release of essential neurotransmitters resulting in increased alertness and motivation. Also sustains energy release and mental functioning. Some common sources are: Meat, fish, seafood, eggs, dairy and grain products and legumes (Wurtman 1988)

<u>Fat</u>- sustains glucose breakdown which gives the body energy needed for functioning. Carriers of vitamins A, D, E and K and essential fatty acids which help form nerve cell membranes. Found in oils, salad dressings, butter and margarine. Note: most fats are hidden because they are added during food preparation. (Garrison and Somer, 1995)

<u>Choline</u>- Needed to produce acetylcholine an essential neurotransmitter used by the brain and muscle cells. Suggested that regular intake of Choline may improve memory performance. Found in egg yolks, meat, wheat germ, peanuts and soybeans. (Mark and Mark, 1989)

<u>B Vitamins</u>- B<sub>1</sub> promotes the body's ability to use glucose; deficiency can result in mood changes and reduced attention span. Found in enriched breads, pork, peas and pecans. B<sub>6</sub> involved with acetylcholine metabolism and activity, deficiency can impair memory. Some common sources include chicken, fish, egg yolks bananas and avocados. B<sub>12</sub> supports formation and maintenance of myelin sheaths that surround nerve cells, deficiency can result in memory loss, confusion and impaired physical functioning. This vitamin can be found in meat, eggs and dairy products. (Garrison and Somer, 1995)

<u>Vitamins A and E</u>- these vitamins are considered antioxidants and are essential to good health. They promote cell growth and fight infections, protect brain and body against free radicals which cause cell destruction and can affect the nervous system by interfering with normal nerve myelination. (Garrison and Somer, 1995)

# The Service Project: Web Design

Through our research and experience, we have found that healthy food is not readily available in most school cafeterias. Our plan is to design a website that will basically serve parents as a guide to keeping their children healthy. Our main focus will be on providing information to parents about creating healthy lunch alternatives for their children. We will feature ten lunch recipes that provide healthy varieties for children at lunch during school hours. In this way, parents will be able to ensure that children are able to eat healthy foods during the average school day. Also, our website features activity and exercise suggestions for children that will be easy to access by parents for quick and fun activities for their children. Another aim of the website is to move children away from the TV and back outside. Finally, since eating on-the-go is essential to most daily routines, our website provides links to other websites that provide the nutrition information for the most common fast-food and sit-down restaurants. Accessibility to nutritional information is our goal and utilizing the web is the perfect way to make our information available.

Our website is currently up and running can be found at www.rulunches.weebly.com. We are currently in the process of publishing information about our website in several places such as local newspapers and also on the website of the New Brunswick Public school district. We believe this effort will allow for the advertisement of our website and attract parents to our easy to use resource.

## Website Links

http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html

http://www.dietfacts.com/fastfood.asp

http://win.niddk.nih.gov/statistics/

http://www.pbrc.edu/pdf/PNS-physicalactivity.pdf

http://www.pecentral.org/

#### References

Baechle, Thomas R., and Roger W. Earle. Essentials of Strength Training and Conditioning. 3<sup>rd</sup> ed. Champaign, IL: Human Kinetics, 2008. Print.

Bethesda, MD Eating Healthy and Physical Activity Across Your Lifespan: Weight-Control Information Network. Print.

Clark, Michael A., Scott C. Lucett, and Rodney J. Corn, eds. NASM Essentials of Personal Fitness

Training. New York, NY: Lippincott Williams and Wilkins, 2008. Print.

Elias, M., Elias, P., Sullivan, L., Wolf, P., and R. D'Agnostino. 2002. Lower Cognitive Function in

the Presence of Obesity and Hypertension: The Framingham Heart Study. Int. Journal of Obesity 27: 260-268.

Galvez, M., Frieden, T., and P. Landrigan. 2003. Obesity in the 21st Century. Env. Health Persp. 111(13): 684-685.

Garrison, R., & Somer, E. (1995). *The nutrition desk reference*. New Canaan, CT: Keats Publishing

Heyward, Vivian H. Advanced Fitness Assessment and Exercise Prescription. Fifth ed. Champaign, IL: Burgess Company, 2006. Print.

Klesges, A., Stein, R., Eck, L., Isbell, R., and L. Klesges. 1991. Parental Influence on Food Selection

in Young Children and its Relationships to Childhood Obesity. Am. J. Clin. Nutr. 53:859-864.

Mark, J., & Mark, V. (1989), Brain Power. Boston: Houghton Mifflin

"Physical Activity Protects Against Health Risks of Obesity." President's Council on Physical Fitness and Sports - Research Digest 3rd ser. 12 (2000). Print.

Pollitt, E. (1933). Iron deficiency and cognitive function. *Annual Review of Nutrition*, 13, 521-537

Salinsky, E., and W. Scott. 2003. Obesity in America: A Growing Threat. NHPF: 1-31.

Veugelers, P. and A. Fitzgerald. 2005. Prevalence of and Risk Factors for Childhood Overweight and Obesity. CMAJ 173(6): 607-613.

Williamson, D. 2007. Statistics Related to Overweight and Obesity. WIN. Retrieved by <a href="http://win.niddk.nih.gov/statistics/">http://win.niddk.nih.gov/statistics/</a>.

