CSEP-CPT CORE COMPETENCIES

CORE COMPETENCIES & SUB-COMPETENCIES

Each CSEP certification defines clear core competencies Candidates are expected to demonstrate, in order to be successful with the Theory and Practical Exams. CSEP-CPT Candidates will apply the knowledge and skills from their post-secondary education to address these specific core competencies, which are further defined by a series of specific sub-competencies.

1. Basic Human Anatomy, Human Physiology, and Exercise Physiology

1.1 Explain and identify typical values for: cardiac output, stroke volume, systolic, and diastolic blood pressure for men and women at rest and during exercise.

1.2 Identify and explain normal and abnormal cardiorespiratory responses to submaximal exercise.

1.3 Describe the responses of the cardiorespiratory system to acute and chronic exercise.

1.4 Differentiate between the anaerobic alactic, anaerobic lactic, and aerobic energy systems. Identify the characteristics of each system and how these characteristics apply to exercise programming.

1.5 Identify and explain the most valid and direct measure of maximal aerobic power (VO2max).

1.6 Identify and explain the difference between absolute and relative oxygen consumption (VO2).

1.7 Explain the relationship between exercise workload, oxygen uptake, and heart rate including factors that may influence these relationships.

1.8 Explain METS and estimate the energy costs of physical activity in metabolic equivalents (METS/Kcal/KJ) using established energy expenditure tables.

1.9 Explain the purpose and physiological responses to warm-up, active recovery, and passive recovery after aerobic or resistance exercise.

1.10 Identify normal versus abnormal physiological responses during the post-exercise recovery period.

1.11 Explain the dose-response relationships between physical activity, health, and fitness.

1.12 Define muscular strength, endurance, power, and flexibility.

1.13 Explain the principles of force production and levers as they apply to human movement.

1.14 Explain force production relative to muscle length, position of muscle attachment, and velocity of contraction.

1.15 Identify and describe the action of major muscle groups.

1.16 Explain age and gender differences in muscular and cardiovascular systems.

1.17 Describe the principles of overload, specificity, reversibility, and individuality as they apply to training adaptations.

1.18 Define sedentary behaviour.

1.19 Explain the physiological responses to sedentary behaviour.

2. Psychological Characteristic and Motivational Strategies

2.1 Describe positive health behaviours.

2.2 Identify and suggest improvements for lifestyle behaviours and physical activity participation using the Physical Activity and Sedentary Behaviour Questionnaire (PASB-Q).

2.3 Identify and describe factors affecting participation in physical activity. Describe the concepts of self-esteem, self-efficacy, confidence, competence, and body image.

2.4 Describe various theories and models related to health behaviour change (i.e., Social Cognitive Theory, Self Determination Theory, Transtheoretical Model, Theory of Planned Behaviour, and Health Action Process Approach).

2.5 Identify sources of self-efficacy (i.e., mastery experiences, etc.).

2.6 Demonstrate understanding of the factors influencing effective communication by displaying good interpersonal and verbal/non-verbal communication skills.

2.7 Demonstrate the client-centred approach to personal training.

2.8 Identify individual differences and apply appropriate instructional techniques.

2.9 Demonstrate motivational interviewing skills such as open-ended questioning, active-listening, eliciting change talk, managing resistances, and guiding clients to explore change.

2.10 Demonstrate selection and use of appropriate instructional tools.

2.11 Explain and discuss the importance of: empathy, reinforcement and incentives, and authenticity as they relate to personal training.

2.12 Demonstrate the ability to assess readiness for change and determine the needs, wants, lifestyle, abilities and limitations of the client.

2.13 Describe and apply appropriate strategies (which may include using the processes of change) designed to increase motivation, overcome barriers, and encourage compliance for the clients.

2.14 Identify and explain the cognitive processes involved at each stage of behavioural change.

2.15 Demonstrate the ability to apply the stages of behavioural change and other intervention techniques to effectively accommodate the needs, wants, lifestyle, abilities, and limitations of each client in program design and planning.

2.16 Explain the importance of S.M.A.R.T. (Specific, Measurable, Attainable, Relevant, Timed) goals and how they empower a client to take action.

2.17 Demonstrate proficiency in utilizing applicable tools within the CSEP-PATH® Resource Manual given a particular stage of change.

2.18 Explain and provide specific examples of how extrinsic and intrinsic factors may motivate and facilitate change to healthy behaviours in different individuals.

2.19 Establish the client's stage of motivational readiness for becoming more physically active using the appropriate instructional techniques and counselling styles.

2.20 Demonstrate the ability to apply a variety of exercise motivation and adherence strategies including: short- and long-term goal setting, methods of providing feedback, and the provision of effective incentives.

2.21 Explain the goal setting process and work together with the client to help them write clear concise goals that they are confident in.

