The role of physiotherapy and the management of exercise in eating disorders

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Session aims

For delegates to gain an understanding of:

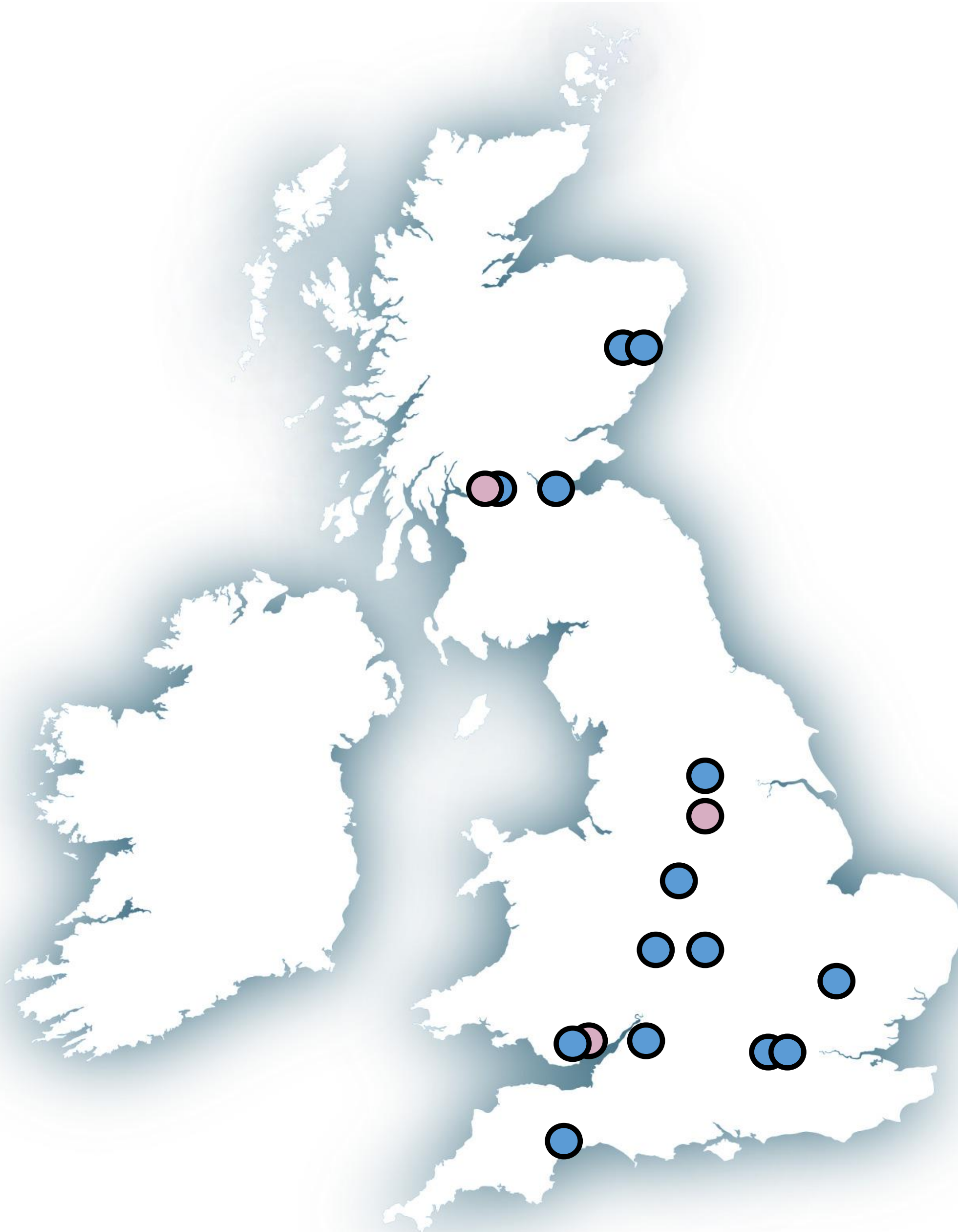
- The current picture of physiotherapy in eating disorders
- The role of physiotherapy in eating disorders
- The considerations and risks in managing physical activity and exercise
- Approaches to safer physical activity and exercise

Physiotherapy as part of eating disorder treatment

Why Physiotherapy?

- "..Physiotherapists have specific expertise in both the 'body' and 'the body in movement', two important issues integral to eating disorder pathology." (Probst et al 2013)

- Physiotherapists are experts in exercise management and prescription.
- In-depth knowledge of the body and function, applying risk management and treatment techniques to enhance safe function, and connection with the physical self.
- Physiotherapists are trained in aspects of behavioural change and motivational techniques.



