

# BOILER PUMP

THE OFFICIAL NEWSLETTER OF PURDUE SPORTS PERFORMANCE

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Photo Credit: Paul Sadler

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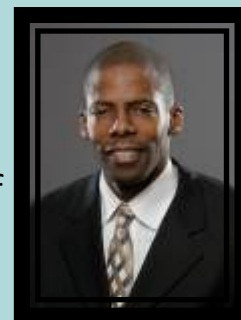
# Real Talk: Leadership

Coach Carlisle's Leadership Topic of the Month:

## Building and Bonding

Team chemistry naturally ebbs and flows throughout the course of a season. Take the time to monitor and maintain your team's chemistry. Let your reserves and support staff know how much you appreciate them. Stay connected and current with those on your team and continually remind them about your common goal and common bond.

**Resource:** <http://www.championshipcoachesnetwork.com>



# PSP Coach News



## Coach Carlisle Receives Highest Honor!

Coach Carlisle will be recognized as a Master Strength and Conditioning Coach by the Collegiate Strength and Conditioning Coaches Association on May 8 at the CSCCa Annual National Conference MSSC Dinner and Ceremony. The attainment of this title of distinction represents professionalism, knowledge, experience, expertise, as well as longevity in the field. It is undoubtedly the highest honor that can be achieved as a strength and conditioning coach. Dr. Pat Ivey, assistant athletic director for athletic performance at the University of Missouri, who recently was named Football Scoop's National Strength and Conditioning Coach of the Year and is a colleague and personal friend, will present Coach Carlisle with his blue blazer. Master Strength and Conditioning Class peers, by year: <http://www.csc.ca.org/members/mscc>

### APRIL TRIVIA QUESTION ANSWER

Which Purdue Sports Performance coach has participated in sprint triathlons in the past?

A. Kane Thompson

B. Sam Craven

**C. Christina Specos**

D. Molly Binetti

# PSP Coach News Farewell...



The Purdue sports performance coaching tree is growing! Congratulations to Coach Kane Thompson and Grant Thorne on their promotions! Last month, Coach Thompson accepted a position at the University of Minnesota with the football strength and conditioning staff. Coach Thorne, meanwhile, has completed his master's degree here in the health and kinesiology department and has accepted a coaching position with the Green Bay Packers. Following his previous consulting experience last summer, he will continue utilizing mechanical and physiological tracking (including GPS technology) and determining competition load, recovery and rehabilitative decisions.



Coaches Kane Thompson and Grant Thorne started with us in 2011 as founding Purdue sports performance Staff members. We surely will miss them!  
Best of luck to both in their future endeavors!

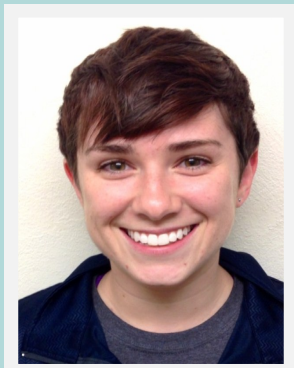


# PSP Coach News

## We Welcome...



Purdue Sports Performance has accepted 7 undergraduate student interns for the summer 2014 program, beginning June 2. Please join us in welcoming:



**Katlyn Mason**

1st year Strength & Conditioning Graduate  
Student, Springfield College  
BS SUNY Cortland  
Major: Kinesiology-Fitness Development  
Minor: Sports Studies  
Former Soccer Player

**Brandon Ruemler**  
Junior, Olivet Nazarene University  
Major: Recreation & Sports Fitness  
Minor: Exercise Science  
Current Football Player



**Rachel Evans**

Senior, Western Illinois University  
Major: Exercise Science  
Minor: Management  
Former Basketball Player

**Brandon Brown**

Junior, Olivet Nazarene University  
Major: Exercise Science  
Minor: Business Administration  
Current Football Player



**Leopold Angerer**

Senior, University of Vienna  
(Austria)  
Major: Sports Science  
Former Volleyball Player



