Science & Baseball

Utilizing Brain To Its Fullest Potential Can Allow Ball Players To Have Sharp Focus

More peak performances can be achieved by training the brain with intense concentration.

By LOU PAVLOVICH, JR. 
Editor/Collegiate Baseball

RIVERSIDE, Calif. — Brain wave research remains one of the intriguing areas that scientists are investigating in the quest for more peak achievements by athletes. A training system called the NeuroTek Peak Achievement Trainer (www.peakachievement.com) has been used by the U.S. Army Marksmanship Team, professional athletes and teams in the NFL, PGA and Major League Baseball as well as Fortune 500 companies and the U.S. Olympic Training Center. The company claims that it is a complete program that trains concentration, alertness and relaxation to achieve peak performance via a software package that runs on a computer as sensors are connected to your head to pick up electrical signals (brainwaves).

The ultimate skill it teaches is focus by the athlete on a very high level. And nothing can be as important as focus in the sport of baseball which has short spurts of action within an environment that can cause athletes to doze off mentally.

Marty RubinoFF, assistant baseball coach at Riverside Community College in Riverside, Calif., is one of the great researchers in the game today. He has made it his quest to learn everything he can about every aspect of sports science to help the athletes he comes into contact become more proficient in their skills.

RubinoFF, who reads an average of 50 books a year, is the only baseball coach Collegiate Baseball is aware of who has tapped into the powerful arena of brain wave research.

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Given Less Than A Year To Live Due To Terminal Brain Cancer, Yanko Beats Odds

Miracle of science takes place as Jim Yanko continues to coach at Pacific.

By LOU PAVLOVICH, JR. 
Editor/Collegiate Baseball

STOCKTON, Calif. — University of Pacific pitching coach Jim Yanko is simply a miracle of science. He was told in November of 2003 that he had terminal brain cancer and less than a year to live. “I had endured five excruciating days of headaches at the time,” said Yanko. “It felt like an ice pick was being driven into my skull. On the fifth day, I woke up at about 5:30 a.m. and told my wife, Lynn, that this wasn’t normal. So I drove myself to the emergency room at St. Joseph’s Hospital in Stockton. They ran MRI and CT scans. Then I knew right away that something was wrong when the emergency room doctor came into my room and asked if my family was close by.”

Jim told him that his family lived in Stockton, and he called his wife, a school teacher, to come immediately to the hospital. “When Lynn arrived, a neurosurgeon came into my room shortly after that. He was talking a mile a minute and explained that they found a golf ball sized lesion on the right frontal lobe of my brain, and they needed to get it out right away. They were showing us...
Brain Wave Training

Riverside's Rubinoff Finds In-Depth Look At Tremendous Benefits

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"Brain wave research is really cutting edge stuff," said Rubinoff, who earned a Ph.D. in Applied Science in the field of sports coaching.

"It's an intriguing area within brain wave research is how an athlete can focus better just prior to the game and during the game."

During a 9-game winning streak, both teams will usually combine to throw 250 pitches or more. And that means 250 times during a game an athlete has to keep his mind on whatever job he has. That may be a pitcher throwing pitches, a fielder preparing himself to field a ball, a runner stealing or taking an extra base, or a batter focusing on good pitch and bad pitch.

While the game may last 2-4 hours, the live action lasts less than 10 minutes. "Focusing on the pitch and what type of information you are taking in is a crucial element of the game. To be effective, you must trust your eyes and your brain right from the start," says Rubinoff. "You are striving to slow the game up and not speed it up as well. And those are two very opposite things which athletes fight all the time. Then comes the actual decision making process to swing at a pitch or let it go."

It was brought up to Rubinoff the first time he was training baseball player as a training pioneer in baseball, came up with the phrase, "Slow The Game Down" years ago with his tracking enhancement concepts. But the bottom line is that if you are not focused on the job at hand and are daydreaming, it is impossible to be consistently good at a sport.

