



3. MEDICA MEDICINE + SPORTS CONFERENCE The Focus on Prevention

When it comes to chronic diseases, exercise and healthy nutrition is often more impactful than taking medicine. “Prevention” is one of the key words which also was the focus of the 3rd MEDICA MEDICINE + SPORTS CONFERENCE on the 17 and 18 November 2015 in Düsseldorf. Worldwide renowned experts, drivers and doers met at the established cooperation platform to foster new exchange formats, new sport medical therapies, and innovative approaches for prevention, recreational and professional sports.

Prevention is better than curing diseases. Clear. And there is a proven and significant relationship between physical activity and prevention of illnesses. Also clear. This is valid for healthy persons. However, also ill persons benefit from exercise. Exercise is often better than taking pills. Although this is true, many persons still have an inactive lifestyle in addition to other habits that are risky for their health.

Exercise is Medicine

To increase the significance of exercise in prevention several initiatives like “Exercise is Medicine” (a global initiative of the American College of Sports Medicine), “Exercise Prescription for Health” (initiative of the two sport medical associations FIMS and EFSMA) have been started. Physicians and sports medical doctors can “prescribe” exercise or rather “recommend” it. In several countries new legal regulations will foster these initiatives. One example is the new German prevention law starting in 2016: health insurances have to spend 7.00 instead of 3.09 Euro for prevention for each insured person. Physicians will then be able to prescribe exercise in fitness centers and gyms that will be covered by the insurance. Exercise prescription for health will become reality – a new challenge for many physicians in every aspect of implementing it. What is the right activity program? Are there any existing guidelines? Who are the right partners for implementing it? How can the progress be

monitored? The MEDICINE + SPORTS network partners are working on answering these questions.

Increased Health Consciousness

Although there are many people having a risky lifestyle, a growing number of people are ready to do something for staying healthy. There is an increasing interest in fitness trackers, wearables, and health apps that monitor many facets of a healthy lifestyle. And it is more than quantifying yourself, loving gadgets or socializing: it motivates people to be more physically active.

Tracker, Health Apps and Wearables – a Booming Market

50 mio wearables were sold worldwide in 2013 and it is exploding rapidly, says Christian Stammel, CEO and founder of WT Wearable Technologies Group, and speaker of the MEDICA MEDICINE + SPORTS CONFERENCE. Analyst house Juniper estimates this to be 80 bio \$ in 2020. More than 500 mio \$ have been spent by US sporting goods company Under Armour for the acquisition of two fitness apps. 475 mio \$ were paid by CEO Kevin Plank for the trainings and nutrition platform „MyFitnessPal“, and 85 mio \$ for “Endomondo“, a digital fitness trainer. And sporting goods company Adidas acquired Runtastic. The company which is headquartered in Pasching close to Linz, Austria, was founded in 2009 and is now a global player in the market of health and fitness apps. Also IT giant Microsoft has started activities in “Wearables“ with its “Microsoft Band“ an activity tracker that measures many physiological parameters like temperature, heart rate, or movement. Even a UV sensor is integrated.

More Than Just Gadgets

The American Heart Association has announced that smart phone apps and wearables can support healthy and ill persons in their effort to live a healthy lifestyle. („Circulation“:2015;132:00-00.DOI:10.1161/ CIR. 000000000000232).

The benefits of health apps, wearables and fitness trackers have also been recognized by health insurances. Some of them think about a financial participation or even cover the cost of the devices.

The trend to self-quantifying and financial contribution of health insurances have been criticized; some don´t take the gadgets seriously and disbelieve their impact on a healthier lifestyle. Even good health apps will not be able to replace the consultation of a doctor, says Dr. Andreas Gassen, chairman of the board of the association representing all German health insurances. And health apps may even promote the abuse of health data. He criticized

especially the payment of bonuses to insured persons that provide their fitness data. The data protection and also the quality of measurement methods were some points he mentioned.