3. Basic Theory and Methods of Health-Related Physical Fitness Assessments

The CSEP-CPT must exhibit a comprehensive knowledge of the assessment protocols, pre-and post-test procedures, test termination criteria, and measurement sensitivities outlined in the CSEP-PATH®.

3.1 Identify and explain the importance of informed consent and pre-assessment health screening (i.e., Get Active Questionnaire, PARmed-X for Pregnancy).

3.2 Explain the difference between clients that are apparently healthy versus those with a stable health condition.

3.3 Provide examples of a client that is able to exercise independently.

3.4 Recognize symptoms that may indicate a negative change in health status in clients with a stable chronic condition.

3.5 Demonstrate the ability to correctly assess resting heart rate and resting blood pressure, and identify the prescreening requirements for safe participation.

3.6 Identify who is qualified to address the client's needs (e.g., CSEP-CEPs for conditioning exercises after rehabilitation of an injury).

3.7 Recognize when to refer clients to persons with more advanced expertise (e.g., physician, CSEP-CEP, psychologist, etc.) for evaluation and/or clearance.

3.8 Identify the steps to take when referring a client to another exercise or allied healthcare professional.

3.9 Develop a network of credible exercise and medical/healthcare practitioners to use as referrals.

3.10 Demonstrate the ability to administer correctly and explain the purpose and scoring of the Stages of Change Questionnaire, Abilities for Active Living Questionnaire (AAL-Q) and PASB-Q.

3.11 Evaluate anthropometry (i.e., height, weight, waist circumference) according to the guidelines of the CSEP-PATH®.

3.12 Identify and explain the strengths and weaknesses of reporting percent body fat versus the techniques used in the CSEP-PATH®.

3.13 Explain the theory behind various methods of estimating body composition such as DXA, underwater weighing, air plethysmography, and bioelectrical impedance for the determination of percentage of body fat as well as the strengths and weaknesses of each method.

3.14 Evaluate aerobic fitness via submaximal exercise assessment protocols (e.g., mCAFT, the Rockport One Mile Walk, the YMCA cycle ergometer and/or the Ebbeling treadmill protocols) according to the guidelines of the CSEP-PATH®.

3.15 Explain the theory, limitations, and assumptions underlying submaximal assessments of cardiovascular fitness (such as the mCAFT, the Rockport One Mile Walk, the YMCA cycle ergometer and/or the Ebbeling treadmill protocols).

3.16 Explain how to use submaximal exercise responses to estimate relative VO2max during the mCAFT, the Rockport One Mile Walk, the YMCA cycle ergometer and/or the Ebbeling treadmill protocols.

3.17 Demonstrate the ability to collect accurate exercise heart rate measures and demonstrate appropriate action should an abnormal heart rate response occur.

3.18 Demonstrate the ability to administer all portions of the post-exercise recovery protocol and demonstrate appropriate action should an abnormal response occur.

3.19 Identify test termination criteria for all aerobic submaximal protocols used in CSEP-PATH®.

3.20 Demonstrate the appropriate use of the Rating of Perceived Exertion (RPE) scale.

3.21 Demonstrate the ability to evaluate muscular strength, muscular power, muscular endurance, and balance according to the guidelines of the CSEP-PATH®.

3.22 Identify and explain the strengths and weaknesses of assessments of muscular strength, endurance, and power with particular focus on protocols used in the CSEP-PATH®.

3.23 Demonstrate the ability to evaluate flexibility according to the guidelines of the CSEP-PATH®.

3.24 Identify and explain the strengths and weaknesses of flexibility assessments including functional range of motion protocols (e.g., Sit and Reach Test).

3.25 Describe the validity and reliability of the protocols outlined in CSEP-PATH®.

3.26 Explain the measurement sensitivity of all measures outlined in CSEP-PATH®.

3.27 Identify and discuss sources of measurement error as it relates to reliability, validity, and objectivity and why it is important to minimize these sources of error.

4. Physical Activity/Exercise Prescription and Program Design

4.1 Demonstrate the ability to design programs that consider client data including:
   a. Goals and expectations
   b. Current lifestyle demands that may present barriers to physical activity (e.g., family and work responsibilities, hectic schedule, extensive travel, access to facilities or equipment)
   c. Current physical activity and sedentary behaviour patterns
   d. Current level of fitness, strengths and weakness (i.e., as informed by a formal fitness assessment if one has been conducted)

   Where a client elects to forego a formal fitness assessment, the CSEP-CPT will need to base training program recommendations on observations and client feedback.

4.2 Apply the principles and techniques of client-centered exercise prescription (e.g., monitoring adaptations or progressions).

4.3 Design appropriate submaximal exercise programs incorporating the principles of progressive overload, specificity, reversibility, and individuality.

4.4 Describe the difference between exercise prescription designed for health, fitness, and/or performance (sport and occupational).