Limited physiotherapy input into eating disorder teams or services (blue adult and lilac CAMHS)

Majority of Physiotherapists work within mental health teams and in reach into ED services

– only small number of members have a dedicated ED role

Physiotherapy Professional Eating Disorder UK Network

– currently 24 qualified Physiotherapists

Gaps and limitations for physiotherapy

- Limited recognition of the role of physiotherapy – "what do you do in eating disorders?"
- Physiotherapy is not an established role as part of MDT/ in commissioning documents
- Limited dedicated time – majority of physiotherapy clinicians in-reach from mental health teams
- Gaps in supervision governance
- Limited research and evidence base related to physiotherapy in eating disorders
- No under-graduate or post-graduate teaching about mental health or eating disorders, as well as limited placement opportunities
- Emerging inclusion in national eating disorders guidance document e.g. SIGN and MEED
  However, no clear physiotherapy guidance for clinical practise and service provision

Physiotherapy Eating Disorder Professional Network group: key areas to guide practice

- Training
- Promotion
- Supervision
- Guidance resources

Developing a guidance document for physiotherapy practise in eating disorders

- Aims and target audience –
- **To provide a written framework based on available evidence and expert experience for physiotherapy assessment and treatment**
- **To provide evidence of the role of physiotherapy and the need for inclusion within eating disorder treatment**
- **To highlight opportunities for future research to increase scientific evidence base for physiotherapy in eating disorders**
- **For Physiotherapists in the UK who come into contact with someone with an eating disorder – to include those new to eating disorders, and other clinical settings both physical health and mental health**

Member feedback

"Despite having over 25 years' experience mostly in rehabilitation settings, applying this to eating disorders when I was new to the role was quite challenging. The experience and expertise within the network has been a continued source of guidance and support, and to have had all of this information in one place in the form of a guidance document would have been invaluable. It is both a reference for my practice and a guide to where to focus my CPD"

Contents and key guidance areas

Physiotherapy Eating Disorder
UK Professional Network

Physiotherapy in Eating Disorders:

A Guidance Document

- Overview of Eating Disorders
- Risk Management
- Physiotherapy Assessment
- Physiotherapy Management/Interventions:
  - Physical Activity and Exercise
  - Dysfunctional Exercise
  - Supporting a safe return to Physical Activity and Exercise
  - Exercise, Activity & Osteoporosis with an Eating Disorder
  - Body Image and Body Awareness
- Physical and Mental Health Co-morbidities
- Considerations for Children and Adolescents
- Considerations for Older Adults and Frailty
- Considerations for Physiotherapists in Other Clinical Settings
- Governance, Workforce Planning and Future Development

Area	Interventions
Management of physical activity and exercise	• Management of dysfunctional exercise • Prescribed exercise programme for pre-existing or new conditions • Prescribed exercise to restore functional strength • Safe supervised re-introduction alongside weight restoration & recovery
Body awareness and Body Image	• Body awareness treatment techniques and exploration – muscle tension, breathing, posture – at rest and during movement • Body image, changing perceptions and challenging external influencers (exercise and physique beliefs) • Education, support and advice – understanding the body, anatomy, how it can feel and positive function
Reduced bone health	• Prevention and risk management • Physiotherapy management • Education and advice
Mobility, transfers, function and falls	• Assessment of risk factors – ED complications • Functional tasks and transfers – equipment, advice • Balancing falls exercise prescription with weight restoration

Posture and Musculoskeletal

- Pain management and physical rehabilitation
- Injuries and pre-existing musculoskeletal (MSK) conditions
- Postural changes – physical, behavioural, psychological, environmental

Anxiety management, relaxation and massage

- Relaxation
- Breathing exercises
- Body Awareness techniques and Massage

Continence

Atrophy of or damage to pelvic floor muscles

- Exercise advice
- Support, advice, referral

Other physical health conditions and co-morbidities

- Neurological
- Orthopaedic
- Rheumatology
- Respiratory
- Support and advice, patient and staff

Physiotherapy assessment

- Presenting condition
  - **Exercise history**
  - **Musculoskeletal system**
  - **Physical functioning and co-morbidities**
  - **Bone health and menstrual history**
  - **Body image and awareness**
  - **Cardiovascular health/biochemical markers**
  - **Nutritional intake, body weight and weight trajectory**
- Additional medical history – co-morbidities (and impact of ED)
- Psychiatric history
- Medication
- Social and family history
- Support network
- Involvement with MDT and motivation for change

Risk considerations for physiotherapy input

- Cognitive impairment
- Self harm
- Suicidal ideation
- Trauma
- Absconsion
- Exercise dependence

- Dehydration
- Hypoglycaemia
- Electrolyte imbalance/biochemical profile, e.g.
- Hyponatremia (sodium)
- Hypokalaemia (potassium)
- Rhabdomyolysis
- Refeeding syndrome (metabolic disturbance)

- Hypotension,
- Orthostatic hypotension,
- Bradycardia,
- Postural tachycardia,
- Atrial fibrillation, heart failure, *cardiovascular instability*
- Peripheral oedema
- Dizziness, syncope/ fainting

- Foot drop,
- Altered gait pattern
- Functional Neurological Disorder
- Muscle wasting,
- Reduced bone health
- Fractures, soft tissue injuries, postural difficulties, pain, falls

- Psycho-social
- Housing
- Vocational/ occupational
- Interpersonal relationships

