

SAFE EXERCISE AT EVERY STAGE (SEES) GUIDELINE

A clinical tool for treating and managing dysfunctional exercise in eating disorders.

MEDICAL PRACTITIONER QUICK-GUIDE

FACTS: EATING DISORDERS AND EXERCISE

EATING DISORDERS (EDS)

Eating disorders (EDs) (Anorexia Nervosa, in particular), have been recognised as having the highest mortality rate of all psychiatric illnesses due to medical complications and suicide. EDs also carry a high economic burden and an overall poorer quality of life for patients.

DYSFUNCTIONAL EXERCISE (DE) IS ASSOCIATED WITH POORER OUTCOMES

Engaging in dysfunctional exercise with a comorbid eating disorder has been associated with increased risk of relapse, increased illness chronicity, and prognosis. It has been estimated that between 30-81% of individuals with an eating disorder struggle with dysfunctional exercise. Although many terms are used to describe dysfunctional exercise (including compulsive, obligatory, excessive, and driven), research has highlighted that the quality or nature of the exercise is more problematic than the quantity of the exercise alone. Individuals with an ED engaging in unmanaged exercise may be at an increased risk of cardiorespiratory, musculoskeletal, neurological, psychological, reproductive and metabolic complications (as attached).

IMPORTANCE OF SAFE MOVEMENT AND EDUCATION

However, interventions promoting exercise abstinence have been associated with higher rates of relapse, poorer treatment outcomes, heightened psychopathology, prolonged illness duration, and increased use of risky behaviours. Conversely, interventions that facilitate safe return to exercise have been associated with reduced eating disorder symptomatology, greater treatment compliance, and improved long-term prognosis.

EVIDENCE-BASED TREATMENT SUGGESTIONS

HISTORICAL APPROACH

Historically, there has been no standard practice to support health professionals manage and reintegrate safe movement and education into ED treatment. Consequently, many health professionals have adopted the practice of recommending abstinence from exercise during ED treatment.

CURRENT APPROACH: SAFE EXERCISE AT EVERY STAGE (SEES) GUIDELINE

As a result, the *Safe Exercise at Every Stage (SEES)* guideline has been developed to better facilitate the prescription of safe exercise in eating disorder populations. This straightforward and graded process aims to support clinicians in determining the level of exercise and education appropriate for each individual based upon their current level of physical and psychological well-being. To access, visit <https://www.safeexerciseateverystage.com/access-sees-guideline/>.

TIPS FOR SUPPORTING A SAFE RETURN TO EXERCISE

- Use the SEES guideline to assess level of risk and determine safe exercise
- In Vivo tasks in session
- Involve social support
- Motivational and collaborative approach
- Promote intuitive movement and its benefits

REFERENCES, TRAINING AND ADDITIONAL RESOURCES

All of the above can be found within the SEES guideline and/or on the website.

POTENTIAL COMPLICATIONS OF UNMODIFIED EXERCISE WITH AN EATING DISORDER

EATING DISORDER (IRRESPECTIVE OF WEIGHT, SHAPE OR SIZE)

↓ ENERGY & FLUID AVAILABILITY, MALNUTRITION, STARVATION, PURGING

HEALTH CONSEQUENCES OF ED

PSYCHOLOGICAL Exercise dependence Anxiety Depression Irritability Dysfunctional attitudes Emotional distress Decreased stress tolerance Interpersonal dependence Reliance on pain medication Increased medication side effects Decreased health related QOL Exercise withdrawal	Postural tachycardia Orthostatic hypotension Hypotension Prolonged QTc interval Arrythmia Superior mesenteric artery syndrome Cardiac arrest Heart failure Angina Palpitations Heart attack Mitral valve disease Torsade de pointes Organ damage and failure Abnormal blood oxygen saturation Aortic obstruction Pericardial effusion Decreased stroke volume	Decreased left ventricular mass Peripheral blood pooling RESPIRATORY Shortness of breath Rapid, shallow breathing Hyperventilation Respiratory compromise Respiratory paralysis MUSCULAR Muscular dysfunction Weakness Cramping Tremors and fasciculation Pain Rhabdomyolysis Tetany Catabolism	SKELETAL Uncoupling of bone Decreased bone mineral density and geometry Decreased lying down of lifetime bone Difficulty reacquiring bone Osteoporosis and osteopenia Cortical thinning Lower trabecular number and density Decreased space between trabecular Lower bone calcium regulation Permanent postural damage	Neuralgia Ataxia Vertigo Dysphagia Requirement of pain med'n Irreversible brain damage ELECTROLYTES Hyponatremia Hypokalemia Hypophosphatemia Hypercarbia HYDRATION Hypohydration Dehydration Hypovolemia TEMPERATURE Hypothermia Cold extremities	METABOLIC Decreased resting metabolic rate Decreased glycogen Decreased leptin Decreased growth hormones Decreased insulin-like growth factor 1 Decreased urine specific gravity Decreased blood urea nitroge Increased ghrelin Increased cortisol Increased transaminase Hypoglycaemia SEXUAL Decreased oestrogen Decreased testosterone Decreased lutinising hormone	Decreased follicle stimulation hormone Risk of menstrual disturbance and dysfunction Functional hypothalamic amenorrhea COMORBID ILLNESS Increased risk of psychological and physical comorbidities ANTHROPOMETRY Altered body fat percentage Altered body mass index Altered ideal body weight HAEMATOLOGICAL Anemia IMMUNOLOGICAL Increased risk of infection
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

CONSEQUENCES OF EXERCISING WITH AN ED WITHOUT APPROPRIATE MODIFICATION

PSYCHOLOGICAL Exacerbate exercise dependence Decreased psychological capacity Increased rigidity Increased compulsivity CARDIOVASCULAR Decreased cardiac output during exercise	Decreased endurance Decreased performance MUSCULOSKELETAL AND NEUROLOGICAL Bone and muscle catabolism Worsened long term bone health Increased amino acid catabolism	Increased stress fracture risk and prevalence Increased muscle pain due to circulatory lactate Increased oxygen perfusion, uptake and utilization Decreased muscle strength Increased injury risk	Decreased concentration in sport Decreased judgment in sport Decreased coordination Decreased training adaptations and responses ELECTROLYTES Increased electrolytes lost in sweat	HYDRATION Hypohydration Dehydration Hypovolemia TEMPERATURE Increased risk of heat illness and heat stroke	METABOLIC Induce or worsen hypoglycaemia Adrenal dysfunction Increased blood urea nitrogen (indirectly) SEXUAL Induce or worsen FHA and associated risks	COMORBID ILLNESS Increased risk of negative outcomes with comorbid condition OTHER Exercise intolerance ENERGY AVAILABILITY FURTHER DECREASED
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------