Mild Cognitive Deficits from Cancer Treatments

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Center for Rehabilitation and Wellness (CRW)

- Neurological Rehabilitation
- Orthopedic and Sports Medicine Rehabilitation
- Physical, Occupational and Speech Therapy
- Wellness and Fitness
- Wheelchair Seating and Mobility
- Chronic Pain Center
- Cognitive Recovery Center
- Driver Assessment Program
- Hand Center
- Pelvic Floor Rehabilitation
- Neuropsychology
Side Effects

• Side effects vary from person to person, even among those receiving the same treatment.

• The type of treatment(s) you receive, amount or frequency of the treatment, your age, and other health conditions.

• Learn about steps you can take to lessen side effects during and after treatment.

• Speak up about any side effects or changes you notice, so your health care team can treat or help you manage them.
Common side effects of cancer treatment

- Lymphedema
- Memory or Concentration Problems
- Mouth and Throat Problems
- Nausea and Vomiting
- Nerve Problems (Peripheral Neuropathy)
- Pain
- Sexual and Fertility Problems (Men)
- Sexual and Fertility Problems (Women)
- Skin and Nail Changes
- Sleep Problems
- Urinary and Bladder Problems
Cancer Rehabilitation

- Physical Therapy
- Occupational Therapy
- Speech Therapy
- Lymphedema
- Neuropsychology
- Pelvic Floor
Chemo Brain

- American Cancer Society defines chemo brain as the mental cloudiness that survivors notice before, during, and after cancer treatment.
Cancer Related Cognitive Impairment (CRCI)

- Chemotherapy
  - Structural and functional changes to the brain (Conroy et al., 2013)
  - Decreased gray matter density post chemotheraphy (Conroy et al., 2013)
  - Increased oxidative DNA (Conroy et al., 2013)
    - Alzheimer’s and Parkinson’s disease
  - Decreased brain volume equivalent to aging almost 4 years (Koppelmans et al., 2012)
Changes from chemotherapy

(Ferguson, McDonald, Saykin, and Ahles, 2007)
Treatments for CRCI

• Physical activity
  • Decrease degeneration of brain volume (Meneses-Echavez, Jimenez, & Velez, 2015; Winocur, Wojtowiez, Huang, & Tannock, 2013)
  • Decrease inflammatory cytokines (Mustian et al., 2015)
  • Aerobic exercise increase hippocampal volume (Firth et al., 2018)
  • Combine exercise with cognitive training improves cognitive function (Tait, Duckham, Milte, Main, & Daly, 2017)
Benefits of dance

• Improved
  • Strength, endurance, balance, functional fitness (Hwang & Braun, 2015)
  • Increased flexibility, postural stability, reaction time, and cognitive performance (Kattenstroth, Kalisch, Kolankowska, & Dinse, 2011)
  • Same physical results as formal exercise and improves social and behavior factors (Kaltsatou, Kouidi, Anifanti, Douka, & Deligiannis, 2014)
  • Connectivity to different regions of the brain (Giacosa, Karpati, Foster, Penhune, & Hyde, 2016)
  • Blood flow to middle temporal gyrus decrease activation of frontopolar cortex (Ono et al., 2014)
    • Reduced energy for mental task and increase for motor planning
Why Occupational Therapy?

• Enable everyone to live life to its fullest by educating the population to promote health, prevent, or live better with injury, illness, or disability (American Occupational Therapy Association [AOTA], 2018).

• “We should be concerned with human occupation and its connections to the person and environment” (Townsend & Polatajko, 2007, p. 24).
Why Country Line Dance

• No partner
• Friendly atmosphere
• Ability to grade dances
• Variety of dances
• Dance to various music

(Howcast, 2011)
Areas Addressed in Country Line Dancing

- Memory
- Sequencing
- Processing speed
- Motor planning
- Pacing/ Energy Conservation
- Endurance
- Strengthening
- Balance
- Socialization
- Problem solving
- Motivation
Conclusion

• Provide clients an opportunity to laugh, participate in something fun, non-traditional rehabilitation, and engage socially in a way that makes them feel normal, rather than cancer patients.

• May minimize stress and depression and encourage individuals to socialize in the home and community environments (Sivvas, Batsiou, Vasoglou, & Filippou, 2015).

• This perspective is the first to incorporate country line dance to cancer patients

• Functional activity that can affect all areas of occupation.
References


References


References


