Depression, anxiety and stress

Unit: Understanding medical conditions for exercise referral

Depression

Characterised by

- the absence of a positive affect
- a loss of interest and inability to find enjoyment in ordinary things and experiences
- episodes of unhappiness
- persistent low mood
- a range of associated emotional, cognitive, physical and behavioural symptoms

Classification systems

Two main classification systems:

- American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (**DSM-IV**)
  - Currently informs the National Institute for Health and Clinical Excellence guidance (NICE, 2010).
- International Classification of Diseases (**ICD-10**)
  - Currently informs the World Health Organisation guidance.

Unipolar and bipolar depression

Unipolar

- episodes of depression only

Bipolar

- episodes of depression
- at least one episode of elevated mood (mania)

NB: Level 3 only unipolar listed

Prevalence

- World Health Organisation report depression will be one of the highest ranked cause of disease burden in developed countries by the year 2020 (Second only to CHD).
- 4-10% of people globally will experience major depression during their life
- In the UK, major depression is seen in around 5% and 10% of people (Primary care)
- About two thirds of adults will experience depression symptoms of sufficient severity to influence their activities

Cost to the nation

- In year 2000 costs estimated at £9 billion
- £370 million direct NHS costs
- The remainder indirect costs including
  - 109.7 million lost working days
  - 2,615 deaths due to depression

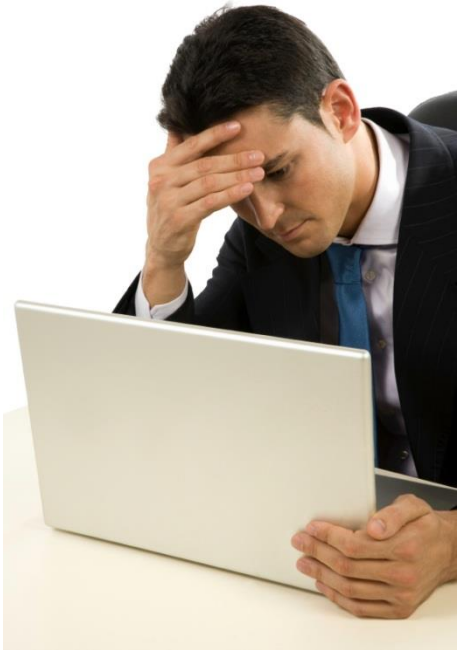
Pathology

The cause of depression is unknown but is likely to result from a complex interaction of biological, psychological, and environmental/social factors

- genetic factors cited, but without a clear pattern of inheritance
- personality factors have been implicated
- psychosocial issues (e.g. socio-economic climate)
- failure of adaptive/coping mechanisms

Presentation

- Psychological symptoms include:
  - continuous depressed mood
  - feelings of hopelessness and helplessness
  - low self-esteem
  - tearfulness
  - feelings of guilt
- Physical symptoms include:
  - slowed movement or speech
  - change in appetite or weight constipation
  - unexplained aches and pains
- Social symptoms include:
  - not doing well at work
  - taking part in fewer social activities
  - reduced hobbies and interests



Risk factors

- Gender
  - higher prevalence in women
- Heredity
- Prolonged stress
- Physical illnesses
  - causing disability
  - pain
- Past history of depression
- Alcohol misuse
  - Higher prevalence in men

Anxiety

- A feeling of unease (worry or fear) that can be mild or severe
- An emotional state, typified by cognitive & somatic components
- Main symptom of several anxiety-related conditions
  - General anxiety disorder (GAD)
  - panic disorder (with and without agoraphobia)
  - post-traumatic stress disorder (PTSD)
  - obsessive-compulsive disorder (OCD)
  - social phobia
  - specific phobias (for example, of spiders)
- General anxiety disorder (GAD)
  - most common
  - long term condition
  - causes individuals to feel anxious about a wide range of situations and issues, rather than one specific event.

Classification systems

- DSM-IV emphasises worry (apprehensive expectation), including the feature that the worry is difficult to control

- ICD-10 focuses more on somatic symptoms, particularly autonomic reactivity and tension.