"This amazing area of research all started for me when I read a coaching book on baseball brain wave research. The first thing you must learn is how the brain really works as a multi-sensory organ. The cerebral cortex is the higher learning area of the brain. Then you have the cerebellum which is that mimes the unconscious. In an athletic sense, when you first learn a new skill, say you are analyzing it in the cerebral cortex. As you perform the skill as a whole, the cerebellum will start to take over and gain your skills and react."

Brain Wave Training

Rubinoff’s desire to learn more about this area led him to the Nunavut, a Canadian territory that has an area of 3.5 million miles. Rubinoff has spent nearly as well.

"That's what I am going to try this year. In a book I read years ago by Sydney Thirsk, legendary Pittsburgh Pirates executive, the first 5-7 feet after the pitcher releases the ball, the batter should have a lot of information on the ball and the angle of the pitch. And velocity.

"I asked Dr. Bill Harrison if a batter can really see the ball the final 5-7 feet to the strike zone. He said batters do see the ball the final 5-7 feet to the strike zone but it is in their mind, for they project in your mind where the ball and bat will meet. That's why you batter is not paying attention with your eyes not necessarily tracking the ball down at bat contact but in the hitting area with your eyes."

"With our video analysis program (Darthrii), I break down the pitch and highlight pitch areas at release point and prior to that if he is tipping pitches. Pitches might not be pitches well or do a number of other things that give hitters an edge. But if the batter is not paying attention with sharp focus on what the pitcher is doing in his windup through the release point, the brain can’t track pitches nearly as well."

"Again, that magic word focus comes into play which is so vital in sports. This year I will break down the video and have our hitters pay attention to where the pitcher is being shown during the windup and delivery."

Small Visual Signs Important

Rubinoff said that picking up small cues from pitchers who throw pitches in certain areas is essential.

"Great hitters take in certain visual cues that other people don’t take in. The reason is that they study pitchers very carefully. Again, their brain is paying attention to those kinds of things. That is the biggest thing I see…the observation of what is going on and how the pitcher is being released."

"So many players are tuned into aspects other than slowing the game down and taking in information to make better decisions. That's the biggest thing. With better information, you will make better decisions. As you are trained, I envision baseball players making over 100 decisions which gives them an edge."

"This would help baseball players in every position. "You have a lot of information as the pitcher is about to release the ball, and that is the body language as it as the fielder’s area based on a lot of visual information if you are paying attention to velocity, movement and location of pitches. Most infielders and outfielders can read the hands of the hitter as he swings through the zone."

Rubinoff was asked how brain wave training might help pitchers

"I believe that utilizing the down time before pitches could help them as they mentally visualize great pitches that they are about to face and really a mental visualization is a powerful tool. If you are able to visualize a pitch properly before the ball is thrown, that player will relax and become more relaxed because of mental success. You take the powers of visualization and break it down up into just like I did in with Peak Achievement Trainer in San Diego and thought portion of the brain to visualize, this powerful tool can go to work for you."

"San Ron Wolforth tied string on the knee of the catcher and then walked the rest of the string all the way to the pitcher’s mound and held it tightly right in front of the pitcher’s eyes. The pitcher had a precise ball angle burned into his mind all the way to his target with the white string."

Sensory Deprivation

"The biggest thing with sensory deprivation can help refine brain wave activity as well."

Rick Peterson, pitching coach with the New York Mets, has pitchers close their eyes in bullpen settings so they can mentally visualize a perfect pitch in a selected location of the strike zone. Then with eyes closed, they throw the pitch to catchers. Before opening their eyes, Rick asks the pitchers where he can make his pitch.

Many times pitchers tell Peterson if it was an accurate pitch or not when he threw the pitch through the pitching motion which was intensified by the visualization

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C. Petersons -
Baseball Stirs Imagination, Creativity In Coaching

BY CHARLIE GREENE
Special To Collegiate Baseball

MIAMI, Fla. — The pursuit of new ideas is a continuing process. Whether you’re watching a game or a practice session, baseball stirs the imagination and provides countless opportunities for coaches to be innovative and creative.

Having the opportunity to attend spring training in Arizona this year proved no different and I was able to capture what I thought were some very useful and exciting defensive drills being utilized by creative coaches.

