EXERCISE MEDICINE IN CANCER MANAGEMENT

MEDICAL, NURSING AND ALLIED HEALTH PROFESSIONALS

Overview

This course is designed to develop knowledge and skills in the application of exercise medicine for assessment, prescription, delivery, and monitoring of exercise for people with cancer. Medical, nursing, and allied health professionals will benefit most from this course because it builds on your extensive knowledge of human biology, patient care and health systems. In this course we concentrate on developing skills and knowledge of exercise assessment, prescription, supervision, monitoring, exercise technique, motivating behavior change, prescribing safe and effective exercise for people with cancer.

Structure

This course is delivered entirely online through our learning management system. It consists of seven key components:

1) Background readings – key scientific, professional, and lay publications are prescribed and provided at specific stages throughout the course.
2) Pre-recorded lecture videos.
3) Multiple choice and true false quizzes following each major section.
4) Discussion forums on key topics, controversies, and questions.
5) Video presentations of practical skills, techniques, exercises, and assessments.
6) Video demonstrations of digital tools for exercise assessment and prescription.
7) Virtual real-time Q&A session with the instructor

Schedule

Topic	Approximate Study Time (mins)
Introduction and course orientation	10
Cancer biology, sites, and types	30
Cancer treatments	30
Physical and psychological consequences of cancer and treatments	30
Principles of exercise prescription • Exercise dosage • FITT Principle • Overload • Progressive overload • Acute physiological responses to exercise • Adaptations to chronic exercise • Specificity of training • Variation in Training • Cardiorespiratory (Aerobic) training (MICT & HIIT) • Neuromuscular and musculoskeletal (Resistance) training	60

• Strength and Power • Flexibility training • Components of an exercise session • Periodization • Auto-regulation of session volume and intensity • Stages of change model	
Exercise acute and chronic effects • Muscular system • Nervous system • Metabolic system • Skeletal system	30
Exercise Medicine within Cancer Management	60
Patient Flow • At diagnosis • On referral – physician or self-referral • Pre- Initial consultation • At consultation • Ongoing monitoring and patient review	30
Health history	10
Pre-exercise screening	10
Virtual Practical Session 1 – Patient flow, forms and risk stratification	30
Recruiting the patient	10
Informed consent and research participation	10
Absolute and relative contraindications to exercise assessment	10
Rating of perceived exertion and wellness check	10
Virtual practical Session 2 - Assessments of cardiorespiratory capacity • CPET • Steep Ramp Test • Step test • 400m walk • 6 minute walk	30
Virtual Practical Session 3 - Assessments of neuromuscular strength • Chest press • Leg press • Leg extension • Seated row • Plank	30
Virtual Practical Session 4 - Assessments of functional capacity • Timed 6 meter walk	20

• Timed up and go • Sit to stand • Stair climb	
Assessments of quality of life and psychosocial wellbeing - fatigue, anxiety • SF36 • HADS • DASS	10
Assessments of cancer specific health and status • FACT-G • EORTC	10
Assessment of body composition • DEXA • pQCT • bioimpedence • height • weight • hip and waist circumference • BMI	20
Virtual Practical Session 5 - Introduction to MyWellness Exercise Prescription Platform	60
Targeted exercise prescription • cardiorespiratory • muscle hypertrophy • muscle strength • functional performance • balance • skeletal health • fat loss • lymphoedema • bone metastatic disease • pre-habilitation for surgery • neoadjuvant and adjuvant to chemotherapy, radiation therapy, immunotherapy, steroid therapy	30
Virtual Practical Session 6 – Targeted exercise prescriptions	30
Long term planning, prescription and periodisation	20
Nutritional considerations	30
Graduation to self-management • Fitness centre • Home based • Group exercise • Park fit • Sport as medicine	10
Clinician, fitness professional and patient feedback	10

Case studies and scenarios	60
	Total 740 minutes