

HIGH SCHOOL ATHLETES AND OVER THE COUNTER
PERFORMANCE ENHANCING DRUGS.
AN INSIDE LOOK AND WEBSITE
A CREATIVE PROJECT SUBMITTED TO THE GRADUATE SCHOOL
FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
MASTER OF ARTS
BY
STEVEN ALBRITTON
DR. JOE MISIEWICZ
BALL STATE UNIVERSITY
MUNCIE, INDIANA
MAY 2011

TABLE OF CONTENTS

CHAPTER 1 – OVERVIEW & OBJECTIVES - 1

CHAPTER 2 – WHY IS THIS A PROBLEM? - 4

CHAPTER 3 - METHODOLOGY & RESEARCH - 8

- IHSAA Commissioner Bobby Cox
- David Pearson, PhD, CSCS
- Rob Bell, PhD, Sports Psychologist
- Athletic Director Chris Conley, Delta High School
- Athletic Director Dan Wolfert, Yorktown High School
- Athletic Director Tom Jarvis, Muncie Central High School
- Four Athletes, (Names withheld), Seniors, 3 football players, 1 baseball player

CHAPTER 4 – RESULTS - 17

CHAPTER 5 – CONCLUSION - 20

APPENDIX A – IDEAL NUTRITIONAL EATING PATTERN & FOOD PYRAMID

APPENDIX B – INGREDIENTS OF TWO PRODUCTS

BSN PRODUCTS THAT WERE AWARDED GLUTATMINE PRODUCT OF THE YEAR AND NITRIC OXIDE PRODUCT OF THE YEAR.

APPENDIX C – STUDENT TRANSCRIPTS FOR A GENERAL VIEW OF WHAT THEY SAID

APPENDIX D – DEFINITIONS

APPENDIX E – RECOMMENDED WEIGHT TRAINING SCHEDULE

APPENDIX F – BIOS OF DR. ROB BELL AND DR. DAVID PEARSON

APPENDIX G – WHAT YOU CAN FIND ON THE WEBSITE

WWW.WEIGHTGAINRIGHT.WORDPRESS.COM

BIBLIOGRAPHY

Chapter 1 – Overview & Objectives

Growing up I was always tall and very athletic; but my downfall was my overall size and strength. Being 6'3", 155lbs wasn't going to get me calls from colleges asking me to play football for them. I chose to use supplements in hopes of increasing my chances to pursue a dream of football at the next level. I have first hand knowledge of what it's like to have a desire to get big and strong fast, and how the pressures of wanting to succeed can cloud judgment. I looked for a route that I thought would get me there the fastest. Supplements advertised quick results so I made the decision to begin supplementing with no knowledge of what I was really putting in my body.

We live in a society where teenagers are overrun with messages. One of those images is of the male and female body. Over the last 40 years advertising has changed in ways where a certain body type is depicted as the desired look for men and women. For men it's a ripped and slender body with a six-pack of abs and large biceps. The female form has turned into large breasts, and a slim waist. Each and every day we are bombarded with this perceived perfect form. Magazine covers, TV commercials, shows, movies, and the Internet all play into promoting the stereotype of the perfect human form.

(Appendix VII)

Along with constant exposure of the ideal human body, we are also shown the prototypical athlete look. The actors in the Under Armour commercials (<http://youtu.be/dnECY26PSHk>) give us the best example of how men are told what they need to look like if they want to succeed on the sports field. The athlete's in these commercials are all well over six feet tall and over 200 pounds and are built for football, basketball, and baseball. These images are seen by millions of people, and in those millions of people are teenagers who are growing up trying to figure out who they want to be; while listening to what other people say they should be.

In this examination, I will be looking at how male high school athletes respond to these stimuli in sports through a series of interviews. The performance enhancing supplement industry makes around 25 billion of dollars each year, according to the *Nutrition Business Journal*, selling products that promise weight gain and increased strength. Not only that, but a majority of the products sold by these companies are not regulated by the Food and Drug Administration. (FDA) These products are supposed to only be available to those over the age of 18. But, just like I did, teens under 18 have been able to illegally get and consume these products under a false promise of a perfect athletic body.

My overall objective for this project is to find out why teens choose to take these supplements instead of just good nutrition and lifting weights. I talked with students and athletic directors and asked them why students choose this route often with out much or any research into the side effects. I also spoke with Dr. Rob Bell, who is a sports psychologist, about the mindset these kids are in when they choose to take supplements. Dr. David Pearson is a Certified Strength and Conditioning Specialist who has clear

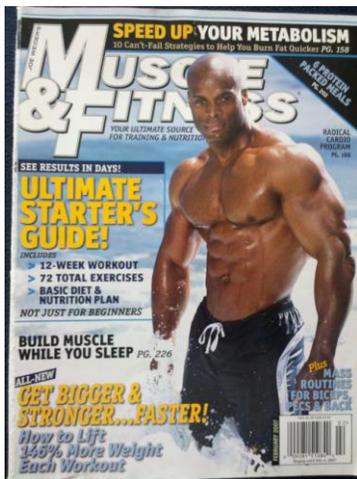
knowledge of proper weight management and nutrition. Not only that, but he is an expert on performance enhancing supplements.

To supplement this project will be a website that I will present to the Indiana High School Athletic Association (IHSAA). I want to help spread knowledge of how to gain muscle mass without having to use these supplements. My main goal is to get young people to care more about what they put into their bodies. Through this paper and the website (www.weightgainright.wordpress.com) distribution, I feel that I can help young athletes following in my footsteps. Both this paper (Appendix V) and the website will have workouts students can follow to help gain strength. Also there will be info about how many calories they should consume and with what types of food.

