Cancer and Fatigue

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What is Cancer-related fatigue?

- A distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning. (NCCN, 2019)
Cancer-related fatigue

- Under-reported, under-diagnosed, and under-treated symptom/side effect.

- Very common symptom among patients with cancer receiving chemotherapy, radiation, bone marrow transplantation, or treatment with biologic response modifiers.

- Approximately 80% of patients who receive chemotherapy and/or radiation therapy can experience fatigue.

- Can be a disruptive symptom for months or years after treatment is completed.
Quality of Life

- Cancer-related fatigue (CRF) can make people too tired to take part in daily activities.
- Can cause a delay in returning to work.
Screening is important

• Providers must ask about fatigue.

• Don’t think it’s a “bother” to tell your provider about your fatigue, especially if it is impacting activities.

• Numeric scales can be used. Mild fatigue <4; moderate fatigue 4-7; severe fatigue >7 (impacting activities of daily living).
What can cause fatigue to be worse?

• Disease progression
• Medications or interactions between medications
• Use of ≥ 4 medications increases interaction risk
• Other concurrent diseases (especially heart disease, lung disease, autoimmune disease flare, depression)
Treatable contributing factors (not disease or chemo)

- Pain
- Depression/emotional distress
- Sleep disturbances (insomnia/restless legs)
- Poor sleep hygiene
- Anemia
- Nutrition
- Activity level
- Medications
- Alcohol/substance abuse
Fatigue is rarely caused by a single factor – commonly there is something else such as sleep disturbance, poor sleep hygiene, emotional distress, or pain that are making fatigue worse.
Sleep disturbances

• Common – present in 30-75% of patients being with cancer.
• During active treatment there is more time spent resting and sleeping, but the sleep pattern is severely disrupted as people nap more during the day and can’t sleep at night.
• Sleep apnea can develop from treatment, surgery, weight gain/loss, hormone issues due to treatment.
Sleep hygiene

• Poor habits:
  • stick to a regular schedule
  • try not to take nap >60 minutes in length during the day.
  • Don’t ingest caffeine (drinks or foods) after 2pm (or noon for some people)
  • Don’t drink alcohol right before bed
  • Don’t eat high sugar foods before bed.
Sleep hygiene

• Make sure your environment is right for sleep:
  • Dark room
  • Quiet room
  • Comfortable bedding
  • Comfortable temperature
Sleep hygiene

• Stress reducing activities:
  • Reading
  • Journaling
  • Yoga
• NO gaming, TV watching, computer or cell phone usage or social media use right before bed or during hours that you would normally be asleep.
Sleep hygiene

- Stimulus control – go to bed when sleepy
- Get out of bed after 20 minutes if you can’t fall asleep
- Avoid late afternoon naps
- Avoid caffeine after noon
Nutrition

- Nutritional assessment
- Evaluate weight gain or loss
- Calorie needs and changes
- Things that could impede proper calorie intake
- Anemia
- Vitamin/mineral status
- Fluid and electrolyte imbalances
Nutrition

• Modify diet to include all calories needed (you might need more during treatment).

• Correct electrolyte imbalances (sodium, potassium, calcium, iron, and magnesium) with either foods high in those minerals/electrolytes needed and/or supplementation.
Other questions to ask yourself... or tell your provider

• Does your fatigue cause a change in your normal activities or exercise?
• Can you walk up the steps without stopping?
• Can you cook, clean, do laundry?
• Are you tired at a certain time of day?
• Do you exercise currently? How much? How has it changed?
Other diseases that can add to fatigue

- Heart disease (CHF or coronary artery disease)
- Lung disease (COPD, bronchitis)
- Kidney disease
- GI issues (diarrhea, IBS, Diverticulitis)
- Liver disease
- Neurologic impairment (dementia, MS, etc)
- Thyroid disease
- Diabetes that’s not well controlled
- Peri or post menopausal
- Low testosterone
How do we treat it???

• First, we must know what your baseline functioning status was.

• If you were running prior to diagnosis/treatment v. walking a block or two those are quite different expectations.
• One of the main strategies for treatment is to provide education about fatigue and what to expect with each treatment or from the disease itself.

• When will fatigue be worst?