Wurtman, J. (1988). Managing your mind and mood through food. New York: Harper & Row

### **Editorials**

Dear Vice Principal Susonnovich,

My name is Daniel Fiumecaldo I am a senior at Rutgers University here in New Brunswick. I am currently enrolled in my senior colloquium class and I feel my colleagues, Ashley Brower and Joseph Ring, and I have identified a particular problem that you will have an interest in. As you may know obesity rates in the United States are the highest they have ever been. Specifically, cases of childhood obesity have shown continual increase in recent years. Through our studies on the topics of childhood diet and exercise habits we have developed a solution that can help curb this problem of rising obesity rates in children.

We are in the process of creating a website project that will serve as a source of health information that will encourage parents to develop healthy eating habits for their children. The main feature of our website, www.rulunches.weebly.com, are ten lunch recipes that have been designed to provide a great tasting, healthy, and easy to make lunch for the children in your school. Once launched in completion, expected for the week of November 15<sup>th</sup>, our website will

also be updated with weekly blog topics on healthy-living habits and creative dinner recipe suggestions. Again our goal is to provide parents with recipes that not only emphasize healthy eating but also are easy to prepare and can fit into the fast-paced schedule most parent's experience.

Furthermore, our website will offer information on the importance of exercise for children and provide fun exercise activities for them. A large part of building a healthy lifestyle is participating in daily physical activity. The activity suggestions provided are focused on encouraging children to spend time actively playing which will allow them to form healthy habits of physical activity in the future.

We hope you agree with the goals we are trying to reach with this project and if so, we would like to distribute information about our website to the parent's of your students. To do this most effectively we thought about possibly adding a link to our website with a short description to the New Brunswick Public School webpage under the Parent Resources tab. Another idea we had would be to create a flyer advertising our website that could be distributed to the children or published in a news letter the parents receive. If you would like to work with us on this project and want further information you can contact me via email at fiumecal@eden.rutgers.edu or cell phone at 908-421-0970. We will have sample flyers and newsletter ads ready at your request. Thank you for your time.

Sincerely,

Daniel N. Fiumecaldo, Rutgers University, Undergraduate

Dear Gloria Stravelli,

Obesity is a serious issue today as the second greatest preventable cause of death. This issue continues to grow every year with increase in the rate of obesity. There is no perfect solution to obesity, but I believe that education for parents is the best strategy. Most people form their habits early in life, and it is really hard to change lifestyles. By teaching parents to set a good role model and providing the health benefits of eating right, hopefully we can turn this issue around.

There are certain facts and figures I think parents aught to be aware of. First, childhood obesity is an indication of a lifetime issue with weight <sup>2</sup>. Therefore the importance of forming healthy habits early in life is crucial. In addition, childhood obesity leads to many secondary effects such as low self esteem. It has also been found that both obesity and hypertension are correlated with decreased cognitive functioning in middle age <sup>1</sup>. By providing parents with information about all the aspects of obesity such as decreased cognitive function, hopefully the parents will see the need to encourage healthy behavior. Obesity increases the risk of heart disease, diabetes, stroke, and some forms of cancer in addition to countless other side effects <sup>3</sup>. The need for a change in the country's collective relationship with food and exercise must change or else.

Parents also must learn that they play a huge factor in their children's lifestyles. The children look up to and follow their parents particularly in regards to food. Obesity is developed by an individual and their habitat. From a young age, children only know the food habits that their parents teach them. When they reach the age that they are able to go to school and pick out their own food, often they will choose what they know.

This fact that children follow parents' examples and that there are many risks associated with obesity, have lead to the development of a website, <a href="www.rulunches.weebly.com">www.rulunches.weebly.com</a>. The purpose of this website is to inform parents of the negative impacts of obesity, and to offer healthy alternatives. In addition it features a kid's section and a blog that is updated often. Thanks,

Ashley Brower

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To whom it may concern,

The current trend of childhood inactivity and poor eating habits has lead to exponential increases in childhood obesity over the last few years causing the problem to become known as an epidemic. Problems associated with excess body fat have surpassed cigarette smoking as the leading causes of preventable death. This all spawns from the larger issue of an enabling society.

Today parents allow their children to sit and play video games and watch TV possibly because these activities are 'safer' and possibly less emotionally traumatic than getting their children involved in a sport or letting them go outside and play. What parents don't realize is that the short term fix of keeping kids indoors has the long term consequences of health problems and the emotional ramifications of being overweight or obese.

The plague of overprotective parenting has even carried over to sports with many of today's recreational leagues moving away from competitiveness and toward handing out trophies to every player win or lose. This only undermines the value of athletics and activity to a healthy life by killing the goals and competitiveness of most children and turning sport into a meaningless activity of going through the motions.

Many of today's parents fear exposing their children to physical activity and competitiveness, while each is essential to a healthy life. Physical activity alone, before any changes in body composition, can cause drastic improvements in health markers and competition can give kids the drive to succeed and show them that success is earned, not given. Peer interaction and physical activity are essential to a child's up bringing as they teach lifelong lessons and prevent health problems in the future.

A website has been made addressing the issues of inactivity as well as topics of childhood nutrition. The address is www.rulunches.weebly.com.

Sincerely,

Joseph Ring