**Terence Meehan**

Senior, Lock Haven University  
Major: Recreation Management  
Concentration: Fitness Management  
Former Soccer Player



**Michelle Lay**

Senior, Purdue University  
Major: Applied Exercise and  
Fitness Specialist  
Former Track & Field Sprinter



# Sports Science Report

## PLYOMETRICS

### Explanation of Plyometrics

Plyometrics is a training technique used to optimize the body's ability to generate explosive power and improve our speed capacities. During a muscle contraction, the muscle stretches which creates tension within the muscle (the eccentric phase). Next comes the rest period (amortization phase). Finally, the energy stored from the stretch is released (contraction phase). Plyometrics enhance this concept of the stretch shortening cycle by generating an increased stretch and quicker load to further increase the tension for greater output from the muscle through an assortment of jumps, skips, and throws. For optimal use results, 15 to 20 seconds is the time in which a well-executed plyometric occurs. While most think that plyometrics are only for the lower extremities, there are also upper body plyometrics which work on the same principles.

### History

The *shock method* (the original label of plyos) was originally created and implemented by Dr. Yuri Verkhoshansky, a former Soviet Union coach and sports scientist during the early 1970s. After being dismantled by the Soviets in the Olympics during the Cold War, Fred Wilt, the American track and field coach and Purdue coach, began his investigation of the Soviets' dominance. Through his investigation, Wilt observed a variety of repetitive jumps onto boxes and skips which he had never seen before during one of the Soviet training sessions. Wilt then collaborated with Dr. Michael Yessis, who worked with Verkhoshansky to learn how to properly implement the shock method for the team's benefit. They later changed the name from shock method to *plyometrics*, and the method began its rapid growth within teams in the United States.

### Benefits of Plyometrics include:

- Increased tendon stiffness
- Increased recruitment of fast twitch muscle fibers
- Strengthening of fast twitch muscle fibers

### References

Plyometrics. (2013, January 1). *Dr. Yessis Sport Lab*. Retrieved April 28, 2014, from <http://doctoryessis.com/about/plyometrics/>



*This month's sports science topic comes to you from **Coach Gavin Roberts**.*

# Inside the Huddle...

**This Month, Purdue sports performance catches up with Mary Beth Dunnichay (Diving) and Autumn Beachy (Cross Country)**



**Q: In what ways has your training influenced your diving performance?**

**A:** My training has had a major influence on my diving performance. It has helped me gain shoulder strength/stability, so I was able to continue my diving career after having three shoulder surgeries. It also has made me jump higher than I ever have.

**Q: What are you most proud of accomplishing in the weight room or training?**

**A:** Some of my proudest accomplishments in the weight room/training would have to be whenever I hit a PR on anything and after three shoulder surgeries, and two years later I can finally do pull ups again pain-free.

**Q: Tell us about your most memorable training session with the PSP staff.**

**A:** There are too many. Whenever I doubt myself and the weight coach is there to push me and tell me I can do it, it is such a great feeling when I overcome that doubt and prove myself wrong.

**Q: What advice would you give to an incoming freshman about training with Purdue sports performance?**

**A:** The best advice I could give an incoming freshman is to trust in the program. Everyone on the PSP staff is the best at what they do and just want to make us all the best athlete we can possibly be.

**Q: What has been the highlight of being a Purdue diver?**

**A:** I love being able to represent Purdue. There are so many highlights it is too hard to narrow it down to one, but just being able to have the top notch venues to train at and unbelievable people to help me has been amazing.



**Q: In what ways do you believe your training has influenced your running performance?**

**A:** I know that what I have done in the weight room has made me more fit. Going to the starting line of a race and seeing that you are more toned than your competition is a big confidence boost before the race has even started. I also know that my core is much stronger now than it ever has been because so many of the lifts that we do activate our core. Having a strong core is so important for running, and it helps prevent a lot of overuse injuries.