Chapter 2 – Why is this a problem?

Supplements are a billion dollar a year industry focusing on young males according to Dr. Bell and Dr. Pearson. By placing a product next to a professional athlete, the supplement companies can say, “These athletes got bigger, stronger and faster using our product and you will too.” The problem with this is that the FDA does not evaluate them. Since these products don’t claim to cure a disease these companies can get away

with not sharing the amounts of each ingredient and putting bogus claims onto the container.



In 2006, according to *Pediatrics* and The Journal of the American Academy of Pediatrics, “Investigators at one university found that 88% of athletes used nutritional supplements, and among a high school cohort of 270 athletes, 58% had used some form of supplementation.”

(Pediatrics)

We live in an age where results are wanted immediately. We want faster Internet, faster email, and fast food. Our society doesn’t like to wait on results and the supplement industry only perpetuates this by saying the product will work quickly. This creates a unique problem with young kids trying to find the “get big quick” route. As I found in my

interviews with athletes most of them don't take the time to find out what exactly they are putting into their body. Trimethylglycine is a chemical ingredient in NO-Xplode. This was a supplement I took and listed is in Appendix II. Sources say in high doses it can cause may cause diarrhea, stomach upset, nausea, and excitability. I never checked the ingredients or researched the side effects of this product and I experienced nausea and an upset stomach when I took NO-Xplode at times.

One part of this is the peer pressures these athletes face as they advance through junior high, high school, and college. Some kids mature faster than others and this can create a complex in those teens that mature late. As young athletes we want to play and we want to play early. We practice and work hard to get on the field and to perform at our best. When I was in their shoes I explored a variety of legal supplements options to help me get on the field faster and get stronger. And some kids, like me, will take the chance on supplements to see what happens. Also if they see teammates doing these supplements, they will feel like they are being left behind. They aren't doing everything they can to play while others are. No one likes being left out or left behind and that goes especially for sports. The pressures also come from parents. Some parents may not be able to afford college for their kids, and a college scholarship is a way to get them into higher education. Pressure to succeed comes from all directions and the quick, easy route is one these athletes consider taking. Sports Psychologist Dr. Rob Bell said, "It's a sports culture, so it's a culture of winning. It's very rarely a culture of building character and doing things the right way. Even though programs might talk that way, it's about winning. The pressure becomes immense because they're expected to carry on this winning tradition."

I was able to speak with Dr. David Pearson, a Certified Strength and Conditioning Specialist and Professor at Ball State University, for this project and he informed me the problems don't end at the pressure to succeed. One problem with why teens have trouble gaining weight is that they don't get enough sleep. The body repairs itself and grows during rest. Years ago families had one TV in the living room. Now many families have multiple TVs and computers and some of these are located in athlete's bedrooms. They often stay up late then have to get up early in the morning for school without adequate rest for the body to recover from the prior day according to Dr. Pearson.

The next problem stems directly from not getting sleep. These teenagers are now lacking rest so they try to sleep all the way up until the last moment they can before leaving for school. Often they leave only enough time to shower, dress and leave, skipping breakfast entirely on the way out the door.

"These kids have got to get up in the morning and eat breakfast. I know this sounds like something your mom said to you or your grandma, or you hear as folk wisdom. But breakfast is, with out question, the most important meal of the day," Pearson said. He went on to add that being able to jumpstart the metabolism in the morning really sets the tone for your body to operate at a high level. The body expects fuel in the morning, and by skipping it you're more likely to resort to sugary snacks or drinks to get you through the morning.

Dr. Pearson went on to say that since the body hasn't been adequately fueled for the day, the body is forced to use stored fat to function from in the morning. And this contributes to the lack of healthy foods and meals these kids don't get in there growing years. They will eat snacks to get through the day, have lunch at school, and maybe eat a

late dinner at home. The chemistry of the body as to when it needs food is thrown into an abnormal pattern, where muscular, height, and weight growth becomes much harder to attain.

Chapter 3 – Methodology & Research

My investigation started with the commissioner of the Indiana High School Athletic Association, Mr. Bobby Cox. He is a former athletic director himself, and now oversees all of the public school athletic programs in the state of Indiana. I wanted to know what was already being done to educate students. The IHSAA currently provides materials to the athletic directors about supplements and steroids that they can utilize for their students. It is up to the discretion of those administrators to decide whether or not to give out the materials. Mr. Cox says that although they do provide the information for supplements, he thinks it's best for students and parents to consult their family physician. "I think that the coaching staffs and our member schools are doing a much better job of educating those young student athletes about those dangers, and just talking about the simple notion that hard work, practice, and good nutrition is where you're going to get better; not taking a shortcut and doing other things," Cox said.

He also believes a majority of the peer pressure placed on succeeding comes from adults. Whether it is parents or some one else close to a young athlete, he feels that these people can be putting the most pressure to do something beyond general weights and nutrition. A chance at a college scholarship or the slim chance of going professional can

sometimes put those interests ahead of an athlete. Mr. Cox believes that practicing hard and working at your sport pays off. He is a former athlete himself and would choose not to allow his kids to use a supplement if they asked. Being able to practice and make the adjustments on the playing field is where you will get better. Since he is the commissioner, Mr. Cox did say the IHSAA wouldn't be getting into regulating products that are legal and available for sale, but still recommends students staying away from them. During Mr. Cox's interview he spent a majority of the time discussing steroids and their negative effects on students.