Dobinson et al (2020); RCP (2022); Quesnel et al (2023)

Consideration for physiotherapy management of bone health

Weight restoration and hormonal balance (including regular menstrual cycle for females) is the priority

Education and advice

- exercise may have limited benefit to bone health, particularly if further preventing weight restoration
- motivation for recovery and consideration of longer-term consequences of reduced bone health.
- Bone bank

Consider fracture risk (increasing risk with chronicity of low body weight)

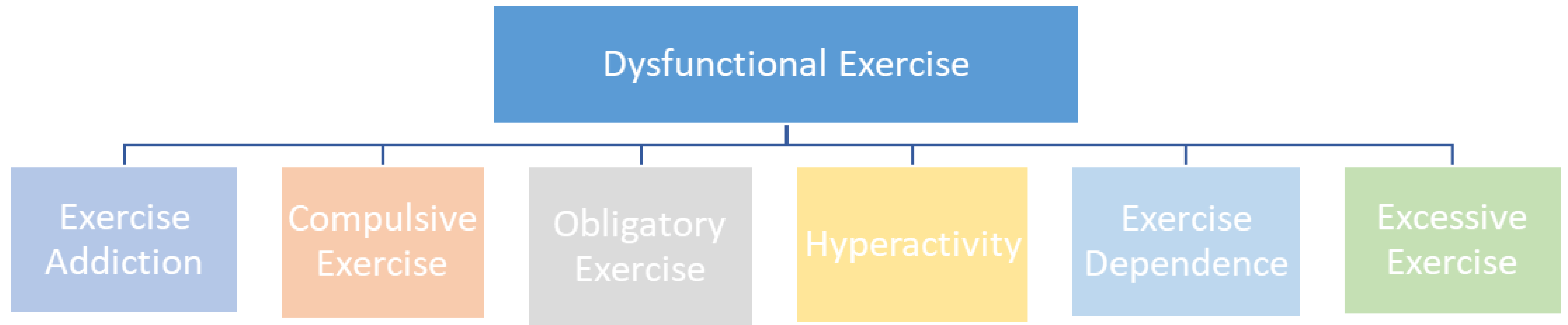
- Limit and/or modify movement to avoid end of range repeated and sustained spinal flexion; high falls risk activities; contact sports; high impact exercise; safe moving and handling
- Postural management and lifestyle adaptations

- Orthopaedic management of fractures

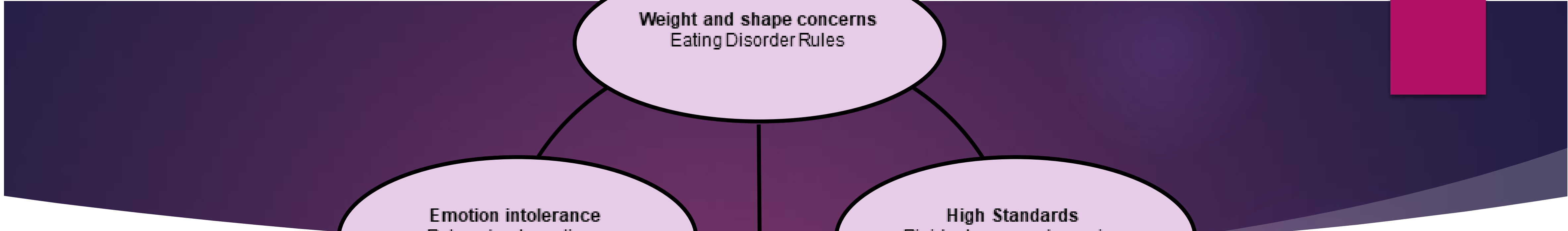
Recommendations

- If healthy body weight and regular periods = reduce limitations in exercise and increased bone loading benefit of exercise – include flexibility, weight bearing, balance and resistance exercise. Include spinal extension exercises.

Physical activity and exercise and eating disorders



Structured exercise; incidental exercise
Accumulative activity levels – sport, leisure, prescribed, recreational, occupational, domestic



Weight and shape concerns
Eating Disorder Rules

Emotion intolerance
Rules about emotions

High Standards
Rigid rules around exercise

Physical Activity and Exercise

Fears about stopping
Weight, shape, emotions

Positive effects of exercise (initially & ongoing) Weight loss; mood regulation; sense of achievement

Question: what external factors influence exercise?

- Online and social media
- Exercise trackers and fitness apps
- Gym and exercise environments/culture
- Sports and coaching approaches (weight categories)
- Elite sport
- School and PE
- Government guidance/health promotions

STRUCTURED MOVEMENT	INCREASE IN INCIDENTAL MOVEMENT	MOVEMENT RESTLESSNESS
Increase in structured and planned exercise • Can be highly repetitive • Often strenuous, highly intensive sport or exercise • Often a bias towards cardiovascular exercise types • Increasing duration and high expectations of achievement or exercise goals • With intention of increased energy expenditure, weight loss/control, and/or building muscle mass	Increase in incidental physical activity and daily movement • Can be covert • 'Additional trips' • Choosing tasks that are more active • Avoiding social or occupational activities that are more sedentary • Offering to help others with active tasks • Conscious movements for energy expenditure - foot and finger tapping, rocking, holding muscle contracts and static postures	Influenced by neurobiological factors • Persistent restless • Sensory seeking movement • Anxiety driven behaviours – foot and/or finger tapping, rocking, limb shaking, repeated sitting-standing Can be influenced by biochemical changes in hormone Leptin levels

Question: when does exercise become unhealthy?

