



Exercise Physiology • Hydrotherapy • Injury Rehabilitation

Pathophysiology

Dementia is defined as a chronic or persistent disorder of the mental processes caused by brain disease or injury and marked by memory disorders, personality changes and impaired reasoning.

Early onset dementia (EOD) is classified as dementia that presents before the age of 66 years causing cognitive and behavioural disturbances. Patients are vulnerable to rapid physical and activities of daily living (ADL) function decline. Basic ADL (BADL) function includes activities vital to living such as bathing, eating and dressing. Decline in physical function causes reduced independence, increased dependence, reduced autonomy, reduced participation and increased risk of comorbidities. A reduction in autonomy subsequently reduces BADL ability and can lead to institutionalisation.

Prescription

Sustained aerobic exercise- due to anxiety reducing nature and cardiovascular benefits. Resistance exercise- to increase muscle mass, tendon and ligament strength, bone density, flexibility, tone, metabolic rate and postural support. Balance training- falls prevention. A fall to a patient with dementia can be detrimental making falls prevention essential in maintaining BADL and ADL function.

BENEFITS OF EXERCISE

The prefrontal cortex is responsible for decision-making and can be positively impacted by exercise. As patients diagnosed with EOD are typically more physically capable it makes exercise even more appropriate and easily administered to aid in functioning of this population. Exercise in this population is important in the following:

- Reducing cardiovascular risk factors e.g high blood pressure, high cholesterol, heart attack, stroke.
- Reducing risk of type 2 diabetes and obesity.
- Decreasing levels of stress, anxiety and depression.
- Reduce cognitive decline
- Improve independence and ADL function
- Social engagement

References

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