Dr. David Pearson of Ball State University thinks that a big source of the problem has started with society's idea of a "meal."

"I think we've lost this idea of a meal. I think we need to start there. I think what we need to be able to do is to educate everyone. This is mom and dad, and the kids all in the same room; and educating them on what good foods they could be eating to get nearly the same results at a fraction of the cost. Very few of these supplements are what we call a complete meal (Appendix I) or complete food; and we start seeing these big holes in the nutrition plan if we simply grab for the shake, the powder, or the pills."

He went on to say that being able to get back to eating full meals with the proper dietary needs would be a big step in alleviating a need for supplements. If these companies were to step up and talk about the products they sell they wouldn't be able to say much good about them. Most are a combination of large amounts of rice flour and other chemicals. The rice flour is added to fluff up the product and make it look like there is much more in the product than really is. Since it's not regulated it doesn't matter how much they use to fill up the container. You could have a product that has little to no

chemicals (Appendix II) that would possibly help you gain muscle mass. This way the companies can make each bottle very cheap by using cheap products to fill up the capsules and containers. The idea that there is something in a powder or in a can has gotten into the heads of athletes and we need to show them that there isn't a magical pill out there to gain mass and strength.

“Most of this stuff, especially if it's caffeine based or any of caffeine's relatives is just really jacking you up. They really aren't doing anything for your performance. And remember there isn't anything that you can take that's going to make you shoot a basketball better or hit a baseball further. It's all the talent, coordination, and the sports development that goes into it,” Pearson said.

Dr. Pearson is not totally against supplementing athletes, but he does offer a guide to on how to properly go about supplementing (Appendix III) and to only use it as a last resort. And some questions to ask along the way.

- What are you trying to accomplish?
- Where is the child in relationship to development?
- Have they done any strength training?
 - (Lots of debate on what age is safe to start weight training anywhere from 8-13 pending sport participation)
- Have they done sports of any kind?

These questions will help shape and mold a proper training and eating regimen for an athlete trying to gain muscle mass, size, or just be healthy overall. Every athlete is

different on what they need to perform at an optimum level; heading straight for the protein shake shouldn't be the first choice.

Like stated earlier, eating breakfast needs to happen in everyone's lives. Skipping that meal sets your day back immediately because your body doesn't have fuel to start the day. Carbohydrates, fruit juice, milk, and other products to start the day going is going to help not only with general nutrition but also allowing the body to gain weight if that's your goal.

Dr. Bell offered further insight into why supplements are being taken by young athletes. "I think a lot of it is that, if we are going to be taking something we have that belief that it's going to work. And that belief in that it's going to work really is effective. The placebo effect accounts for almost 30% of change in adults," Bell said. Sometimes just knowing you are on something that "says" is going to make you bigger will trick the mind into making the body grow larger.

"For example the power bracelets and necklaces are huge today. It's kind of like if you don't have one you're in the out crowd. And it's a perfect example because they don't work, but what happens is the belief in that it's going to work shows that it works," Bell said. Belief is a very powerful tool but ingesting a product is much different than slipping on a bracelet.

The pressure is also something that becomes internalized with so many people and especially in young males. They see the pictures in the magazines of the ripped athletes but what they don't see is that most of the guys in those magazines use illegal products to look the way they do, as seen in the video clip below, even though they are advertising a product that is legal but doesn't work. http://youtu.be/4j0nmJ0_cvc (Bigger,

Stronger, Faster) The athletes pressure themselves into believing that in order to be accepted you have to look like the guys in the magazines or play at an extremely high level.

The athletic directors interviewed for this project all had very real concerns about these performance enhancing supplements and all agreed that they weren't sure about the knowledge their students had. None of the schools had policies against supplement use but two of the three athletic directors said their school does do random drug testing. Even some of the legal supplements do test positive in a steroid drug test. The supplement listed in Appendix II, NO-Xplode, has so much caffeine in it that it would test positive. BSN recently released a caffeine free version of NO-Xplode.

Chris Conley, of Delta High School, grew up while the supplement industry was just taking off. His parents made sure he knew that he wasn't allowed to take these supplements. They didn't want him taking anything unnatural or something they didn't feed him. Even these days he is very skeptical of supplements and stresses to his student-athletes that a good diet and exercise is the way to go. Recently, Conley has had the chance to go on some college visits and see the facilities used by athletic programs there. One thing he noticed is that at the college level they stress that they don't want their athletes taking supplements nor do they provide them for use.

"If college programs can tell you that we think diet and nutrition is the most important thing and we don't need supplements, I think that tells us a lot at the high school level. We use their techniques on the field and we can use their plan for nutrition and not use supplements," Conley said.

Dan Wolfert, of Yorktown High School, had a very interesting take on supplements. He only recently joined the ranks of Athletic Director and previously worked for two minor league baseball teams. He worked in baseball while the biggest steroid debacle in sports rocked the Major Leagues. Although he has only a very general knowledge of these products, he has seen first hand how when some athletes are taking a supplement to get ahead, others will get in on the action so they won't get left behind. He feels that although he doesn't believe it's a concern at his high school he does understand the desire to succeed will make people do things they normally would not. "Because you came here and asked me about these supplements I definitely will take a closer look at educating myself about them," Wolfert said.