Prevalence

- Adult Psychiatric Morbidity in England survey (2009)
  - estimated 4.4% of people in England
- Worldwide
  - estimates vary between 0.8% and 6.4% of people
- More common in women
  - between 1.5 and 2.5 times higher

Cost to the nation

- Reduced work productivity
  - Over 30% of people with anxiety showed an annual reduction of work productivity of 10%

- Increased GP and hospital visits
  - this may be a consequence of the distressing somatic symptoms, which many people with anxiety experience

Pathology

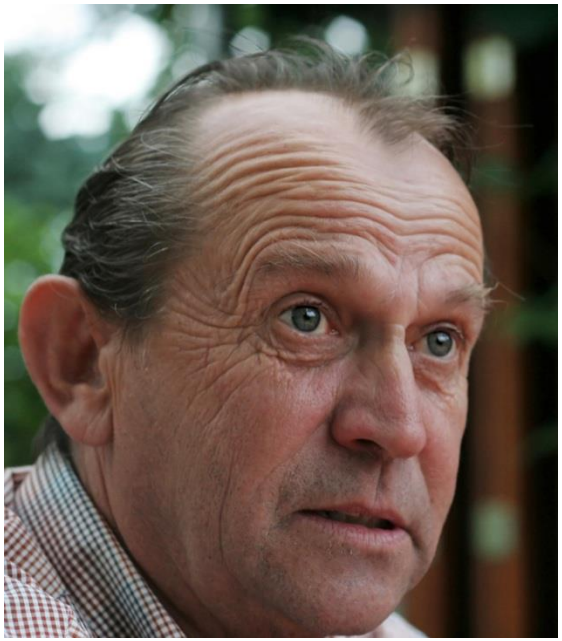
- The exact cause is not fully known
- A number of factors may contribute, including:
- Genetics
- Brain chemistry
  - anxiety is associated with abnormal levels of certain neurotransmitters in the brain
- Environmental factors - trauma and stressful events
  - Bereavement, divorce, changing jobs or schools etc
  - Anxiety also may become worse during periods of stress

Presentation

- The key feature is worry and apprehension that is out of proportion to the circumstances.
- The worries are typically widespread, involve everyday issues, and have a shifting focus of concern.
- The person finds the worries difficult to control, and this can result in decreased occupational and social functioning

Risk factors

- Gender
- Age
- Personality
- Family history
- Traumatic events
- Medical conditions/symptoms, e.g. COPD/dyspnoea



Stress

- Usually, the result of a traumatic incident
- Causes the person to experience extreme, disturbing or unexpected anxiety, fear or pain
- Psychological and somatic response to feelings of intense helplessness

Classification systems

- Similar to anxiety disorders
- DSM-IV and ICD-10 are two systems
- Two key criteria:
  - the presence of a *stressor*
  - the re-experience of the event
- Plus two more criteria:
  - avoidance
  - increased physiological arousal

Prevalence

- Around 1 in 6 people consider their work to be very or extremely stressful
- Work-related stress accounts for approximately 35% of all work-related illnesses

Cost to the nation

The Health and Safety Executive (HSE):

- Report there is a convincing link between stress and ill-health
- Estimate over 105 million days are lost to stress each year
- Estimate cost to UK employers in region of £1.24 billion

Pathology

- Any type of mental pressure may cause stress, either brought on by
  - a single large event
  - a build-up of several small stimuli
- Some common causes of stress include:
  - money problems
  - job worries
  - relationships
  - death of a loved one
  - family problems
  - exams

Presentation

Symptoms of an acute stress reaction can vary, but will often include:

- an initial state of confusion
  - some narrowing of attention, inability to comprehend stimuli, and disorientation
- quickly followed by further withdrawal from the surrounding situation
  - agitation, anxiety, impaired judgment, and depression
- autonomic signs of panic may be present
  - tachycardia, sweating, flushing

Symptoms usually appear within minutes of the impact of the stress stimulus, and will often disappear within hours

  - may persist for 2–3 days if the stimulus is strong enough

Risk factors

- **Personality traits** – certain individuals have personality traits that predispose them to over-respond to stressful events
- **Genetic factors** - some people have genetic factors that affect stress, such as having a more or less efficient relaxation response
- **Immune regulated diseases** - specific diseases that are associated with immune abnormalities (such as rheumatoid arthritis)
- **Length and quality of stressors** - the longer the duration and more intense the stressors, the more harmful the effects

Part two

ACCEPTED TREATMENTS

Treatment and intervention of depression, anxiety and stress

- Medications used to treat symptoms
  - *NOT recommended for mild depression, as side effects outweigh benefits (NICE)*

- Psychotherapy can be useful in helping the client understand the factors involved in either creating or exacerbating the symptoms.

