

Substrate metabolism in skeletal muscle measured by magnetic resonance spectroscopy

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STELLINGEN

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The habitual low intake of carbohydrate ($< 5 \text{ g} \cdot \text{kg}^{-1} \text{ body weight} \cdot \text{d}^{-1}$) by soccer players provokes cumulative deficits of about 10 % in glycogen replenishment within 24 h, which might result in decrements of following performances. (this thesis)

After an eccentric exercise glycogen stores continue to deplete during the first 2 h after cessation of the exercise even if a high dose of carbohydrates is consumed. (this thesis)

Fat oxidation in females and males is still a matter of debate. Not only the relative contribution to total energy but also the different fat sources seem to be equivocal. (this thesis)

Already a short-term high fat diet modulates intramyocellular lipid (IMCL) stores and substrate contribution during exercise. The higher the initial IMCL concentrations are the larger is their contribution as an energy source during submaximal exercise. (this thesis)

„Zwei Dinge sind zu unserer Arbeit nötig: Unermüdliche Ausdauer und die Bereitschaft, etwas, in das man viel Zeit und Arbeit gesteckt hat, wieder wegzuwerfen.“ (Albert Einstein, 1879-1955)

“If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.” (Hippocrates, ca. 460-370 BC)

“The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them.” (William Bragg, 1862-1942)

„Tell me and I'll forget; show me and I may remember; involve me and I'll understand.“ (Chinese Proverbs)

„Alles Wissen oder Lernen ist, verglichen mit der Tiefe der Erfahrung, wie ein Tropfen Wasser, der ins Meer fällt.“ (Zen-Meister Tokusa Sengan, 782-865)

„E pure si muove.“ (Galileo Galilei, 1564-1642)

„SYNERGIE ist ein Zusammenwirken verschiedener Kräfte, wonach eins plus eins mehr als zwei und die Summe der zusammenwirkenden Teile größer ist als die Summe der getrennt wirkenden Teile.“ (Oliver Langer, 1997)

Monica G. Zehnder
Berne, March 2005