Tom Jarvis, of Muncie Central High School, also was very unfamiliar with the products offered at nutrition stores, but allowed his son to use protein about 10 years ago. It was only used for a short time and he and his wife monitored how their son took the supplement. Jarvis believes that since his son only used them for a short time, he gained nothing from the supplement. He also pointed out a very interesting bit of information. "In the last few years we've had very few kids go on to college to play sports and even fewer went onto the professional ranks. We'll have one go pro this year in the NFL. His name is Ryan Kerrigan and he'll be a first round pick. I can assure you he never took any supplements and he would tell our kids to do the same," Jarvis said.

All three men were very open to what they knew about the subject and to what extent they thought their student athletes used these products. Each was sure that only a small portion of student-athletes used these products and none of their coaches pushed any kids into taking something extra. One thing they all agreed on was the pressure that these kids are under to succeed is immense. Mr. Conley feels that most of the pressure comes from parents because they all want to see their kid perform well and succeed. Sometimes a “do what it takes” attitude can indirectly effect how an athlete performs. Mr. Conley made a point that some of his freshmen and sophomores are already so worried about playing at the next level, that they are more worried about their physical attributes and skill sets more than making the grades they need to get into school.

Sometimes a trickle down effect from parent to child can occur. A parents failed attempt at athletic success can be transferred to the young athlete, and the pressure grows from there. Whether intentional or not the pressure all three athletic directors believe that not only the parents, but also the media offer the biggest influence of pressure. The media puts out the magazine ads, puts the commercials on TV and put the belief of, “This is what you need to look to succeed,” thought in someone’s head.

The student-athlete interviews were very eye opening. Some of the answers I received I expected while others were very surprising. The students will not be named due to an agreement with the athletic directors.

After speaking with the doctors and the athletic directors it was time to find out just how much the students knew about these supplements and who was using them. Not only that but I wanted to find out just how healthy of a lifestyle they were leading when it comes to the essentials of getting bigger and stronger. Dr. Pearson stressed how important sleep and breakfast was so I made sure to ask about the points that were stressed.

Overall these athletes got much more sleep than I expected. The average was around eight hours a night and experts say to get seven to eight hours a night. Only half of them made it up in time to eat breakfast in the morning. Those who didn't eat said the first meal of the day was lunch around noon unless they got a small snack before then. They also told me that a good majority of their friends also do not eat breakfast. Not only that but milk was almost non-existent in the diets of these teens. But when quizzed about which foods were high in protein each one of them was able to name four or five foods that would be a great source of protein. They were able to name chicken, steak, and milk among others.

The knowledge of supplements was minimal at best for all of the interviewees. They also told me about their friends who also took supplements. More than likely they took the word of the store clerk working at GNC or picked up a generic brand at Target. Of the ones who actually took supplements, their parents advised each one and the decision was made together. A future coach told one athlete that he would need to bulk up, but that they would take care of that when he got to school. He decided to get a head start and use protein powders.

Side effects or ingredients weren't really a concern. Not only was "proprietary blend" (A-V) an unknown phrase but also "placebo effect." (A-V) These teens didn't know what the term that allows companies to mask the actual ingredients in a product. Although vitamins, drugs, alcohol, and general diet were discussed in health class, the actual supplement industry wasn't mentioned, nor was it mentioned in their weight lifting classes.

One thing that struck me is that one high school student actually new that the guys pictured in magazines are usually on steroids and are just there to sell product. "Ripped guys in the commercials aren't doing Creatine, they are doing steroids. There is no way you get that big just on Creatine," he said. He was part of the 50% that chose not to use some kind of supplement to get bigger. He has full belief that lifting hard and resting are the sure way to gain muscle mass. Most schools offer some kind of weight lifting class, and even though he doesn't pay much attention to what people do before or after training, he saw 10-15 other students using supplements who didn't play a sport. The products are advertised so well that even non-athletes have an idea of what males are supposed to look like.

Chapter 4 - Results

The findings in this study were very similar to what Dr. Pearson and Dr. Bell explained to me before I interviewed the athletic directors and student athletes. As said in the previous chapter, supplement based knowledge is almost non-existent in teens. A majority of the people interviewed said that they didn't know what goes into these products or how it effects the body Those who did research a product they were taking, did so under supervision from parents. But the students felt that most of their peers who use these products just head to a store and buy whatever they are told works. This causes a potential risk to someone who may be allergic or takes too much of the product.

One interesting fact I found in my research was the “Dietary Supplement Health and Education Act of 1994.” Republic Senator Orrin Hatch from Utah actually co-wrote this legislative act. It just so happens that there are over 130 supplement companies in Utah that make it one of the top grossing industries in the state. This act not only keeps them in business but keeps them from spending more money on proving these products are safe.

Pressures to succeed at a high level come from many directions. The pressure from parents wanting to see their child succeed was identified as most common source. It was an indirect pressure for the most part. Only one person told me that their dad suggested he started taking protein to help get bigger. His dad was also the coach of the

football team and his mother researched the products to find the best and safest route. Next, the media was a very common answer as to why people were using these products. I was told in my interviews that even non-athletes were taking supplements to help get stronger because of what they saw as the ideal body. They see the Muscle & Fitness magazines and Under Armour commercials using guys with huge muscles and beautiful women surrounding them. The examples below are just a small look into one magazine and what teenagers are bombarded with.



