The Truth of the Trend

Research has shown that training the nervous system with Olympic lifting, plyometrics or any type of explosive high intensity training can be beneficial to the athlete when done correctly. There is much debate on the subject of CNS (central nervous system) fatigue and whether it is a real phenomenon or a false naming of adrenal fatigue, muscle fatigue, etc. Whether or not CNS fatigue truly exists or is being named correctly is beside the point. The fact is that explosive exercises with weight such as Olympic lifting place very high demands on all systems of the body and carry serious risk of injury if not learned and practiced properly.

Olympic weightlifting requires a high level of understanding and skill. Bompa has a suggested that the optimal number for training the nervous system is 1-3 repetitions with a rest period of 6 minutes between sets. In addition ATP is only present for 6-8 seconds which is about 3-5 reps before needing at least 2-3 min of recovery. Once ATP runs out the lifts will become compromised because the muscle does not have the energy to elicit the contraction the nerve is demanding. Anything beyond said rep range starts to overload the joint because form is compromised. Since these methods are designed to tax the central nervous system it does not make sense to try to change them into strength and endurance movements for high reps. Despite the research and proven science many mainstream programs will suggest doing a set of anywhere from 10-20 repetitions or even do as many reps as possible in a 30-60 second window. Using these methods for endurance is like telling a sprinter to sprint through marathons for training.

The other issue is that these methods require a very high level of motor control. Proper movement patterns need to be practiced without resistance at a low level until the client shows proficiency in the movement. Of all the lifting methods, Olympic lifting is the most difficult to master because of the required flexibility and motor control for explosive movements with heavy weights to get the max benefit. Olympic lifting is a sport in itself and can take years to learn. From our experience it takes the average person 4-6 months just to be able to get into the positions required to properly perform the movements. Once they can move it can take another 6-12 months to actually learn how to correctly do the lifts with weights. Olympic lifting is a professional sport yet everyone thinks they can do it without training. Even professional athletes should be cautious because the lifts were designed not for football, soccer or tennis, but for Olympic lifting.

Athletes should integrate Olympic style lifts into their strength and conditioning programs to reap the benefits of these movements but not duplicate them exactly. I suggest most athletes train from the power position which is called the hang (bar just below knees) since that is what most sports require. If a super elite athlete wants to learn the full lifts, it should be determined by a very high level coach.

Most courses that teach this method are 2-4 days and then a certification is received allowing one to teach the lifts. Since we all agree Olympic lifting is just like basketball or any other pro sport, then how is that possible? One cannot learn basketball in 2-4 days, let alone teach it, right? The answer seems obvious, yet people still spend millions on extreme home training videos and going to training facilities to do trendy high intensity programs that make no scientific sense.

The videos are the most dangerous, in our opinion. Any professional knows you cannot learn plyometrics by watching a video, and that the average person does not have the knowledge of the basic physical requirements and proper progressions. The science behind plyometrics is

similar to Olympic lifting and should not be done for high repetitions either. The sad truth is that a majority of programs break the laws of proven science and safety, but their obvious flaws are overshadowed by attractive instructors, celebrity endorsements, extreme marketing tactics and industry politics. These companies are commendable, in a way, because the business intellect required to achieve such enormous revenue is impressive and there are some very good components in many of these programs. The main issues with these programs are that the parts that are wrong are so wrong it negates any of the positive aspects.

So the big question we get is, "why do they work if they are wrong?"

The fact is that if you do anything consistently and intensely while eating well you will obtain results. If you were to move bricks from one side of the yard to another for two hours a day with a 15 minute jog every 30 minutes for two months, you can be assured there will be fat loss and muscle growth. This is especially true for people who have never exercised or have done very little. So does that make it right? This sounds crazy but one of the best NFL receivers of all time, Jerry Rice, did just that growing up. He played a lot better when he started training like a football player instead of moving bricks.

Why doesn't everyone get hurt? I know a guy who has been doing that stuff for years! Well, there are people who smoke until they are 90 and have no issues while others who never smoke die of lung cancer at 40 years old. In most cases smokers will develop health problems before 85, but there are always the exceptions. Everyone is different. There are countless variables that contribute to our physical constitutions and what our bodies can handle before we break down including genetics, nutrition and mental/emotional patterns, just to name a few. Some people are born athletes and can tolerate these programs because they have a natural ability to perform most plyometrics correctly and are strong and flexible enough to weather the storm of poor training.

Are all cookie cutter programs bad? No. There are some great instructors out there who can run programs that follow science and elicit even better results. This article is meant to educate you and serve as the WARNING LABEL. This is not meant as an attack on any particular company or program. It is simply meant to provide information based on common sense and science so that better results can be achieved safely.

Written by Charles DeFrancesco Dr. Robert Inesta www.fitandfunctional.com

References: Bompa, T. (2005) Periodisation Training for sports. 2nd ed. Human Kinetics (taken from <u>http://www.brianmac.co.uk/cns.htm#ref</u>)

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