



The Competitive Athlete

9, 10, 11, 17, 18 & 23rd May 2010

Module Plan

Day 1 am: Functional Sports Nutrition Part 1 – Ian Craig

- Functional Sports Nutrition – an overview: understanding the integrative effect that emotional, neurological, immunological, endocrinological and musculo-skeletal health has on human performance
- Models of Performance: the many contributing factors to athletic performance
- Complexity research for integrative health
- **Case Study of a Complex Athlete**

pm: Functional Medicine approach to a Professional Road Cyclist – Pete Williams

- Tips of the Trade for Physical examination - head to toe
- Body Composition measurement techniques
- The Functional Sarcopenic woman – nutritional and exercise influences
- **Case Study of a Professional Cyclist**

Day 2 am: Bioenergetics of Sports – Ian Craig

- Fuel Metabolism during Exercise – an overview
- Macronutrients as fuels
- Micronutrient requirements for enzymatic steps
- Exercise Types – aerobic & anaerobic energy systems
- Use of Organic Acid Functional Testing to examine Fuel Utilization
- **Case Study using Functional Testing**

pm: Nutrient Timing – Ian Craig

- Macronutrient Ratios – high-carb, high-fat or high-protein? - nutrigenomics may hold some answers to individual body type
- Fluid and Electrolytes: hydration principles and monitoring devices
- Timings of Food and Fluid Intake for optimum fuel utilisation and anabolic drive
- Sports Drinks and Recovery Formulas – commercial products and DIY options
- **Case Study of a Recreational Marathon Runner**

Day 3 am: Clinical Assessment & Nutritional Protocols – Antony Haynes

- Use of questionnaires to elicit information from signs and symptoms
- In-house testing
- Laboratory testing including Adrenal Stress Index, sIgA, Haematology and Biochemistry
- Suggested nutritional and supplementation strategies based on clinical assessment
- **Case Study**

pm: Drugs in Sport – Antony Haynes

- Types of drug doping that occurs in sport – stimulants, relaxants, anabolic agents, endurance enhancers
- Health implications of drug doping
- Sporting Bodies banned lists and testing procedures
- Safe use of Supplements in Sport – optimising performance without testing positive
- **Case Study**

Day 4 am: Functional Sports Nutrition Part 2 – Ian Craig

- The Health of the Athlete – an integrative body systems perspective: digestion; detoxification; immunity; communication.
- Gut-brain axis in athletes
- Acid-alkaline balance and the physiology of breathing
- Physiological markers of elite athletes
- **Case Study**

pm: Ergogenic Aids – Alessandro Ferretti

- Ergogenic Supplementation – lipotropic agents, thermogenic agents, anabolic agents and meal replacements.
- Clinical Supplement Protocols for: building muscle, losing fat, anaerobic exercise, aerobic exercise, pain reduction, tissue repair, recovery, mental focus and strength.
- **Case Study**

Day 5 am: Injury and Illness – Ian Craig

- Oxidative Stress, Ageing and Antioxidants: training-induced increase in oxidative capacity AND oxidative stress; nutritional strategies for regeneration
- Injury, Infection and Inflammation: overview of inflammatory process including nuclear transcription down to local inflammation; nutrients required for tissue regeneration
- Periodicity: nutritional considerations depending on periodisation strategies
- Case Study of a badly injured Motorcycle Racer

pm: Overtraining and Stress – Ian Craig

- Adrenal Dysfunction as a Model for Overtraining: historical models of overtraining; autonomic nervous system balance (sympathetic vs. parasympathetic drive)
- Cortisol activity during exercise (anabolic vs. catabolic drive); modulators of cortisol during exercise
- Case Study of a Stressed Boxer

Day 6: Fuel for Athletes – From Theory to Practice

Christine Bailey and Ian Craig (10.30am–3pm)

- Macro- and Micro-nutrient balance – preparing your plate
- Breakfast Fuelling – top foods to consume
- Cooking pre- and post-training snacks such as protein shakes, bars and pancakes
- Cooking a power lunch plus *tasting*
- Including protein, essential fats and quality carbs in your meals
- Sweet treats for performance
- Sports nutrition products – do you need them and are there alternatives?
- Closing Question and Answer Session

Your Lecturers

Ian Craig MSc, CSCS, Dip CNE As leader of this module, Ian has over 20 years of experience as a competitive Middle Distance runner. He studied Exercise Physiology to MSc level in America, before qualifying as a Strength and Conditioning Specialist and spending several years as a Personal Trainer and Coach. Now a Nutritional Therapist, he practices and lectures in Functional Sports Nutrition (an integration between Nutritional Therapy and Sports Nutrition) at his home in Cape Town and during regular trips to the UK.

Pete Williams M.Med.Sci, AFMedCP, CSCS A medical science graduate of both Liverpool and Sheffield Universities, a graduate of the prestigious US Institute for Functional Medicine, a Strength and Conditioning Specialist and lifetime achievement award winner with the Register for Exercise Professionals, Pete Williams is one of this country's most complete health experts. He specialises in Functional Medicine at his clinic in London.

Alessandro Ferretti DipION Years of competitive Judo and practicing as a Personal Trainer and Nutritional Therapist, has led Alex to amass a wealth of experience in the field of Sports Nutrition. A graduate of ION, he worked for several years with a highly regarded supplements company as Education manager before leaving to establish his own nutrition business, 'Equilibria Health Limited'. Alex now lectures on clinical workshops aimed at the post-graduate sector, provides corporate wellness packages and runs a successful nutrition practice, which includes many serious athletes.

Antony Haynes BSc, Dip ION Antony has had a long involvement with sport: he played hockey for East England junior team and captained Essex plus won gold medals as a member of the GB junior ski team. His interest in sport led him to complete a degree in Sport Science at Brunel University in 1987. Since qualifying as a Nutritional Therapist in 1992, he has had nutritional care of several international and world class athletes, as well as many gym members and individual athletes.

Christine Bailey MSc, PGCE is a qualified Chef and food consultant as well as a freelance food and health writer for numerous national magazines and newspapers. She has produced several recipe books including TOP 100 Low Salt Recipes 2009 (Duncan Baird Publishers) and The Intelligent Way to Lose Weight (2009 (Dr Mark Atkinson and Christine Bailey) Published by Higher Nature. She is a student of Nutritional Therapy at CNELM and runs several cookery workshops hosted by the college.

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