Each photo above came from a Muscle & Fitness magazine. They advertise getting stronger but also use sexual photos as a way to bring in consumers. The industry tries to convince you that using their product will bring you the ladies too. Not only that, but pro athletes are often used to push product. Super Bowl MVP Drew Brees has been a

long time client of Advocare. He says he has used the products for over ten years now. He might use them or he might not, but he is paid to say that he does. The tag line for one of the commercials he is in is, "Use it. The pros do!" A young person hearing that might say, "If it's good enough for Drew Brees, it's good enough for me."

Basic good nutrition habits have been given to students through school. They all agreed that health teachers gave them the tools to live a healthy life but many ignore the one of the biggest parts of being healthy in eating breakfast. Two of the four students interviewed said they don't take time to eat anything for breakfast. They are hungry and sluggish in the morning but won't have their first meal until lunch. What was ironic is that one student who was currently taking a protein supplement, didn't get up and eat breakfast. I told him that he is just setting himself back. This student is 6' 3" and about 160 pounds. He is very slender and adding weight is already difficult. I was kind of surprised to learn he wasn't utilizing the most important meal to help him gain weight.

Based on my small sample of four students and the professionals I interviewed, I feel that most of these teens don't know enough about these products to make a good decision. Only two of the students took the time to research products or have a parent help with the process.

Chapter 5 – Conclusion

In conclusion, the four teens I spoke to had very little knowledge about supplements. They all have heard about them and some take them, but overall don't know the fact versus fiction about them. I expected students to not know much about these supplements but I also speculated that more students would be using these products on a regular basis.

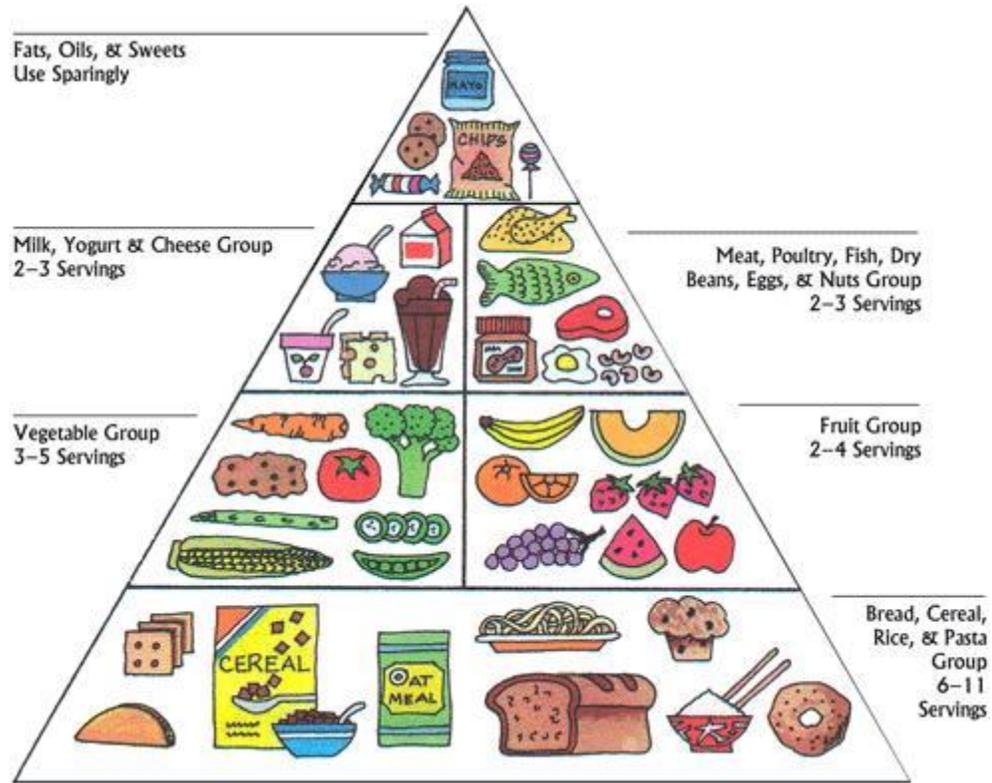
Each student talked about how in health class they learned about the food pyramid (Appendix I) and learned how to lead a healthy lifestyle. The problem is that they don't turn words into actions. All agreed that breakfast was the most important meal, but the ones who decided not to eat it could not come up with a good reason for not eating it besides just being lazy. We want change to happen fast but when it comes to a simple and proper way of doing a task, we look for the quick fix and that's what these supplements claim to do. For example, the student who is taking protein powder to get bigger but also doesn't eat breakfast. He thinks the protein will help build the mass but he isn't doing the basics, besides working out, to make gains. The product he is using is actually just filling holes in his diet that are there from him not eating breakfast.

We need to somehow get the info out to help these teens realize that the models in magazines are airbrushed and are on steroids. They also need to know the myths from the facts about supplements versus an actual good meal. I'm going to help this problem

