SEES

SAFE EXERCISE AT EVERY STAGE (SEES) GUIDELINE

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

MEDICAL PRACTITIONER QUICK-GUIDE

Dobinson, Cooper & Quesnel, 2019.
E: contactseesteam@gmail.com
W: safeexerciseateverystage.com

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.

EDS ARE WORSENED BY DYSFUNCTIONAL EXERCISE (DE)

One factor worsening the rate of relapse, illness chronicity and future prognosis in ED populations is the engagement in dysfunctional exercise (DE) (also known as compulsive, etc). DE supports the ED in a spiral-like fashion and is present in up to 81% of individuals with an ED. A dysfunctional relationship with exercise is based not only on the quantity of exercise but also on the quality and cognitions behind it. Engagement in DE can be extremely damaging to cardiorespiratory musculoskeletal, neurological, psychological, reproductive and metabolic health (and potentially irreversible or life threatening) (as attached).

IMPORTANCE OF SAFE MOVEMENT AND EDUCATION

Recommending complete exercise abstinence for patients with ED may result in consequences such as an increased risk of relapse, poorer treatment outcomes, more severe psychopathologies, worsened illness chronicity, the employment of dangerous alternative coping strategies, and a missed opportunity to address dysfunctional exercise in a clinically safe space. Conversely, providing patients with safe movement support and education **may improve mental and physical eating disorder symptomology, treatment compliance and 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

CARDIORESPIRATORY
Bradycardia
Tachycardia
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

NEUROLOGICAL
Autonomic nervous system dysfunction
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 hormonesDecreased 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

ELECTROLYTES
Increased electrolytes lost in sweat
Decreased concentration in sport
Decreased judgment in sport
Decreased coordination
Decreased training adaptations and responses

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 intolreance

ENERGY AVAILABILITY FURTHER DECREASED

Adapted from Dobinson, A., Cooper, M., & Quesnel, D. A. (2019, May). Safe Exercise at Every Stage Guideline. Retrieved May 25, 2019, from https://www.safeexerciseateverystage.com/access-sees-guideline