- **Rigid** – inflexible routines and can interfere with social and vocational/occupational tasks
- Fixed routines – **repetitive** with no variation
- **Strict** exercise rules
- **Withdrawal symptoms** – anger, irritability, guilt, anxiety
- Fear of negative **consequences of not exercising** – physical or emotional
- **Solitary** and/or **secretive**
- Unbalanced nutrition and hydration
- **Unbalanced** with rest
- Used as an avoidant coping strategy or for emotional regulation
- Change in motivation e.g. **no longer related to performance or health**
- Change in exercise type e.g. drive for higher intensity exercise
- **Loss of awareness** of behaviours/routine
- Little or **no pleasure** or enjoyment
- **Obsessive** attitudes with often false beliefs about weight, health and fitness
- Following **unhelpful rules** about exercise, e.g., 'no pain no gain, 'more is better'
- Feels of compulsion – **have to**, feeling like a chore
- Exercising in the presence of **illness or injury**
- **Compensation** for missed sessions
- Exercising as a form of self-punishment
- Increase **preoccupation** with exercise
- **Detailed measurement** of exercise results, e.g., intensity, steps, distance
- Used as a means to eat, or to **compensate** for food eaten
- Influenced by **comparisons** with others, including through the use of social media and, for e.g., fitness magazines
- **Unhelpful** and obsessive use of fitness apps and exercise trackers.

Exercise rules and beliefs: examples

"If I sit down all day I will get fat, be lazy and will get a fat tummy"

"If I don't exercise, I won't be able to cope with my day or my anxieties"

"Without exercise I can't trust my meal plan"

"I can't do anything else in a day unless I have done some exercise"

"I must achieve 20,000. They say 10,000 but I must do more in order to have the best achievement."

"I must exercise everyday as this will make me stronger"

"Everyone should exercise every day"

"People will judge me for eating if I do not exercise enough"

"If I'm not a runner then I have no identify. It is who I am".

"I feel pretty gross, alone and trapped. Exercise gets me away from feeling that"

Eating disorders and excessive exercise | University of Nottingham – YouTube

- Exercise can be a very powerful tool in maintaining an eating disorder
- It can develop into a strong compensatory behaviour and coping strategy for the eating disorder.
- This can lead to exercise dependence and increased negative emotions if exercise opportunities are reduced or not available
- This is because of the strong influence that exercise can have on weight control or in managing challenging emotions.

Abstinence or not?

Dysfunctional Exercise may be present in 20- 80% of people with ED and implicated in relapse and chronicity (SEES 2020)

Abstinence versus inclusion of exercise as part of eating disorder treatment?

It is important to understand links with exercise as part of an eating disorder

Reset any unhelpful relationship or exercise behaviours

It can be helpful, and minimise harm from exercise, to pause.
However, a pause or stopping might not always be possible. For many taking exercise away takes away a strong coping strategy. Do not take away exercise without support to identify other healthier coping strategies