by creating a website with the facts. It will be filled with the facts on how to properly gain weight. Video commentary from Dr. Pearson and Dr. Bell will be included to help athletes and coaches understand the correct way to go. Also included in the site will be the myths about supplements and what they really do for you. In the end this website will be given to the IHSAA and sent out to high schools. My hope is that schools, athletic directors, coaches, and athletes can have a place to access this information to make better informed decisions on what they put in their body. I want this to happen because I have lived this growing up. I took all kinds of supplements in my senior year of high school and freshman year of college. I can estimate I've probably spent around \$1,500 on pills and powders in hopes I would get bigger and stronger, faster. I look back at the times when I would take three pills three times a day for a "vascular pump," a pre-work out shake, a post work out blend, and a testosterone booster; it was actually a poor decision on my part. The research I would do would be what it said in the magazine and maybe a talk with a friend about if they had used it. Did I get bigger and stronger? Yes, but personally I don't believe it was the supplements. I was eating larger meals because I wanted the extra calories to put weight on. The placebo effect definitely came into play. I believed they worked, because I wasn't going to admit taking these didn't. That's admitting an expensive failure so at the time I talked myself into believing it was the supplements that worked. I essentially paid lots of money for belief in a product. Weight training, good nutrition, water, and rest were the only things I needed to get bigger, and I through this project I hope other young athletes will realize the same. In the digital storytelling program we are encouraged to venture into new media outside. I chose to do a supplemental website to easily give out this information to students, teachers, athletic

directors, and principals in a way they can easily distribute further on. I'm not an expert in web design but I felt like doing a project outside of my comfort zone would push me to learn more about different types of media. With this website I've already received feedback ranging from a freshman in college all the way to a professional personal trainer into how the information there has made them question and rethink what they put into their bodies.

APPENDIX A – IDEAL NUTRITIONAL EATING PATTERN & FOOD PYRAMID



Two Day Eating Plan – Muscle & Fitness Magazine

Breakfast: Day 1

- 1 piece of fruit (apple or orange)
- 6-8 oz yogurt or a cup of skim milk
- 1 English muffin
- 2 sausages

Lunch:

- Turkey breast on whole wheat w/ cheese
- 1 piece of fruit
- Green salad w/ low fat dressing
- Raw Nuts

Dinner:

- Baked chicken
- Brown Rice
- Steamed Vegetables

Day 2

- Oatmeal
- Orange Juice
- Toast with peanut butter

- Tuna with tomato, lettuce, & mayo
- Pasta with marinara
- Mixed Vegetables

- 8-9 oz. tilapia or salmon
- Asparagus spears
- Black beans
- Brown Rice

APPENDIX B – INGREDIENTS AND PURPOSE OF THREE PRODUCTS

NO-Xplode: Purpose – This is a pre-work out mix taken on an empty stomach 30 minutes before beginning the workout. Its intent is to increase focus, reduce fatigue, and increase recovery time so you can workout longer.

Ingredients: Proprietary Blend of L-Arginine AKG, L-Citrulline Malate, RC-NOS, (95% Rutacarpine), L-Citulline AKG, Nicotinamide Adenine Dinucleotides, Gynostemma Pentaphyllum (95% Gypenosides) (leaves & stem), Modified Glucose Polymers (maltodextrin). Di-Creatine Malate, Trimethylglycine, Creatine Ethyl Ester-Beta-alanine Dual Action Composite, Sodium Bicarbonate, Sodium Creatine Phosphate matrix, Creatinel-O-Phosphate-Malic Acid Interfusion, Glycocyamine, Guanidino Propionic Acid, Cinnulin PF, Ketoisocaproate Potassium, Creatine AAB,, L-Tyrosine, Taurine, Glucuronolactone, Methylxanthine (Caffiene), L-Tyrosine, Medium Chain Triglycerides, Lesser Periwinkle 99% Vinpocetine, 99% Vincamine, 99% Vinburnine (whole plant), Di-Calcium Phosphate, Di-Potassium Phosphate, Di-Sodium Phosphate, Potassium Glycerophosphate, Magnesium Glycerophosphate, Glycerol Stearate

Cell Mass: Purpose – This is a post-work out mix taken immediately after finishing the workout. It's intent is to promote muscle recovery and reduce soreness. But you must weight 30 minutes to eat after taking it.

Ingredients: Sodium Creatine Phosphate Matrix, Creatine Ethyl Ester-Beta-Alanine Dual Action Composite, Creatinol-O-Phosphate-Malic Acid Interfusion, CreatineAAB, Glutamine AKG, Muscle Cell Uptake Proprietary Matrix, Di-Calcium Phosphate, Cinnulin PF (Aqueous Cinnamon Extract) (bark), Di-Potassium Phosphate, Di-Sodium Phosphate

Beta – Alanine: Purpose: To increase muscle carnosine levels, a critical fatigue-controlling factor.

Ingredients: Beta-alanine, Cellulose, Vegetable Acetoglycerides, Caramel Color, Mica, Titanium Dioxide (Natural Mineral Whitener)

The Dietary Supplement Health and Education Act of 1994

DIETARY SUPPLEMENT LABELING EXEMPTIONS

- **"Sec. 403B. (a) IN GENERAL.-** A publication, including an article, a chapter in a book, or an official abstract of a peer-reviewed scientific publication that appears in an article and was prepared by the author or the editors of the publication, which is reprinted in its entirety, shall not be defined as labeling when used in connection with the sale of a dietary supplement to consumers when it -

- **"(1) is not false or misleading;**
- "(2) does not promote a particular manufacturer or brand of a dietary supplement;
- "(3) is displayed or presented, or is displayed or presented with other such items on the same subject matter, so as to present a balanced view of the available scientific information on a dietary supplement;
- "(4) if displayed in an establishment, is physically separate from the dietary supplements; and
- "(5) does not have appended to it any information by sticker or any other method.

APPENDIX C – STUDENT TRANSCRIPTS

Student Athlete #1

6-7 hours of sleep each night.

Does use a Protein Powder before and after baseball practice.

Trying to bulk up for college baseball.

All of the college coaches he spoke with said he needs to bulk up and they would do that when he got there. He wanted to get a head start on it.