**Q: Tell us about your most memorable training session with the PSP staff.**

**A:** My most memorable training session with the PSP staff was when my lifting partner Kiara McIntosh moved up from benching 17.5 pound dumbbells to 25 pound dumbbells. This was at Coach Craven's demand, and she didn't think she could do it, but she's a beast and she did! Now she lifts even more!

**Q: What advice would you give to an incoming freshman about training with Purdue Sports Performance?**

**A:** I would tell an incoming freshman what Coach Craven tells our group all the time. Each weight session is an opportunity to get better so take advantage of each one. It's pretty easy to go into the weight room and lift the lighter weights, but you won't get much out of the time that you are putting in. Maximize your time in the weight room by pushing yourself to lift more and be more efficient at every lift, and that is how you will get better and stronger.

**Q: What has been the highlight of being a Purdue cross country runner?**

**A:** The highlight of being a Purdue cross country runner has been all the relationships and memories I have made with my teammates along the way. I am so blessed to have my path cross the paths of all my wonderful teammates. The memories I made with the girls will last a lifetime.

**Q: Who is your favorite athlete of all-time and why?**

**A:** My favorite athlete of all-time is Jenny Simpson. She is a pro 1,500 meter runner, and she is one of the best ever, but she still has a very humble attitude.

# Mental Conditioning

## Mental Preparation for Sport

Dr. Chris Carr

### “Motivation”

*\*What does it mean to you to “dig deep” inside of yourself to play your best game?*

*\*What does PRIDE mean to you?*

*\*Are you motivated to play your sport for intrinsic (love of the game) or extrinsic (praise) means?*

Every athlete must challenge himself/herself to decide what his motivation is to play the sport he/she plays. As a collegiate athlete, you must decide what your MOTIVATION is in order to achieve the highest level of performance. An internally motivated individual always has a better chance of success, since you cannot control the “externals” that drive the externally motivated player. Of course, it is OK to desire external goals through your sport, but that alone will not enhance your performance. Sport psychology research has found that athletes who are most likely to be successful will operate from an INTRINSIC (internal) locus of control, meaning they take total responsibility for their own performance. What will it be for you?

### Keys to Internal Motivation

***Is accountable for own preparation...****The internally motivated athlete recognizes what will help him to get ready for a game. He is open to new ideas and incorporates mental routines to help him prepare for competition.*

***Focuses on things he can control...****Knowledge of his reads, his responsibilities for each play, and his athletic skills are in the control of the internally-focused player. If she makes a mistake, she regroups, refocuses, and returns to her best play. An externally-focused player may worry about what others think of his mistake, and therefore may put more pressure on himself than needed.*

***Can look in the mirror...****It is hard (although possible) to lie to ourselves. Intrinsically-motivated players know that they will do everything in their control to get ready to play. Are you doing everything you can to prepare for the game tomorrow?*

***Maintains attention and removes distractions...****An elite athlete should be well-aware of the many “distractions” in their life (e.g. fans, media, past games). An intrinsically-motivated player is able to “let go” of distractions and focus on what she has control over...and maintains that focus at the highest level.*

***Doing the “little” things...****An extra sprint, an extra set of reps, and extra five minutes in the film room, doing imagery before each game...Intrinsically-motivated athletes do what it takes to get better.*

“Now if you are going to win any battle you have to do one thing. You have to make the mind run the body. Never let the body tell the mind what to do...You’ve always got to make the mind take over and keep going”