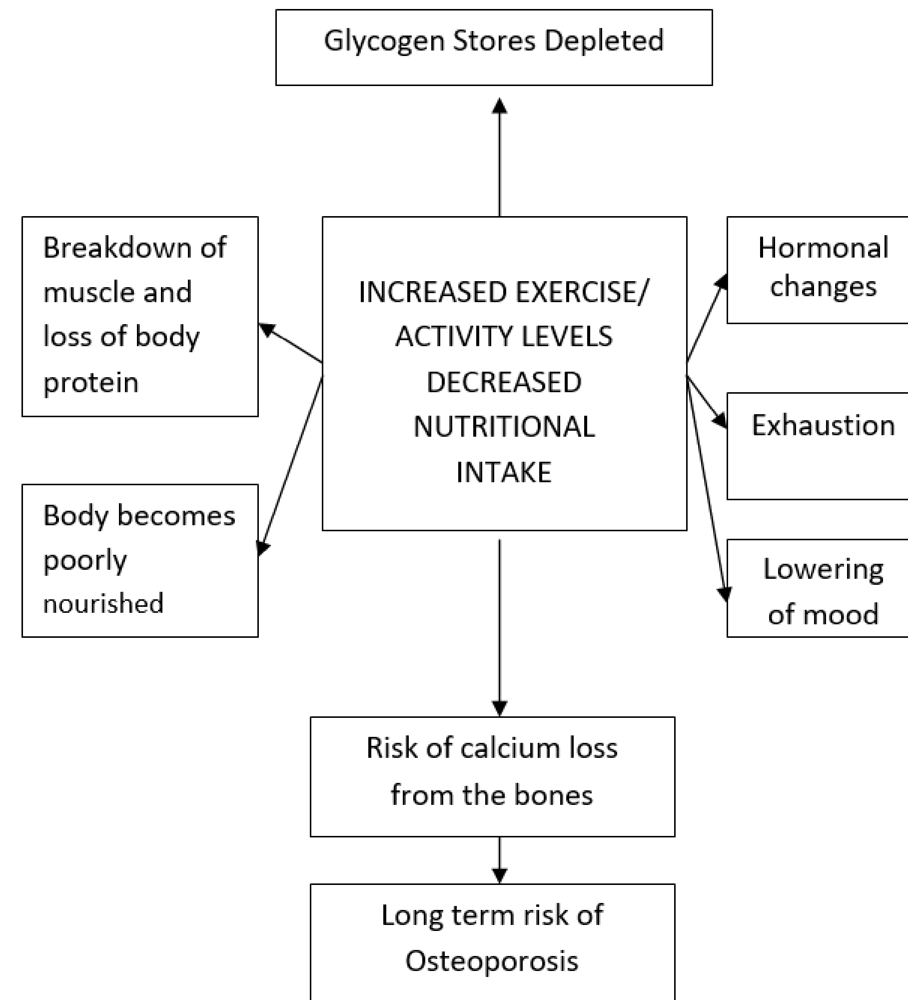
Risks of stopping/pausing (emotionally/nutritionally) balanced with risks of continuing

Modifications may be indicated

Consequences of dysfunctional exercise (1)

Physically

- Dehydration
- Osteoporosis
- Stress fractures
- Degenerative arthritis
- Fatigue
- Breakdown of muscle mass
- Weight loss
- Cardiovascular complications
- Peripheral oedema



Consequences of dysfunctional exercise (2)

Psychologically

- Anxiety and Depression
- Negative self-image
- Feelings of worthlessness
- Dependence on exercise for mood

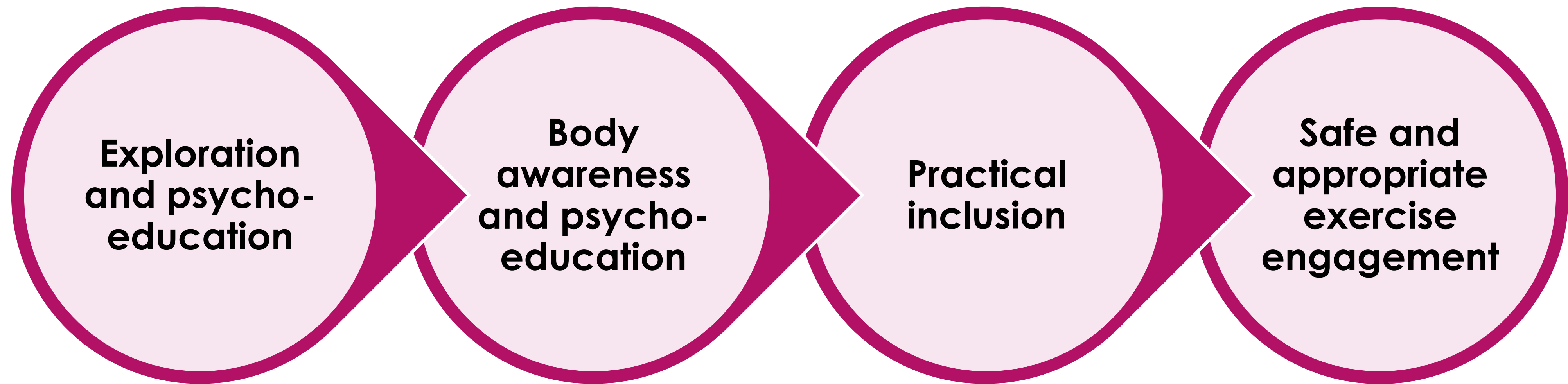
Socially

- Social withdrawal
- Failure at work or college
- Unbalanced occupation
- Deterioration in personal relationships

Physiotherapy assessment of dysfunctional exercise

- Eating Disorder and function of exercise
- Exercise History – past and current exercise engagement; current plan to manage exercise/activity
- Relationship with exercise and core beliefs – initiating and maintaining factors; external factors
- Risk factors including physical risks for physical activity and exercise and psychological risk factors
- Outcome Measures – **Compulsive Exercise Test/Exercise Profile** *Meyer et al (2011); Taranis et al (2011)*
- Goals/hopes for treatment; stage of change

Aims of physiotherapy led exercise and activity management



Admission and medical stabilisation

- Goal: Assessing and supporting safe mobility and activity on the ward
- Physiotherapy assessment, as required – exercise, pain, mobility and function

Formulation and weight restoration

- **m**edically stable or inline with medical recommendations

- Goal: Introduction of low-level activity and body awareness movement (>BMI 13.0)
- Supervised and guided ward based activity. e.g. Stretch and Relax/Body Awareness session
- Introduce Physical Activity and Exercise workbook

