



## FASCIA NEWS

### December 2012

A sporadic info letter from the Fascia Research Group at Ulm University

*Dear Colleagues,*

*In case you receive this info letter for the first time, it is because you participated in one of our courses in the past or expressed interest in one of our products. We plan to send us these FASCIA NEWS between 1 and 4 times per year only, with latest news concerning fascia. In case you are not interested in this, you can simply respond to this email with the word 'UNSUBSCRIBE' in the text. Additionally you can also unsubscribe at the end of this info letter.*

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### **Plyometric training leads to increase of elastic storage capacity.**

Athletes are familiar with plyometric training: to train for rapid acceleration they practice dynamic jumping techniques. This is referred to as the stretch-shortening-cycle and it is assumed that the resulting gain in speed is related to an increase in muscular contraction – due to stimulation of muscle spindles and the related monosynaptic reflex – as well as to elastic storage components of passively stretched myofascial elements. Nevertheless, most experts had assumed, that practicing those jumps would lead to an increase of actively contracting motor units in the muscle during the concentric contraction phase.

A recent study from France looked at the tissue properties and muscle activation patterns of a group of persons that regularly practiced plyometric jumps for 14 weeks, compared with a control group (Fouré 2011, Eur J Appl Physiol 111:539–548). To their surprise they found out that the experienced jumpers utilized less (!) muscle activation during the concentric contraction phase than their less experienced partners. However, their passive myofascial

tissues expressed a higher elasticity (kinetic storage capacity) compared with untrained people. It is concluded that the increase in power and acceleration in trained people is largely due to a better utilization of the passive elements rather than a stronger engagement of motor units.



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### **Connective Tissues in Sports Medicine' April 12-14th 2013, Ulm University**

In sports sciences as well as in sports training the main emphasis has been on cardiovascular and neuromuscular aspects. In contrast to that most sports related overuse injuries occur in collagenous connective tissues (such as tendons, joint capsules, plantar fascia, etc.). Like in other life science areas the role of the 'fascial net' has been largely neglected, and it is only during recent years that it receives increased scientific attention. One of the newly emerging fields in that respect is the investigation how collagenous tissues respond to different types of sports like mechanical loading. The Department of Sports Medicine of Ulm University together with our Fascia Research Group has therefore taken the initiative to set up a first international congress devoted to that new field of inquiry. This congress will happen on April 12-14th 2013 and is called '*Connective Tissues in Sports Medicine*'



Already many physiotherapists, sports MDs, fitness trainers, Pilates/yoga/dance teachers, martial arts instructors, movement educators as well as personal trainers from all over the world have enrolled into this pioneering event. For those of us on the crazy organizing end of this, the high level of interest and enthusiasm from many different fields feels similar to the preparation phase of the first Fascia Research Congress (Harvard Medical School, 2007), which indeed functioned a landmark event. Confirmed keynote presenters already include Paul Hodges, Andry Vleeming, Klaus Eder, Tom Findley, Michael Kjaer, Jürgen Steinacker, Constantinos Maganaris, Boris Hinz, Yasuo Kawakami, Jürgen Freiwald, Benno Nigg, and others. The call for abstracts is still open until January 31st. Info at: [www.connect-](http://www.connect-ulm2013.com)

[ulm2013.com](http://www.connect-ulm2013.com)

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#### **Additional fascia related news:**

It is still possible (until Dec. 31st) to gain the status of a 'Founding Member' of the **Fascia Research Society**. Members of this newly formed international society receive the benefit of significant reductions at future fascia congresses as well as other fascia research related activities. You also get access to extensive literature data bases as well as other online recourses, in addition to the possibility of participating in internal sharing/discussion groups etc. Info at: [fasciaresearchsociety.com](http://fasciaresearchsociety.com)