-George Patton, U.S. Army General and 1912 United States Olympian





# Get Your Mind Fit to Study

- What type of fats may pump up your brain's gray matter?  
☐ Triglycerides      ☐ Saturated fats  
☐ Monounsaturated fats      ☐ Omega-3 fats
- You get the most choline, an essential nutrient that slows memory loss and enhances brain development, in what food?  
☐ Egg yolks      ☐ Spinach  
☐ Egg whites      ☐ Beans
- Which of these drinks may sharpen your mind?  
☐ Milk      ☐ Orange juice  
☐ Green tea      ☐ Water
- Which foods contain anti-oxidants that can help your body fight inflammation caused by stress?  
☐ Berries      ☐ Nuts  
☐ Chocolate      ☐ Artichokes
- Which factor plays a crucial role in memory formation?  
☐ Nighttime snacking      ☐ Caffeine  
☐ Exercise      ☐ Sleep
- Which habit is linked to quicker, more accurate memory and better concentration?  
☐ Daily multi-vit/min      ☐ Breakfast  
☐ Small frequent meals      ☐ Adequate fiber
- All except one of the following are effects of excess caffeine; which is the one?  
☐ Dependence on caffeine      ☐ Gallstones  
☐ Lack of concentration      ☐ Tooth staining  
☐ Increased risk of osteoporosis

**OMEGA 3 FATS** can lead to improved studying efforts by regulating mood. Eat seafood, walnuts, canola oil and flaxseed.

**EGG YOLKS** 1 or 2/day. Skim milk is also a good source of choline.

**GREEN TEA** will slow the cognitive decline associated with aging.

**BERRIES, CHOCOLATE, NUTS, ARTICHOKE**  
Eat a variety of fresh and frozen produce. Blueberries and strawberries may improve coordination, concentration and short term memory.

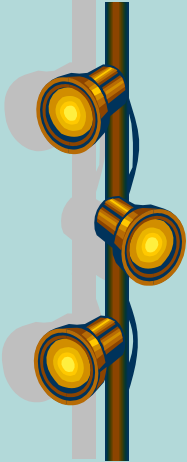
**SLEEP** deprivation causes anxiety, lack of concentration, increased errors, forgetfulness, irritability and lack of motivation. Try to avoid an all-nighter!

**BREAKFAST** eaters have higher test scores. Skipping meals drains your mental energy and an empty stomach means a sluggish brain.

**GALLSTONES** 2 cups (16oz.) of coffee daily seems to have no detrimental health consequences. The craving for an artificial energy boost can be a sign of low calorie intake or poor hydration.



## COACH SPOTLIGHT: GAVIN ROBERTS



Gavin Roberts was hired as a graduate assistant in August of 2013. He oversees the sports performance programs for men's tennis and cheerleading. Additionally, he assists with the men's basketball and softball programs. Roberts received his bachelor's degree in health and kinesiology from Purdue in 2012. In 2013, Roberts received an associate's degree in organizational leadership skills. He played football at Purdue from 2008 to 2013 as a safety and a running back. Currently, Roberts is working on receiving his master's in technology leadership and innovation with a specialization in leadership. He is certified with his Adult and Child First Aid CPR/AED through the American Red Cross Association.



### **What is your favorite part about being a coach?**

The positive impact you can have on athlete's development, not just in their respective sport, but most importantly in life.

### **Who has influenced you the most throughout your career?**

My Father, Coach Earls, Coach Carlisle, Josh, Kane, Ross, Grant Geib and Grant Thorne.

### **What is your favorite quote?**

"Pain is the breaking of the shell that encloses your understanding." - Khalil Gibran

### **What is your favorite movie(s)?**

The Friday series, The Bad Boy series, The Lion King and Meet the Robinson's.

### **What is your favorite TV show(s)?**

Martin, The Fresh Prince and The Boondocks.

### **What is your training philosophy?**

You can have the best program and be the smartest coach in the world but if you cannot motivate your athletes and get them to give their all within each session then you are wasting your time and their time, too.



### **What is your favorite type of training session/ favorite exercise?**

Any training session I can partake in and prove I'm faster or stronger than the athletes/any variation of the power clean.

### **What can we find under "most played" in your iTunes library?**

Kendrick Lamar, J. Cole, Big KRIT, Rocko and New Jack Swing R&B.

### **Tell us something interesting about you we don't know.**

I was an extra on the television show Hope and Faith on ABC a few years ago. It starred Kelly Ripa.

### **Favorite Purdue Memory:**

The pose-off between Coach Carlisle and Wally. It was a classic!

# PSP on the WEB



Purduesports.com



Boiler Power



@BoilerPower

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