Weight restoration

- Goal: Incorporating appropriate activity and exercise in lifestyle alongside exercise management
- Supervised and guided Physical Activity on the ward: e.g. Pilates/Yoga/Strengthening and Core Stability group
- Begin exploration of community-based exercise opportunities
- Continue Physical Activity and Exercise workbook

Maintenance and discharge planning

- Goal: Developing longer term plan for physical activity and exercise
- Further community-based exercise opportunities
  Continued ward based exercise engagement
- Exercise relapse prevention work

Depending on progress, weight restoration, compensatory behaviours, exercise relationship

Referral

GOAL: Assessing and supporting safe activity and function

Reduction of activty in the community, including review of occupational, vocational and domestic related activity

Identification of exercise relationship

Formulation alongside weight stabilisation and restoration

GOAL: Introduction of exercise psycho-educational sessions

Introduction of low level supervised exercise and activity opportunities and body awareness work

Weight restoration

GOAL: Exploration of occupational/vocational activity levels and development of plan for appropriate re-introduction

Introducing weider exercise opportunties as part of wider lifestyle considerations, incidental exercise, e.g. leisure and recreation

Continuation of exercise psycho-educatinal sessions

Recovery and relapse prevention

GOAL Developing a longer term plan for physical activity and exercise alongside occupation/academic activities

Exercise relapse prevention work

Question: how do we know if physical activity and exercise is healthy?

- Flexible in routine and engagement
- Fun
- Enjoyable
- Social
- Varied
- Nourished with nutrition and hydration
- Balanced with rest and recovery
- Primarily for health benefits
- Realistic exercise goals and routines
- Positive reinforcement – enjoyable and improves mood
- No negative effect of being unable to exercise
- Appropriate to own abilities and fitness levels

Considering and planning safe return to exercise

- Dependent on risk factors – medical, physical and psychosocial
- Nutrition, hydration, weight restoration – not BMI/height to weight dependent but must take into physical demand of movement against physical status plus weight restoration goals
- Improving relationship with exercise – review, monitor, pause/regress or progress
- Not when unwell/injured/medically unstable
- Patient goals/reason for type of exercise e.g., new opportunities/social/fun/function
- Supervised and reviewed by Physiotherapy/Exercise Professional
- Alongside body awareness and psycho-education
- Establish baseline – can consider Government guidelines for physical activity, Intuitive Movement
- Continue to monitor – progression/regression
- Community transition/embedding into lifestyle, and relapse prevention planning

Key areas to consider

Fun and enjoyment

- Reframe exercise and reintroduce an element of fun and enjoyment, shifting the experience and reinforcing the positive aspects of exercise.

Social

- Groups, with family and friends, team sports, can potentially enhance a more positive experience, and reduce the risks of exercise becoming solitary and rigid.

Intuitive and body awareness focused

- Choose exercise styles and engagement that enhances body awareness

Time limited

Led by others

Is it the right time?

- Consider motivation for change/readiness

Accumulative activity

- Occupational, vocational, prescribed exercise, travel, domestic

- Respond to internal and external cues before, during and after movement and be able to alter the FITT principle in that moment for best health and performance outcomes and to avoid deleterious events.
- It is process, not outcome oriented.

- Intuitive Movement should :
  - Rejuvenate the body, not exhaust or deplete it
  - Enhance mind-body connection, not allow or induce disconnection
  - Alleviate mental and physical stress, not produce more
  - Provide genuine enjoyment, not pain or dread

(Calogero and Pedrotty, 2010)

- Body scanning as a tool to support body awareness and interoceptive skills

Intuitive Movement Exercise Prompts

Physical

- Do I have any injuries or illnesses?
- How has my sleep been?
- Am I tired/run down?
- Am I adequately nourished and hydrated for this movement?

Emotional:

- What is the reason for exercising right now?
- Is there another coping mechanism I could use? e.g. talk to someone

Behavioural:

- Have I eaten sufficiently to nourish my body yesterday, today and do I plan on continuing tomorrow?
- What exercise did I do yesterday, today and do I plan on exercising tomorrow?
- Am I sacrificing anything to exercise right now?

Intuitive movement principles

Will this exercise:

- Rejuvenate my mind and body, not exhaust or deplete them?
- Enhance mind-body connection, not allow or induce disconnection?
- Alleviate mental and physical stress, not produce more?
- Provide a genuine enjoyment, not pain or dread?