His parents were OK with it

Talked to his dad, who is a Tri-athlete, and he told him to steer clear of Creatine.

Knows other guys are taking protein shakes, on the team and non-athletes.

He said the guys don't know what they are taking and just take the word of store clerk.

Has no idea what "Proprietary blend" means.

Peer pressure - The athletes know where they are relative to the rest of the team. They try hard in practice but don't go to extreme of taking shakes

He doesn't eat breakfast! First time he eats during the day is lunch. He'll find something around the house for dinner. Will have a couple snacks through the day to curb hunger.

Believes it is most important, but likes sleeping better.

Says he is not hungry in the morning.

He thinks maybe half of his friends eat breakfast.

Has experienced no side effects from protein. (All he takes)

Will at least consider eating breakfast after speaking with me on the subject.

Mainly tries to just keep working out and do what the coaches ask him to do

Student Athlete #2

6-7 hours of sleep each night.

Never eats breakfast. Said he got used to not doing it.

Still believes breakfast is most important meal.

Never felt a need to put on weight, naturally a big guy.

Has seen lots of supplement shakes before and after workouts taken by athletes.

Does think they've done research to get the right products.

Feels that only those who don't have big weight use them. They want to impress the ladies, look cooler, and be stronger.

Only a few friends eat breakfast.

Does drink some milk.

Has never used supplements.

Most people doing it are small and trying to get bigger.

Does not see it as a big deal.

More of the athletes decision than anyone else's.

He would choose to go the natural way by sleeping and eating breakfast, cheaper.

Has no idea what "Proprietary blend" means.

Student Athlete #3

Influence from coaches, “if your weak you’ll never get on the field.” People are bigger and stronger at younger ages.

8-9 hrs of sleep each night and drinks lots of milk. Family rule.

Eats breakfast every morning.

Did take protein during and before football season.

Has lost weight since he stopped taking it, but has also not worked out as hard.

50% of team has taken some kind of supplement. They want to be ready for junior and senior year.

Had full support of his parents. Dad, also head football coach, advised him to start taking protein supplement.

Mom researched and bought supplements for him.

About a month into taking he started noticing changes. He felt stronger and had more endurance. He was able to bench about 50 pounds more.

He does believe some had to do with the placebo effect.

Has heard the term “proprietary blend,” but doesn’t know much about it.

Thinks protein helped a little, but was still growing and maturing so could all be natural.

Not fully educated but knows not to take it in high doses.

Student Athlete #4

9-10 hours of sleep each night. (Says he loves sleeping)

Eats breakfast each morning. (Cereal, fruit, Pop tarts)

In his weight training class, more kids took supplements than on football team, but didn’t pay much attention.

The students wanted to get big fast.

Thinks society portrays the perfect male. (Ripped, cut, jersey shore)

No discussion on supplements in weight class or health classes.

Never used them and doesn’t believe in them. Believes it isn’t cheating but the guys he sees taking them aren’t that big.

Ripped guys on the commercial aren’t just doing Creatine, they are probably on steroids.

Never heard anything from coaches that you need to get big.

Started lifting while young.

He knows that you can’t just take protein and get as big as the guys in the photos.

People aren’t looked down upon because it’s just another dietary supplement

Products are advertised so well that people see what they want to look like and think that supplement will get them there.

He never thought a supplement would work.

Knows for a fact that you need to sleep and eat to get bigger.

Teachers have stressed rest and eating right in his classes.

APPENDIX D – DEFINITIONS - www.webster.com

Creatine - A nitrogenous organic acid that is found in the muscle tissue of vertebrates, mainly combined with phosphorus, and that supplies energy for muscle contraction.

Chemical formula: C₄H₉N₃O₂.

Food Pyramid - A diagram that represents a healthy diet by placing food groups in a pyramid according to the number of servings from each group to be eaten every day.

Placebo Effect - A beneficial effect in a patient following a particular treatment that arises from the patient's expectations concerning the treatment rather than from the treatment itself.

Proprietary Blend – A term used so companies don't have to disclose the amount of each type of ingredient in the supplement so other companies don't know the percentages and ratios of each ingredient and/or so the buyer doesn't know how much of the active ingredient is included.

Supplement - something added to complete a thing, supply a deficiency, or reinforce or extend a whole.

APPENDIX – E – RECOMMENDED WEIGHT TRAINING SCHEDULE

Lift is listed first, then the number of repetitions in order of each set second.

Superset – Alternate each lift listed underneath it with no rest. For example, on Monday do six reps of the Single Arm Machine Pull downs, then immediately do 8 reps of the V Triceps pushdown and then rest. Repeat till all sets are done.