Whatever position you take, supporter or non-supporter: sport scientists, trainers, and especially medical practitioners have to get more insight into the opportunities and limitations of new technologies.

Insights into New Advancements in Vital Data and Sports Performance Monitoring

A lot of information about state-of-the-art developments and innovations that will become reality in the near future were presented by the renowned experts of the MEDICA MEDICINE + SPORTS CONFERENCE.

Prof. Dr. Carl Foster, Professor for exercise and sports medicine of the University Wisconsin Lacrosse and former President of the American College of Sports Medicine started the conference. Foster is one of the leading experts in performance monitoring, inspiring the "American Health and Fitness Index". He is famous for his "Talk Test" that provides every person with an easy and intuitive test how much running or walking is beneficial.

Monitoring vital data and generating the right activity program for each individual is multifaceted. Besides physiological parameters new findings regarding cognitive parameters and emotional parameters can play an important role in defining the right program at the right time. Dr. Silvia Binder, founder of the "Binder Institute of Personalized Medicine" presented the impact of focused electromagnetic fields in recreational and professional sports.

Exercise and prevention is also important for patients. Prof. Dr. Frank Mayer, Professor for Sports Medicine and Sports Orthopedics will revolutionize the diagnosis and treatment of back pain patients with his large research network MisPEX (Medicine in Spine Exercise). He presented first findings in Düsseldorf. Exercise is also medicine for back patients.

According to Prof. Dr. Wilhelm Bloch, Professor and head of Department of Molecular and Cellular Sport Medicine of Sport University Cologne, an interesting new topic in sports medicine is epigenetic analysis that can provide information about predispositions and capabilities to be integrated in the sport medical assistance. As the genetic code is limited in describing the differences between physical readiness for performance and the health status and the impact of sports. One key for understanding the discrepancy between genotype and phenotype is epigenetics. Through changes of the DNA and the related histones genes can be active or inactive for different time spans. This epigenetic regulation happens through methylation und acetylation.

Wearables and Gamification - a Motivation for Physical Activity

More and more children suffer from lifestyle diseases because they are obese, have type 2 diabetes and have severe fitness deficits. How to improve this development is one of the main research topics of Dr. Birgit Böhm researcher of the chair of preventive pediatrics of Technical University Munich. She compares the fitness impact of exergames with “real sports” and her findings are surprising. Exergames have almost the same impact on children health parameters.

Wearables will play an important role in exercise medicine and prevention. Polar, the first player in the wearables sports and fitness market is a player that drives the evolution from the fitness tracker to smart coaching systems – the digital personal trainer. The digital personal coach not just shows the measured parameters but gives advice for progress. Individual training plans, the right intensity and immediate feedback that may also be the starting point for contacting the medical practitioner; Smart Coaching offers a variety of heartrate functions for customized personal needs.

The Performance Expert

Mark Verstegen, the CEO of EXOS, performance director of the NFL Players Association since 15 years and leading American fitness expert of many famous professional teams and athletes has revolutionized with his “Core Performance” concept trainings worldwide. He provided an insight into his work and findings. The focus was on how findings in performance training can be used to improve corporate health.

The Networking Benefits: Get Insights, Test, and Network

MEDICINE + SPORTS ecosystem events offer the opportunity to get insight into relevant innovations and network with the experts and drivers: sessions full of insight, “Guided Innovation Tour” with a deep-dive into health and fitness monitoring devices. Wearables can be tested during the get together and vital parameters can be measured at the FITNESS POINT. In Dusseldorf attendees could measure their body age with a Polar system, their body composition by an InBody scale, lung function and calorimetry by Cosmed` s Fitmate, and dysfunctional body areas by Ondamed Technologies. The sports medical experts at the FITNESS POINTS did 199 fitness tests during MEDICA.

Stay tuned for our next networking event on 1 September 2016 in Singapore and on 15-16 November 2016 in Dusseldorf at the world` s largest medical trade show.