### Brain Wave Training Has Huge Potential In Baseball

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he just went through.

Jerry Weinstein, former Hall of Fame coach at Sacramento City College, who is director of the Modern Nuts, is perhaps the best pitching mind baseball has ever seen.

He has his pitchers walk into a dark room and throw pitches into a screen. He feels that by closing the eyes, the balance of the body could be thrown off during the pitching delivery. So allowing the eyes to stay open, even in a dark room, allows the pitcher to throw pitches in a normal fashion without falling over.

“With your eyes closed, you are trying to get an internal feel of your body,” said Weinstein. “When they are heightened,” said Robinoff.

“Both of these concepts would undoubtedly work well.”

### Emotional Resilience

Robinoff said that a number of positive things can result with proper brain training.

“It allows for better mental flexibility, openness to new information, capacity to systematic thought, capacity for abstract thought, have the ability to generate ideas, give a heightened sense of humor, allow for better positive thinking, intellectual courage and emotional resilience.”

“I would think that at the college level and above, any athlete would like to have better mental flexibility.”

Robinoff said that people are distracted easily in life.

“I remember what the father of Tigers Wood did to test Tiger’s mental toughness. His dad would constantly try to distract him and would routinely get in his face. He made sounds, snapped his fingers, and dropped things to distract him. Tiger was never affected by it because his brain was at a different level.”

It was brought up to Robinoff that Lazer Callazo, pitching coach at the University of South Florida, has been a big proponent of testing the mental toughness of his pitchers in bullpen sessions.

In an interview with Collegiate Baseball years ago when he was the pitching coach at the University of Miami (Fla.), he talked about how he yells at his pitchers during their windups in bullpens every once in a while and pokes them in an attempt to distract them. If they are not affected by his antics, he knows that they are ready to pitch with numerous distractions around them.

“The bullpen setting is usually pretty pristine,” said Robinoff.

“There are not a lot of things going on in the bullpen. You are getting their work in. If you all of a sudden change the whole environment and start yelling and poking, I can see why it would be easier mentally during a real game. It sounds like a great technique.”

“Everyone loves the way they get their work in at night, how about anticipating what you want. You want to go to a real game. It sounds like a great technique.”

“The focus of the pitcher while the focus of the batter is getting their work in. You focus on what you want. You want to go to a real game.”

Robinoff said that if baseball players were allowed to utilize brain wave training, it would almost be like playing a video game.

“It would definitely challenge them to focus better than they ever have before. And it wouldn’t be wasted time playing a video game. It would be constructive work that would help them as a player. That’s what you want. You want to go to a higher level. The benefits would be unbelievable.”

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### Negative Thoughts Can Creep In

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Negative thoughts can creep in to practice as well as during league play. The day about positive attitudes but we seldom practice the same on ourselves. Our team is too quick to go into every day realizing that in each moment of our lives we contribute to our own future. If we want to be at cause over our future we need to practice creating positive plans for what lies ahead.

Instead of scribbling potential situations off. Instead of thinking that no one will listen, remember that you have a responsibility to each player on your team individually. If you save just one disaster from occurring, you have created a positive effect on your team’s future. The tough part is that you’ll never know who you saved. You can only observe the failures in this instance. But it is your faith that you can create an effect that is important here. These are your children. How long would you let your babies fall down while trying to learn to walk before you give them a wheel chair to protect them from harm? We all acknowledge the game of baseball is primarily mental.

How about we add this overview to our programs?

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### Wind Weighted Baseball Tarps

Baseball tarps are designed to hold hit to hit with a baseball. The tarp is weighed down with sand and the base is hit to the tarp. The weight of the tarp helps to sink the ball and makes it more difficult to catch. Baseball tarps are used to improve hitting and pitching skills.

**How to Use**

1. Set up the tarp on a smooth surface.
2. Place the ball at the end of the tarp.
3. Hit the ball towards the end of the tarp.
4. The weight of the tarp will make it more difficult to catch the ball.

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