INTUITIVE MOVEMENT CHECKLIST

GREEN FLAGS OF HEALTHY MOVEMENT

(USE DURING MOVEMENT)

- ☐ Safe
- ☐ Fun
- ☐ Symptom-free
- ☐ Rejuvenating
- ☐ Energy-enhancing
- ☐ Focussed/present
- ☐ Healthy intentions
- ☐ Pain-free
- ☐ Notice mind and body cues
- ☐ Able to adjust exercise
- ☐ Good form
- ☐ Variety
- ☐ Can handle unexpected change

RED FLAGS OF DYSFUNCTIONAL MOVEMENT

(USE DURING MOVEMENT)

- ☐ Unnourished/dehydrated
- ☐ Symptoms presenting or worsening (e.g. dizziness)
- ☐ Injury/illness worsening
- ☐ Pain worsening
- ☐ Exhaustion
- ☐ Punishment
- ☐ Numb out
- ☐ Guilt
- ☐ Need to go harder/longer
- ☐ Can't rest even if needing to
- ☐ Strong drive to control weight
- ☐ Rigid rules
- ☐ Only way to feel better/cope
- ☐ Dread
- ☐ Interrupting other commitments

Converting red flags to green: practical ideas

Reduce intensity
Resistance (kg)
Repetitions
Sets
Speed
Power
Incline

Get support
Call trusted friend, family member or support line
Stay with someone

Reduce duration
Time
Distance
Reps
Sets

Change/remember motivation
Energy/fun
Emotional health
Injury rehabilitation

Change type
Flexibility
Strength
Balance
Coordination
Cardiorespiratory
Body awareness
Stability
Power
Speed
Agility
Reaction time
Breathing awareness

Change equipment
TheraBand
Machines
Dumbbells
Barbells
Balls
Mats

Change company
Trusted friend/s
Family member/s
Class
Alone

Change setting
Home
Nature
Class
New location
New route
New time of day

Remember values
Wellness
Independence
Sustainability
Energy

Rest
Sit down
Slow down
Drink water
Snack
Meal

Remember goals
Recovery
Positive relationship with self
Wellbeing
Travel-fitness

Dobinson, A (2019)

What strategies are you aware of/have used to promote safer exercise?

Further ideas (1)

Education

- ✓ Familiarise yourself with the benefits of healthy vs. unhealthy movement.
- ✓ Understand reasons for exercising – if for emotional regulation can this be obtained through other strategies?
- ✓ Remember the type, style, quantity of exercise and activity needs to considered holistically. Don't be led by national guidance or what others are doing – develop what's right individually

Keeping track of time

- ✓ Set alarm for rests and finish

Letting go of external measures and data driven exercise

- ✓ Remove Smart watch tracking apps/Turn off Strava/step counter.
- ✓ Cover bike/treadmill/other screens.
- ✓ Minimise use of social media and internet sites related to exercise; choose who to follow

Further ideas (2)

Taking your mind off things (without numbing out)

- ✓ Listen to music.
- ✓ Listen to podcast, lecture or audiobook.
- ✓ Self-care
- ✓ Sensory or self-soothing techniques
- ✓ Mindfulness, relaxation and breathing exercises
- ✓ Distract, delay, decide technique

Changing things up

- ✓ Reduce or break the duration into bouts (e.g. 10min now, 10min later).
- ✓ Mix the types of movement within the session (e.g. integrate balance into the warm-up).
- ✓ Change session layout (e.g. circuit style, different work/rest intervals, body awareness and function movement)
- ✓ Gym/Sports Centre membership versus ‘pay as you go’

Further ideas (3)

Using new ways to cope

- ✓ Consider using a different coping strategy than movement (e.g. call a friend, podcast, spend time with animals, gardening, art, write in diary, etc). Speak with your psychologist about this.
- ✓ Write down triggers that lead you to exercising unhealthily. Plan for them in future.

Avoiding unhealthy movement

- ✓ Schedule a healthier movement session at the exact same time as the unhelpful one, as you cannot be in two locations at once. Consider what went well, and challenges, to discuss in treatment.

Support for immediately after the session

- ✓ Schedule an enjoyable activity for after (e.g. chat with friend) to distract you from unhelpful thoughts.