4.5 Demonstrate the ability to adjust work intensity on a variety of fitness equipment during an exercise training session.

4.6 Explain the importance of an effective warm-up and cool-down.

4.7 Prescribe submaximal aerobic exercise programs according to strategies outlined in the CSEP-PATH®, incorporating:
   a. Goals and expectations
   b. Frequency and time
   c. Intensity using appropriate monitoring tools
   d. Structure
   e. Type of activity
   f. Progressions

4.8 Prescribe submaximal aerobic exercise intensities that are consistent with current guidelines as advocated by the Canadian Society for Exercise Physiology (CSEP), and other organizations publishing appropriate evidence-based guidelines.

4.9 Demonstrate to clients the procedures required for the accurate assessment of Heart Rate and Ratings of Perceived Exertion at rest, and during physical activity/exercise.

4.10 Understand the benefits of healthy eating and a physically active lifestyle as outlined in Canada's Food Guide, Canadian Physical Activity Guidelines, and Canadian 24-Hour Movement Guidelines.

4.11 Prescribe safe, effective weight management programs that promote long-term maintenance of healthy body composition through lifestyle and healthy eating habits.

4.12 Prescribe a submaximal resistance exercise program according to the strategies outlined in the CSEP-PATH®, incorporating:
   a. Goals and expectations
   b. Frequency
   c. Load, repetitions, sets, work-to-rest ratios
   d. Method of progression and volume of exercise
   e. Equipment choice
   f. Order of exercises (large to small muscle groups)

4.13 Demonstrate proper resistance training technique.

4.14 Prescribe resistance exercise intensities that are consistent with current guidelines as advocated as advocated by the Canadian Society for Exercise Physiology (CSEP), and other organizations publishing appropriate evidence-based guidelines.

4.15 Prescribe flexibility exercises that are consistent with current guidelines as advocated by the Canadian Society for Exercise Physiology (CSEP), and other organizations publishing appropriate evidence-based guidelines.

4.16 Select appropriate exercises (stretching and/or resistance) that target designated muscle groups to improve range of motion and work appropriate muscle pairs.

4.17 Demonstrate the ability to predict one-repetition maximum (1-RM) to determine appropriate resistance exercise intensities according to the protocols listed in the CSEP-PATH®.

4.18 Explain the strengths and weaknesses of doing a predictive 1-RM versus actual 1-RM measurement.

4.19 Explain the relevance and purpose of the program and modifications as they relate to the client.

4.20 Provide appropriate and detailed verbal instructions, physical demonstration, precautions, and safety considerations, and feedback to clients.

4.21 Select appropriate exercise equipment or techniques which suit identified objectives.

4.22 Correctly monitor and modify exercise techniques or prescription as required.

4.23 Describe the expected physiological responses (for all fitness components) to a prescribed program.

4.24 Educate clients about appropriate self-monitoring techniques so that they have the ability to decide whether to modify or terminate a physical activity/exercise session.

4.25 Choose an appropriate tool to record a client's response to physical activity/exercise (e.g., training log, heart rate, sets-reps, blood pressure, work load) and adjust the program accordingly.

5. Safety and Emergency Procedures

5.1 Demonstrate the ability to monitor a client during exercise and identify normal and abnormal responses to exercise.

5.2 Recognize and properly respond to the following signs and symptoms indicating an adverse event: asthmatic attack, angina, myocardial infarction, hypoglycemia, hyperglycemia, stroke, etc.

5.3 Describe appropriate safety precautions (as outlined in the CSEP-PATH®) for clients with a stable chronic condition such as a musculoskeletal disorder, cancer, cardiovascular disease, insulin or non-insulin dependent *diabetes mellitus*, mental health, or asthma.

5.4 Demonstrate appropriate spotting techniques as required.

5.5 Provide technical corrections that help guide the client to improve skill and physical safety.

5.6 Avoid or minimize excessive joint stress produced by a physical activity/exercise (e.g., inappropriate equipment use, inappropriate biomechanics, and repetitive participation in the same activity).

5.7 Identify the benefits versus risks for clients performing moderate to vigorous intensity aerobic exercise.

5.8 Identify and explain the importance of facility and equipment safety standards.

5.9 Describe the elements of an Emergency Action Plan.

6. Documentation, Administration, and Professionalism

6.1 Explain the CSEP-PSP® Code of Conduct with particular focus on client and professional relationships, competence, confidentiality, marketing and promotion, and record keeping.

6.2 Provide advice to clients based on sound, current, and evidence-based information, using ethical and professional conduct.

6.3 Understand the following legal concepts: nature of injury related to physical activity, liability exposure, negligence, standard of care, and risk management strategies.

6.4 Follow appropriate professional and ethical business practices when promoting services or dealing with colleagues and clients.

6.5 Plan for ongoing professional development opportunities that present the most recent scientific findings in the exercise sciences.