Exercise and mental health.

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My oldest sport poem

Better to hunt in the fields
For health unbought.
Than pay the doctor
For nauseous draught.
For cure the wise
On exercise depend.

John Dryden, 16th century
Exercise is useful for

- Hypertension
- Overweight
- Diabetes
- Coronary heart disease
- Cancer, some forms
- Osteoporosis
- Muscular skeletal complaints
General psychological effects associated with exercise

- Wellbeing
- Energy
- Improved sleep
- Reduced need of minor tranquillizers and hypnotics
- Creative thinking
- Self esteem
- Relation to body
- Experience of mastery
Can exercise prevent mental disorders?

- Epidemiological studies
  - Cross-sectional designs
  - Longitudinal designs

- Physically active have reduced tendency to develop
  - Depression
  - Alzheimer’s disease (dementia)
Exercise as treatment for mental disorders: State of the art.

- Depression ***
- Anxiety Disorders
  - Panic Disorder**
  - Generalized Anxiety Disorder *
- Substance abuse/dependence *
- Eating Disorders, normal- og overweight patients**
- Schizophrenia *
- Conversion disorder*
- Senile dementia**
Exercise as treatment of other disorders

- Chronic fatigue syndrome**
- Fibromyalgia**
- Chronic pain*
- Burn-out
- Cancer survivors*
Negative effects of excessive exercise

- Increased risk of eating disorders
- Maintenance of eating disorders
- Anorexia for males: Muscle dysmorphia?
- Exercise dependence
- Compulsive exercise
- Vasallopp-syndrome
- Staleness due to overtraining
Anxiety during exercise intervention

First session

Anxiety

Time
Anxiety during exercise intervention

Later sessions

Anxiety

Time
Patients’ ranking of most important therapeutic elements

(Martinsen et al, 1989)
How much exercise is enough?

- 30 minutes exercise most days of the week at an intensity of a brisk walk
- Various forms of exercise seem to have similar mental effects
Motivation

About 50% drop out of training programs

• Same problems with various programs for life style changes
• Those who need it most are least able to manage
• Knowledge, beliefs and attitudes are not necessarily accompanied by behavioural change
Important factors for adherence

• If possible an exercise milieu
• Not too ambitious
• Same time every week
• Participation more than achievement
• Choose an activity you like
• Exercise dependence?
• Purposeful physical activity
Hypotheses about mechanisms

- Nevrobiological hypotheses
  - Cell growth in hippocampus
  - Generation of new networks among neurons
  - Effect on transmitter substances
  - Increase in blood flow to the brain
  - Increase in body temperature
Hypotheses about mechanisms

- Anthropology (man as hunter or gatherer)
- Phenomenology
Hypotheses about mechanisms

Cognitive theories

- Our emotions are influenced by our thoughts and behaviour
  - Distraction vs. rumination (Nolen-Hoeksema)
  - Mastery (self-efficacy: Bandura)
  - Flow-hypothesis (Csikszentmihalyi)
  - Resilience
  - Attention restoration
Cognitive behavioural therapy

- Mental disorders affect the whole human being:
  - Thoughts
  - Emotions
  - Bodily symptoms
  - Behaviour
Cognitive behavioural therapy

- Bodily symptoms. Cannot be influenced directly
- Emotions: Cannot be influenced directly
- Thoughts: We can learn to be aware of them, and then we can question their validity and functionality
- Behaviour can be changed
Exercise in the management of various mental disorders

- Depression: Behavioural activation
- Anxiety disorders: Exposure

  Cognitive restructuring

- Substance abuse and dependence
  - Regulation of emotions
  - Behavioural activation
  - Exposure
  - Alternative content of life
Exercise in the management of various mental disorders, cont.

- Eating disorders (bulimia and binge eating disorder)
  - Emotional regulation
- Schizophrenia: Behavioural activation for negative symptoms and depression, distraction for positive symptoms
- Chronic pain: Exposure and behavioural activation
After all

Year after year
you sit over the books.
You have gathered
more knowledge
than you need for nine lives.
After all so little is needed
And that tiny bit
The heart has always known.
In ancient Egypt
The god of wisdom
had the head of a monkey.

Olav H. Hauge