



THE CENTRAL INSTITUTE FOR HUMAN PERFORMANCE

RESULTS. NO EXCUSES

Volume 6 - 2009

Building the Ultimate Back: From Rehabilitation to Performance

By Clayton Skaggs, D.C.

On October 4 and 5th, over 70 doctors, therapists and trainers from 15 different states attended this educational program hosted by CIHP. Professor Stuart McGill PhD, world renown for his expertise in back pain and research, was the keynote speaker. Dr. McGill is sought out for consultations by Fortune 500 executives, professional athletes and international Olympic teams. This is his 3rd visit to CIHP and once again he brought exciting and relevant information. With over 200 published papers and 3 textbooks, Dr. McGill is one of the most accomplished clinical researchers in back pain and performance. Here are some key points from the seminar:



Attempts to activate single muscles such as the transverse abdominus are not physiologic possible and likely harmful for back health. This concept of hollowing the abdomen remains a common practice in many Pilates approaches. Professor McGill and others have repeatedly shown this to be a poor way to train the abdominals and will most likely lead to a weak and problematic back.

End range loading is one of the best ways to injure a joint or disc in the low back. Professor McGill and others have shown that going to the full range of motion with a rounded back (such as leaning over from your trunk to stretch your hamstrings or a static yoga pose) repeatedly and/or for long periods of time (seconds to minutes) is harmful to the joints and discs in the back.

Back pain recovery requires accurate diagnosis of the mechanisms of injury and pain. This means an understanding of what lead to the pain and/or injury and what movements will help unload those areas so the tissues can recover. Professor McGill stresses the importance of fundamental exercises of the trunk.

Before you can build strength you must have structural stability. Professor McGill stressed the importance of establishing structural stability with simple strengthening and coordination exercises before proceeding to advanced training. He cited that too often people jump into advanced training exercises while their capacity to sustain such demands is still low.

Successful performance training requires an appreciation of function and form. Professor McGill stresses that there is a fine line between doing an exercise that will improve an athlete or “break” an athlete. Make sure the technique and control of the movement (i.e. tempo) is there.

CIHP Client Highlights

Client Name: Bobby Keppel

Description: Bobby has been a CIHP client for 4 years. He spent the last half of the MLB regular season pitching for the Minnesota Twins. He was the winning pitcher in their playoff-clinching game! Congratulations Bobby!

The Back Squat: Part 1

By Tony Soaib, B.Sc.

The back squat is the most discussed, written about, hated, and even feared exercise in all of weight training. Why? Because it is the most demanding. It could be argued that it is also the most beneficial.

From weightlifting's beginnings lifters have praised the squat as a big reason for their success. Doug Hepburn, one of the world's all time strongest men wrote "no other exercise will give you a better result." Countless other successful lifters agree with him.

So, why do you sometimes hear that the squat is "bad for your knees" or "bad for your back"? Often this is coming from someone who is just unwilling to endure the hard work of a squat workout. Or, they have been misinformed on how to properly perform a squat. That being said, the squat is not for everyone. A fairly extensive training history is needed before training the squat. Mastery of split squats, step-ups, leg curls, and various hip extension variations are prerequisites.



Tommy Kono, two time gold medalist weightlifter, has this to say about the squat: "Improper squatting technique not only waste's a lifter's time but also gives him a false sense of power in the legs which do not really serve him well." Using proper technique will minimize the chance for injury and allow for the most progress in training.

I'll take you through the squat one step at a time. First, center the barbell on your upper back across the trapezius and shoulders. The hands should be slightly outside shoulder width and tightly gripping the bar. The elbows should be pulled under the bar. The feet should be placed anywhere from 4 inches apart to shoulder width with the toes turned outward slightly. Look straight ahead keeping the neck in a neutral position throughout the lift.

Now you are ready for the eccentric phase of the squat. The first movement is a bend of the knees. Continuing bending the knees as you lower the hips keeping the torso as perpendicular to the floor as possible. Keep the chest up and the low back arched. As you descend push the knees as far forward as possible, always keeping them in line with the toes. Remember to keep the elbows pulled underneath the bar. The lowest point of the squat is reached when the hamstrings cover the calves.

The concentric phase of the squat is a reversal of the eccentric. Make sure to not bounce at the bottom of the squat. As you squat the weight to a standing position maintain an erect torso and arched low back. Often lifters will push the hips back and allow the torso to angle forward, turning the squat into a good morning. Avoid this mistake when squatting. Another common technique flaw is allowing the knees to cave inward. As stated early, always keep the knees in line over the toes. The lift is completed when the lifter stands erect just as at the start of the lift.

Now you know how to squat. Part two will look at how to implement the "king of all exercises" into your training program.

CIHP and Metabolic Meals...



What it can do for you?

Without question, the biggest challenge we face in getting you the results you desire is what happens in those many hours when you are not at CIHP! What you decide to consume has a significant impact on your goals, but more importantly, on your health. When we talk about improving body fat, strength, neural tension, it all really comes back to your health and how you are going to feel and exist now and 10-20 years from now. Healthy people do often look better. They also feel better emotionally and physically.

We have partnered with Lesley and Jason Barbour, owners of Metabolic Meals, because their product is exactly what we recommend you eat. Their food is organic, grass-fed, wild-caught fish, gluten free, cage-free, hormone and antibiotic free and low allergen. It is brought to you fresh and tasty and their chef is fantastic!

We understand that a lot of you have a busy and hectic schedule and that eating out is an avenue often chosen. It's important to realize that generally, restaurant food, even if it seems like "clean food (e.g. chicken breast and a side of vegetables)", is often loaded with additives and preservatives like high-fructose corn syrup, unhealthy fats and sodium. These ingredients are there to improve texture and to make swallowing easier. It is quite frustrating to sabotage your health and body composition goals by eating foods that you think are healthy. Restaurants are, for the most part, more interested in selling more food than they are in selling healthy food. For this reason, we feel that Metabolic Meals is a great tool to help alleviate your busy schedule and keep you on track with your goals.

We recommend trying the meals for at least a month to really set your body and mind to eating this way. Try the 5 day plan and do your own meals on the weekends... don't go overboard however, or else you will sabotage your efforts. Metabolic Meals will give you ideas on creating your own unique meals for the weekends. After 2-3 weeks you will be looking forward to Monday where you will not have to think about what to eat for breakfast, lunch or dinner. You can't get bored with this plan since the meals rotate on a 28 day cycle. The convenience and excellence of Metabolic Meals is a tremendous value. Think about how much time and money you spend on groceries, food preparation and eating out.

Metabolic Meals – Tasting at CIHP

Leslie & Jason Barbour, owners of Metabolic Meals, along with Chef Bob Willis will be at CIHP on Monday, October the 19th from 8am-2pm.

Please stop in and sample some very tasty, but healthy and coach approved dishes!

RSVP to Janet at 314-479-0572



CIHP Calendar

November 21, 2009

Dr. Skaggs and Dr. George will be presenting their Musculoskeletal Pain in Pregnancy Seminar at CIHP

December 5-6, 2009

Dr. Skaggs will be presenting his Manual Therapy and Rehabilitation for Temporomandibular and Cervical Spine Disorders (TMJ) Seminar at CIHP

December 10, 2009

CIHP Youth Athlete Event with special appearance by St. Louis Rams Running Back Steven Jackson

January 8-10, 2010

International Symposium on Musculoskeletal Pain and Motor Control: Highlighting the Assessment and Management Approaches of Pavel Kolar and Stu McGill in Naples, Florida