- Exercise as an adjunctive therapy has a growing evidence base

Common medications

- Selective serotonin re-uptake inhibitors (SSRIs)
- Tricyclic antidepressants (TCAs)
- Monoamine oxidase inhibitors (MAOIs)
- Serotonin-norepinephrine re-uptake inhibitors (SNRIs)
- Tranquilizers (Benzodiazepines)

Side effects may include

SSRIs

- Nausea, vomiting, insomnia.
- Fewer side effects than other medications
- Most commonly prescribed

TCAs

- Drowsiness, dry mouth, blurred vision, constipation, urinary retention, sweating

MAOIs

- Dry mouth, insomnia, tachycardia, drowsiness, blurred vision, muscle twitching

SNRIs

- Weight gain, sedation

Tranquilizers (Benzodiazepines)

- Drowsiness, clumsiness, confusion, depression, dizziness, nausea
- Highly addictive and not recommended for long term use

Medication and exercise

- Side effects that have an implication on exercise training
  - nausea
  - dizziness
  - confusion
  - headaches
  - tachycardia
  - dry mouth

Lifestyle intervention

- Exercise
- Dietary changes
- Sleep modification
- Social support
- Stress management
- Counselling and psychotherapy
- Relaxation
- Mindfulness
- Self-help books

Part three

EXERCISE GUIDELINES AND CONSIDERATIONS

Rationale for exercise

Research has found a positive relationship exists between physical activity and mental health

- There are a number of proposed mechanisms, which may help to explain the relationship:
  - endorphins
  - thermoregulation
  - distraction
  - mastery
  - Self-efficacy
- Growing evidence to suggest that it is not necessarily the exercise, but other factors:
  - social interaction
  - inclusion
  - structure to day
- People with MH conditions often have poorer physical health
  - co-morbidities
  - many smoke
  - alcohol

Exercise recommendations

Mode of exercise	FIT principles
Aerobic	• RPE 11-13/20 (comfortable pace) • 3-5 days/week • 20-30mins per session (shorter sessions may be necessary initially) • Monitor dyskinesia (side effect of some medication) • Focus on enjoyment and social participation over duration and intensity
Resistance	• Low resistance, high reps (>12 reps) • 2-3 days per week • Focus on technique/execution to encourage mastery of movements • Choose functional movements that have crossover to ADLs
Flexibility	• Before and after each session • Use static as well as dynamic forms of stretching

Exercise considerations

- Symptoms make exercise challenging
  - hopelessness
  - lethargy
  - lack of enjoyment
  - loss of motivation
- Be flexible
- Promote enjoyment
  - walking is a good starting point
  - accumulative approach
  - low intensity
- Personal skills/qualities
  - Reflect core conditions
  - Empathy and positive regard

Other considerations

- Co-morbidities may be present (e.g. hypertension, overweight)
- Lifestyle factors (smoking, alcohol use or misuse)
- Lower intensity to accommodate lower energy levels
- The inclusion of relaxation activities or mind and body activities
- Promote pleasure and fun through activity
  - a self-reward rather than a punishment
  - use an affirming and positive instructional approach
  - focus on achievement of small steps
- Outdoor activities in natural environments have a positive affect on mood
- Modify the frequency, intensity, duration, type in accordance with individual client needs
- Exercise response similar symptoms (explain and normalise)

Other considerations

- Client support
- Drop-out
- Monitoring progress of the patient
- Risk of self-harm or suicide

Comorbidities

- Consider
  - Any change in risk stratification?
  - Effects of medications
  - Exercise recommendations for other conditions
  - Further adaptations and modifications?