

Self Assessment of Knowledge Competence for Graduate Registration

Sport and Performance Nutrition Pathway – Graduate Registration

The competencies expected of the SENr graduate registrant in Sport and Performance Nutrition are summarised* in this document. All potential applicants are required to undertake a self assessment against the competency framework prior to submitting an application.

Task

Complete a self assessment of knowledge competency rating your level of competence against the assessment framework provided.

Purpose

To ensure that only suitably qualified applicants proceed to apply for formal SENr assessment.

Process

The self assessment framework covers underpinning Scientific Knowledge.

The assessment criteria provides a range of 0 – 3, i.e. no knowledge / skill through to specialist knowledge / fully competent under all circumstances. It is expected that registrants will be at a level 2 or above in each of the competency areas (A-G), namely sound fundamental knowledge and competent under most circumstances.

The framework encourages all applicants to identify strengths and weaknesses, and where gaps exist in knowledge.

NOTE:

If you do not meet all criteria do not submit an application for assessment.

* For a full description of competencies refer to the document '*Competences in Sport and Performance Nutrition*'

SENr COMPETENCY A: SCIENTIFIC KNOWLEDGE		Key to Specialist Knowledge 0= No knowledge 1= Some knowledge 2= Sound fundamental knowledge 3= Specialist knowledge
<i>Competency</i>	<i>Self Assessment</i>	<i>Evidence / Comments</i>
1. Digestion, absorption and excretion.		
2. Cellular metabolism & biochemical pathways of energy production: ○ Aerobic, anaerobic, intramuscular phosphate.		
3. Human energy transfer systems during exercise: ○ Energy release from fats, carbohydrates, proteins; ○ Lactate production, removal and transfer; ○ Oxygen uptake, kinetics, lag/debt. ○		
4. Measurement of energy costs of exercise: ○ Basal metabolic rates; ○ Calorimetry / daily energy expenditure.		
5. Cardiovascular and respiratory response and adaptations to exercise: ○ Heart rate, cardiac output, blood pressure; ○ Ventilatory rates, volumes.		
6. Hormones and endocrine systems in exercise.		

<p>7. Musculoskeletal and neuromuscular response to exercise:</p> <ul style="list-style-type: none"> ○ Motor units, fibre types (and preferred substrates); ○ Bone, muscle, tendon and joint; ○ Skeletal muscle structure / function; ○ Mechanics of human movement. 		
<p>8. Anthropometry:</p> <ul style="list-style-type: none"> ○ Anatomy, surface anatomy and anatomical landmarks. 		
<p>9. Principles of training:</p> <ul style="list-style-type: none"> ○ Training prescription and methodology; ○ Periodisation; ○ Peaking, tapering; ○ Long term athlete development; ○ Adaptation, recovery, over-training, de-training. 		
<p>10. Strength and conditioning:</p> <ul style="list-style-type: none"> ○ Anabolic and catabolic processes; ○ Resistance / eccentric training; ○ Affect on muscle, bone, joints, neural & cardiovascular systems. 		
<p>11. Environment and exercise:</p> <ul style="list-style-type: none"> ○ Thermoregulation, circulation and hypothalamic response; ○ Exercise and dietary implications at altitude, in the heat, in the cold, under water, in pollution; ○ Principles of training and adaptations in extreme environments. 		
<p>12. Hydration for exercise:</p> <ul style="list-style-type: none"> ○ Fluid and electrolyte balance; ○ Thermoregulation. 		
<p>13. Substrate utilisation during exercise of varying lengths.</p>		

<p>14. Nutrition for exercise in the general population and sub groups of the population:</p> <ul style="list-style-type: none"> ○ Age: children, youths, elderly; ○ Gender: males / females (e.g. pregnancy, menstrual cycle); ○ Disease (e.g. allergies, diabetes, coeliac disease, metabolic disorders, genetic predisposition); ○ Disability; ○ Overweight/obese, underweight, making weight; ○ Disordered eating; ○ Cultural, ethical or religious considerations (e.g. vegan). 		
<p>15. Nutrition for exercise, training and competition:</p> <ul style="list-style-type: none"> ○ Periodisation of nutrition; ○ Training and competition dietary plans; ○ Training camps; ○ Travel, foreign locations. 		
<p>16. Safety and health promoting properties of nutrients:</p> <ul style="list-style-type: none"> ○ Macronutrients and micronutrients; ○ Anti-nutrients, toxicants, additives, pharmacologically active agents (drugs); ○ Nutrient-nutrient interactions, ‘nutri-ceuticals’, functional foods, and any other metabolically active constituents of foods. 		

<p>17. Food preparation, handling, management and safety:</p> <ul style="list-style-type: none"> ○ Principles of catering management; ○ Practical and financial constraints on menu planning; ○ Methods of food service; ○ Food and nutritional labelling regulations and legislation; ○ Types of food additives, methods of food preservation and how these alter the nutrient content of food. 		
<p>18. Diet and nutrition for health:</p> <ul style="list-style-type: none"> ○ Constituents of a balanced diet; ○ Recommended daily allowances; ○ Promoting healthy habits. 		
<p>19. Diets and exercise:</p> <ul style="list-style-type: none"> ○ High carbohydrate, fat, protein; ○ Fad diets and implications; ○ Effects of alcohol on performance. 		
<p>20. Ergogenic aids and nutritional supplements (pharmacologically active agents, sports foods, sports drinks and supplements)</p> <ul style="list-style-type: none"> ○ Metabolic effects and efficacy; ○ Health, safety and legal aspects; ○ Anti-doping legislation, guidelines. 		
<p>21. Measurement and estimation of nutritional requirements, dietary reference values and recommended dietary allowances.</p>		
<p>22. Principles of body morphology:</p> <ul style="list-style-type: none"> ○ Ectomorphs, endomorphs, mesomorphs; ○ Sport specific and position specific body composition. 		
<p>23. Principles and methods of measurement and estimation of:</p> <ul style="list-style-type: none"> ○ Energy balance, energy expenditure; ○ Body mass, body composition; ○ Control of body mass and energy balance. 		

<p>24. Fitness assessment:</p> <ul style="list-style-type: none"> ○ Definitions and components; ○ Rationale for performing assessments; ○ Standard tests for aerobic / anaerobic fitness, strength, power, speed, flexibility. 		
<p>25. Monitoring of exercise capacity and training response.</p>		
<p>26. Cognisant of the range of methods used in research that are valid and appropriate to needs and context in sport nutrition:</p> <ul style="list-style-type: none"> ○ Principles and methods of research design; ○ Principles of measurement (including validity, repeatability of measurements); ○ Selection, use and interpretation of design issues (sampling, study size, power); ○ Selection, use and interpretation of appropriate analytical statistical techniques; ○ Methods for monitoring and evaluating the effectiveness of an intervention. 		
<p>27. Continually evaluate relevant research to ensure own practice is evidence based:</p> <ul style="list-style-type: none"> ○ Critical appraisal; ○ Application to practice. 		