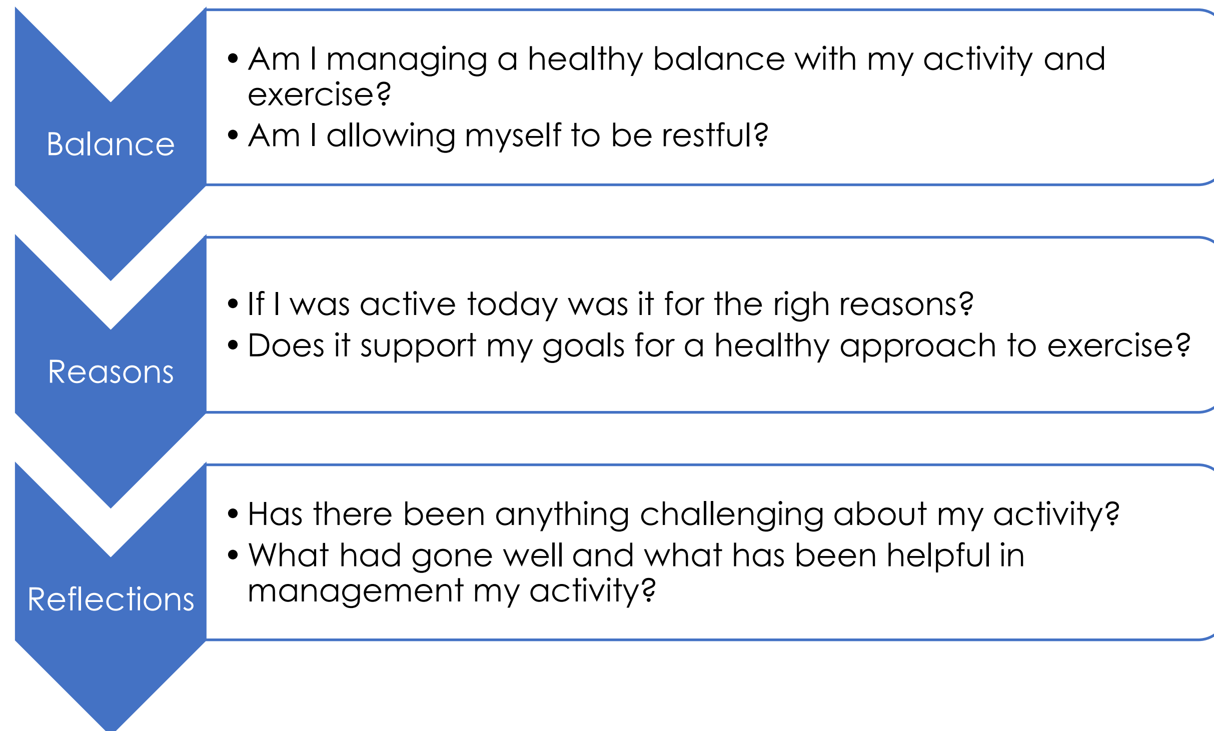
https://youtu.be/jQV7EUnwVOk

Check in prompts

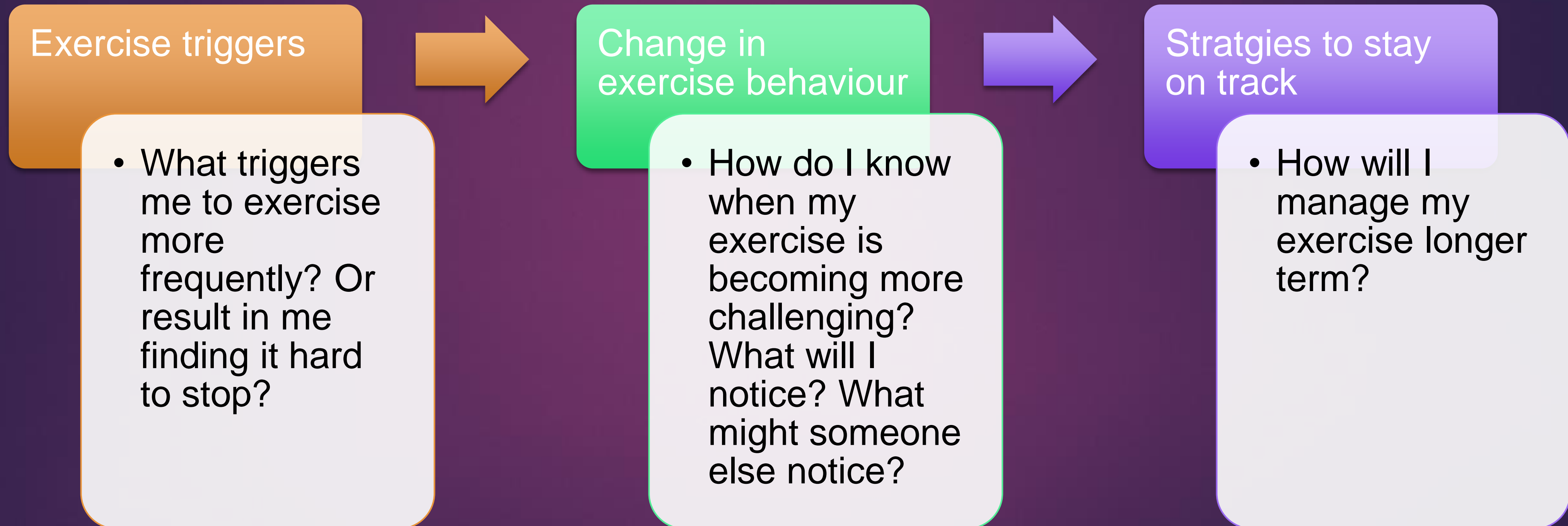
Example One:

- ❑ Am I appropriately nourished and hydrated?
- ❑ Do I have any injuries or illnesses that could be made worse from exercise today?
- ❑ Do I have any symptoms (e.g. dizziness)?
- ❑ Is exercise going to enhance, or take from, my energy today?
- ❑ Am I feeling exhausted?
- ❑ Is my reason for exercise healthy?
- ❑ Is there another coping mechanism I could use instead?
- ❑ Am I sacrificing anything to exercise today?

Example Two:



Longer term management considerations



Discussions and questions

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