Dropset – Start with a heavier weight that you can do the number of reps with, then drop the amount of weight for the final set so you can do more reps

Monday - Chest/Triceps/Abs

Flat Bench – 8,6,4,2

Dumbbell – 8,6,4,15

Decline Bench – 10,10

Incline Dumbbell Fly – 8,8,8

Machine Fly – 12,12,8,8

Single Arm Machine Pull Down (Superset) 6,6,6

V Triceps Push Down (Superset) 8,8,8

Overhead Dumbbell Press 8,8,8,15 (Dropset)

Dips 10,10,10

Push Ups 3 sets (as many as possible)

50 V-Ups

50 Hanging Crunches

50 Standing Side bends (holding a dumbbell) on both the left and right side

Tuesday – Legs & Obliques

Seated Box Jumps – 8,8,8,8

Dead Lift – 10,10,10

Squat – 10,8,6,4

Leg Press – 15,12,10

Smith Machine “feet forward” squat – 8,8,8

Hamstring Curl – 10,10, to failure

Leg Extension – 10,10, to failure

Wednesday – Back & Biceps

Weighted Pull Ups – 8,8,8,8

Barbell Curl – 8,6,4,2,

Seated Row 8-15 (Dropset), 8,8,

Pull down 8-15 (Dropset), 8,8

Seated Individual DB Curl 6,6,6, (superset)

Reverse Curl 5,5,5 (superset)

Laying Down Reverse Body Weight Pull Up 8,8,8,8 (superset)

Upright Row 8,8,8,8 (superset)

Monkey Pulls 8,8,8

Lat Pushdowns 10,10,10

Lower Back Extensions – 10,10,10,10

Thursday – Shoulders & Obliques

Dumbbell Shoulder Press 8,6,4,2
Seated Machine Individual Overhead Press 8,6,5
Individual Front Raise 6,6,6,6 (superset)
Seated Side Raise 6,6,6,6 (superset)
Machine Rotator Cuff 8,8,8
Dumbbell Shrug 8,8,8 (superset)
Smith Machine Shrug 8,8,8 (superset)

Friday – Movement Lifts

Single Leg Box Jumps, (smallest box) 8,8,8,8
Single Leg Step ups (weighted or un-weighted) 6,6,6
Single Leg Curl 8,8,8
Single Leg Ext, 8,8,8
Jump Squat 5,5,5
Hang Clean 5,5,5
Calf Raises 25,25,25,25
Treadmill – 1 mile run

Saturday –

Off/Rest

Sunday – Cardio

Fast Mile

APPENDIX F – BIO'S FOR DR. ROB BELL & DR. DAVID PEARSON

Dr. Rob Bell

Ball State University

School of Physical Education, Sport, and Exercise Science

Assistant Professor August 2006-Current

Courses taught include:

(G) Graduate: (U) Undergraduate (O) Online

(G) Sociology of Sport

(G) Sport and Exercise Psychology

(U & G) Exercise Psychology

(U & G) Psychology of Injury Rehabilitation

EDUCATION

Doctor of Philosophy, 2006, University of Tennessee Exercise, Sport, and Leisure Studies

Emphasis: Sport and Exercise Psychology

Master of Education, 2003, Temple University Kinesiology

Emphasis: Sport and Exercise Psychology

Bachelor of Science, 2000, Shepherd University

Major: Psychology

Minor: History

Books, Chapters in Books, Creative Endeavors, Non-Refereed articles

1. Bell, R. (2010). Mental toughness training for golf. Bloomington, IL: Authorhouse.

ISBN: 1449061885

2. Bell, R. (2009). The light-switch mentality. Association of Applied Sport Psychology Website.

3. Bell, R. (2009). Role of amateur golf. Encyclopedia of Play in Today " s Society.

ISBN: 9-781412966702

4. Bell, R. (2009). Find your zone. Association of Applied Sport Psychology Website.

5. Bell, R. (2006). Social class and sport. Berkshire Encyclopedia of World Sport:

ISBN: 0-9743091-1-7

Dr. David Pearson

Education

Ph.D: Human Bioenergetics
Ball State University, 1987

Research Interests

Enhancing athletic abilities, strength and power, supplements

Recent Publications

"The National Strength and Conditioning Association's Basic Guidelines for the Resistance Training of Athletes." J. Strength and Conditioning, 22(4): 14-27

Experience and Expertise

Rehabilitation of Post Surgical Athletes
Optimal Conditioning and Athletic
Performance Enhancement Nutritional Supplementation of Athletes
Carbohydrate and Protein Feedings for Performance

Recent Publications

Pearson, D.R. and G.M. Gehlsen. (1998). Athletic performance enhancement: a study with college football players. Strength and Conditioning, 20(3): 70-73.

Pearson, D.R. and D.J. Paddon-Jones. (1998). Cost effectiveness of pre-exercise carbohydrate meals and their impact on endurance performance. Journal of Strength and Conditioning Res., 12(2):90-94.

Pearson, D.R., Gehlsen, G.M. and D.S. Shondell. (1997). Performance enhancement and training. Strength and Conditioning, 19(4):54-56.

Grants

The effects on strength and power of an amino acid supplement, rebuild, following strength training in collegiate football players. Trophy Resources, Inc. (competitive) \$2,500. External 1998 (funded). P.I. David Pearson.

Chronic effects of creatine monohydrate on strength and power. Nutritional Technologies, Dallas, TX. (competitive). \$3000. External 1997 (funded). P.I. David Pearson.

APPENDIX G – WHAT YOU CAN FIND ON THE WEBSITE

www.weightgainright.wordpress.com

Why teens use supplements.

They myths and realities of supplements

In depth info on supplements with links to other websites with more info.

Ways to fix the problems with supplements and educating students.

My personal story on using supplements.

A blog with workouts and other extra information.

Most pages include video of Dr. Rob Bell and Dr. David Pearson with their thoughts on the subject of each page

Bibliography

PEDIATRICS Vol. 117 No. 3 March 2006, pp. e577-e589 (doi:10.1542/peds.2005-1429)

Bigger, Stronger, Faster. Dir. Chris Bell. Perf. Chris Bell. 2008. DVD.

Dietary Supplement Health and Education Act of 1994, Public law 103-417
103rd congress