• When will it get better?
General strategies to manage fatigue

• Energy conservation – set realistic expectations of what you can do in a day
• Prioritize activities for the day – what is most important? What can wait for later or tomorrow?
• Delegate!!! (or ask for help)
• IT IS OKAY TO SAY NO!
More general strategies

- Keep daytime naps to <60 minutes.
- Keep a diary – when is the best time of day for you? When are you most tired?
- Plan activities based on your diary findings
- Distraction is good – games, music, reading, or spending time with friends and family may also be very helpful.
Non-medication based treatments

- EXERCISE!! (no, I’m not kidding)
- Nutritional counseling
- Cognitive behavioral therapy
- Bright white light therapy
Exercise (physical activity)

• Increased quality of life
• Decreased treatment-related side effects
• Definite improvement in patients with prostate cancer, lymphoma, other hematologic malignancies, and in patients who have undergone hematopoietic stem cell transplant
Exercise

- Moderate activity during and after cancer treatment
- 30 minutes of moderate activity (walking, biking, swimming) most days of the week
- At least 3-5 days of activity per week can result in better outcomes and decreased side effects.
- Can be done on your own or under the supervision of a physical therapist (find one that is knowledgeable about the needs of patients with cancer).
When to use exercise cautiously

- Bone metastases
- Low platelets
- Anemia
- Fever or active infection
- Limitations due to other diseases
- Safety issues (risk of falls)
Yoga

• When compared with no physical activity, this is a good option
• Not necessarily better than moderate exercise, but can be combined.
• Can be helpful for sleep – yoga twice per week resulted in better sleep quality and less disturbances.
• Recommended for those on active therapy in breast cancer (more research needed for other cancers).
• Massage therapy can be helpful - research shows a decreased in fatigue.
• Acupuncture and acupressure – both could be beneficial, but more studies needed for definite recommendations.
Psychosocial interventions

- Cognitive behavioral therapy
- Behavioral therapy
- Supportive expressive therapy

- Fatigue was often mentioned in studies as a secondary finding, but showed some promise.
Complimentary therapies

• Muscle relaxation
• Music therapy
• Hypnosis
• Stress reduction based mindfulness
Bright White Light Therapy (BWLT)

• Exposure to a high fluorescent light emitted from a “light box” purchased for at home use. (used for seasonal affective disorder as well)

• Samples are small and there is not a standard amount of time or length of treatment – these require further study.
Pharmacologic (medications)

- There is some debate about using these medications (there have been significant placebo effects noted in the studies)
- There are some adverse side effects
- Allergic reactions possible
Methylphenidate

- Psychostimulant medication
- Mixed results
- 7 studies that showed significant benefit
- Side effects include headache and nausea
Modafinil

• Approved for use in narcolepsy
• Helpful for those with severe fatigue but not in those with mild or moderate fatigue.
• Side effects include nausea and vomiting
Dietary supplements

• Mixed results
• Coenzyme Q10 – no benefit
• Guarana – no benefit
• American ginseng – some data showing benefit
• Ginger extract – some benefit
• L-carnitine – benefit especially in those with hypothyroidism who underwent surgery for thyroid cancer
Recommendations

• Methylphenidate for those undergoing active cancer treatment (caution in older adults due to increase side effects).
• No sufficient data to support using modafinil
• Antidepressants have not shown benefit
• Treatment of nutritional deficit or imbalance recommended
• Treatment of comorbid diseases recommended.
Fatigue after treatment

• Cause of fatigue post-treatment is unclear.
• May be due to persistent activation of the immune system
• Late effects of treatment on major organ systems.
Fatigue after treatment

• Risk factors:
  • Pretreatment fatigue
  • Anxiety
  • Depression
  • Physical activity levels before and during treatment
  • Coping methods
  • Cancer-related stressors
  • Comorbid conditions
  • Type of malignancy
  • Prior treatment
  • Treatment late side effects.
Treatment for post-treatment fatigue

- Physical activity/exercise as able (high evidence)
- Yoga is shown to reduce fatigue in cancer survivors
- Cognitive behavior therapies
- Mindfulness-based stress reduction (high evidence)
- Nutrition counseling
Treatment of post-treatment fatigue

- 54% response rate with methylphenidate in some trials (may be considered after ruling out other causes of fatigue)
- Modafinil has limited studies (use with caution)
Take home points

• Evaluation of fatigue is important
• Screening should be done before, during, and after treatment (and ongoing)
• Education should be provided
• Treat any other causes of fatigue
Take home points

• Category 1 evidence:
  • Exercise
  • Psychosocial programs to reduce stress and increase support
  • Energy conservation techniques
  • Nutrition counseling/modification
  • Sleep training
  • Drugs for comorbidities
  • Methylphenidate
• Cancer-related Fatigue, NCCN, 2019
• Cancer Related Fatigue, Oncology Nursing Society Putting Evidence Into Practice, 2019
