



Strength & Conditioning

University of Notre Dame Olympic Sports

Spring 2014

Featured Exercise: Vertimax Vertical Jump Training

Benefits:

- Vertimax is capable of applying a useful, non-varying load throughout the complete vertical jump motion
 - This maximizes power development from start to finish
- With Vertimax, all the muscles associated with the **vertical jump** effort will be loaded through the **full range of the vertical jumping motion**.
 - This will more effectively condition the leg, back and shoulder muscles to produce power sooner in the explosive movement
- The result is improved **acceleration** and **take-off velocity**.

How to Train on the Vertimax:

- Training with Vertimax to improve vertical jump performance is simple and effective
- Simply put on the Vertimax waist belt, set the tension on the elastic bands and attach them to the belt.
- Our strength and conditioning coaches utilize various training methods such as to achieve maximum vertical jump results:
 - Contrast jumps
 - Set and rep schemes
 - Various countermovement depths and velocities



<http://www.vertimax.com>

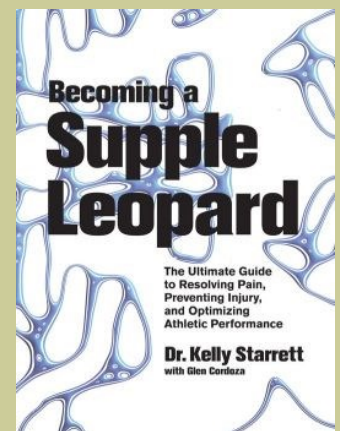


Suggested Reading:

Becoming a Supple Leopard

Kelly Starrett

- Joint Specific mobility
- 'Self Maintenance' and practical ideas for improved wellness and mobility
- Focus on improving basic strength patterns and fundamental movement skills



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INTERNET: [HTTP://WWW.PERFORMANCE.ND.EDU](http://www.performance.nd.edu)

What's New In Strength & Conditioning: Sleep for your Recovery

- Tracking and Analyzing Sleep Data for Improved Performance
 - The consumer based products provide an educational tool to drive conversations about how to improve sleep quality and duration.
 - Fatigue Science creates a predictive model of performance based on sleep data, allowing the optimization of sleep, practice, travel, an game schedules.
- Several new options for tracking sleep, both consumer and institutional products

- Individual:

- Jawbone UP, FitBit, Lark Pro

- Institutional:

- Fatigue Science

lark

JAWBONE
UP



“The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.”

~ Dr. Martin Luther King, Jr.

Did You Know:

Lifting weights does not build muscle.

Lifting weights actually breaks down muscle fibers. It is then through rest, recovery and proper nutrition that muscles are rebuilt stronger to withstand further damage.

This is why eating a healthy diet complete with an adequate amount of lean protein is a must for all athletes. Proteins are broken down in Amino Acids and used in the function of repairing damaged muscle.

The More You Know!





PERFORMANCE

Ask our staff:

Matthew Howley - Men's Soccer Strength Coach



Matt Howley Howley has received a Bachelor's of Exercise and Sports Science from Deakin University in 2009, and achieved his Master of Exercise Science (Strength and Conditioning) from Edith Cowan University in 2010.

Hailing originally from Melbourne, Australia, Howley currently resides in South Bend, Ind.

Q. What is the aim of the summer fitness program?

A. The aim of the summer program is to condition the team in preparation for the up coming season. The program is designed & based around the requirements of the game plan Coach Clark has in place. They want to be a high repeat pressure team so I need to ensure we condition to mimic these conditions to ensure that when faced with such situations in games we are able to excel. We aim to be the fittest team in the country.

Q. Describe the differences in your Non Competition and In- Season strength training program?

A. Out of competition we focus on max strength and power development. Soccer athletes don't need extra mass. We complete a relatively low overall training volume with the focus being on high intensity strength and power based training. This enables the guys to have the ability to generate high levels of maximal force quickly which complements what is being achieved in our fitness program. In- Season we decrease the volume even further and focus on the movements rather than the weight specifically and having a greater focus on injury prevention.

Q. What is the main method you use to condition the team?

A. The main methods used to condition the team are MAS (maximum aerobic speed) and $\dot{V}O_2$. These are two scientifically researched methods which when used appropriately and with adequate but not too much volume can elicit some great results. Too many people are just about "running their athletes". I run the guys but everything is planned out and structured to a point where I know to the meter how far we run per session & how many seconds are above MAS.

Foam Rolling:



Foam Rolling is actually a technique known as Self-Myofascial Release.

Fascia is a structure of connective tissue that surrounds muscles, groups of muscles, blood vessels, and nerves, binding some structures together, while permitting others to slide smoothly over each other.

With exercise, the fascia can become scarred, foam rolling helps to break up this scar tissue allowing for better Range of Motion.