



Cancer/Transplant-Related Fatigue: What to Know, What to Do

Celebrating a Second Chance at Life
Survivorship Symposium

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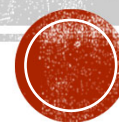


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CANCER RELATED FATIGUE

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INTRODUCTION

1. Defining Cancer Related Fatigue
2. Causes of Cancer Related Fatigue
3. Evaluation of Patients with Cancer Related Fatigue
4. Management Strategies for Cancer Related Fatigue



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DEFINING CANCER RELATED FATIGUE

Cancer-related fatigue is 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.

National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2021. Survivorship (2021). https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf



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- Most common complaint of cancer patients.
- Most distressing symptom reported.
- Up to 30% of cancer survivors report fatigue years after completion of treatment.
- Often patients are unprepared for this symptom.



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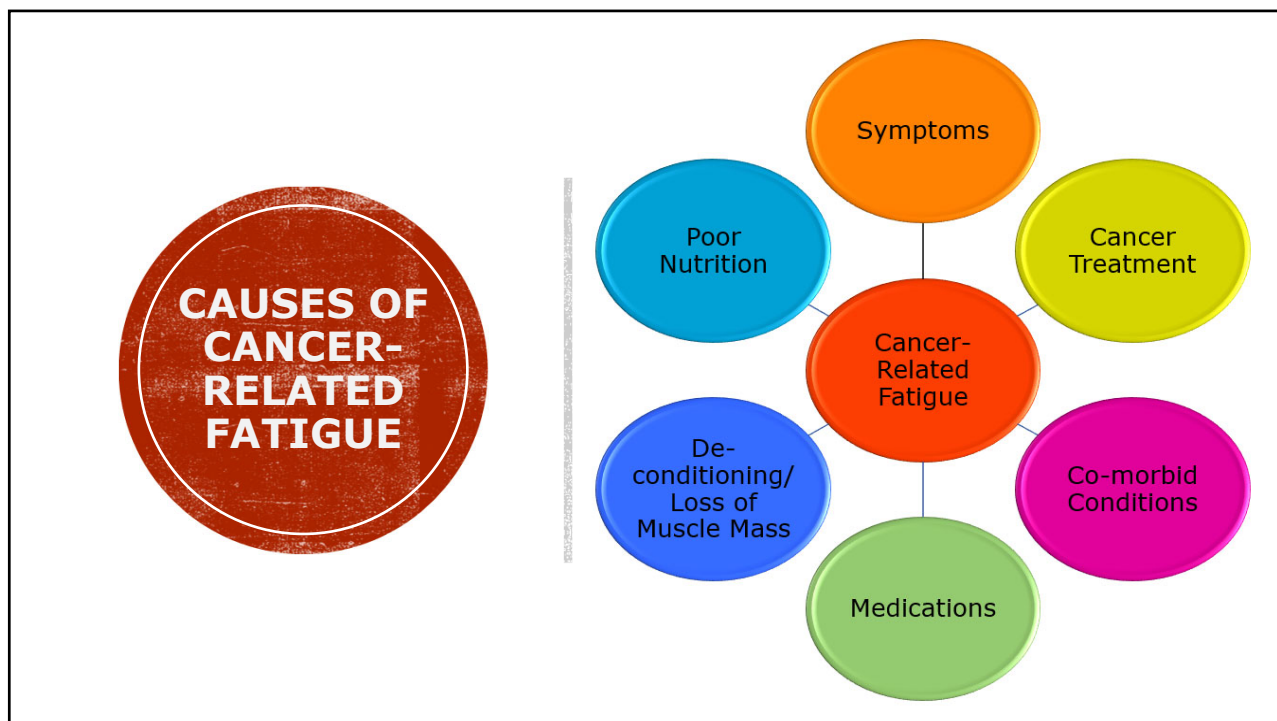


BARRIERS TO ASSESSMENT & TREATMENT

- Time constraints in busy outpatient practice
- Patient reluctance to mention fatigue
- Clinicians feel uncomfortable discussing this symptom due to lack of knowledge in this area.
- Some patients think it is an expected outcome of their cancer and its treatment.





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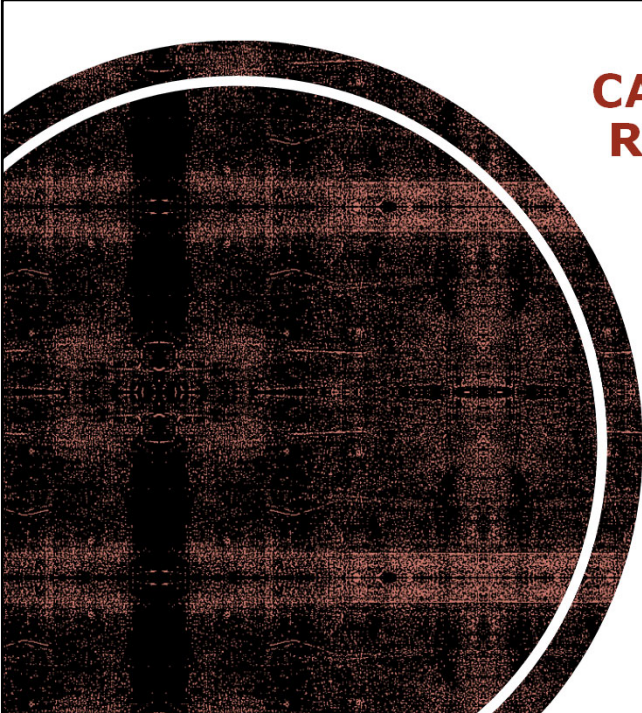
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CAUSES OF CANCER RELATED FATIGUE: CO-MORBID CONDITIONS

- Anemia
- Neurologic disorders
- Heart problems
- Lung disease
- Liver problems




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CAUSES OF CANCER RELATED FATIGUE: CO-MORBID CONDITIONS


- Kidney Disease
- Arthritis
- Infection
- Hormonal Disease
- Graft versus Host Disease



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CAUSES OF CANCER RELATED FATIGUE: MEDICATIONS

- Beta blockers (such as Atenolol, Carvedilol and Metoprolol)
- Sleep aids
- Medications for nausea/vomiting
- Pain medications



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CAUSES OF CANCER RELATED FATIGUE: CONDITIONING & NUTRITION

Physical Function Changes

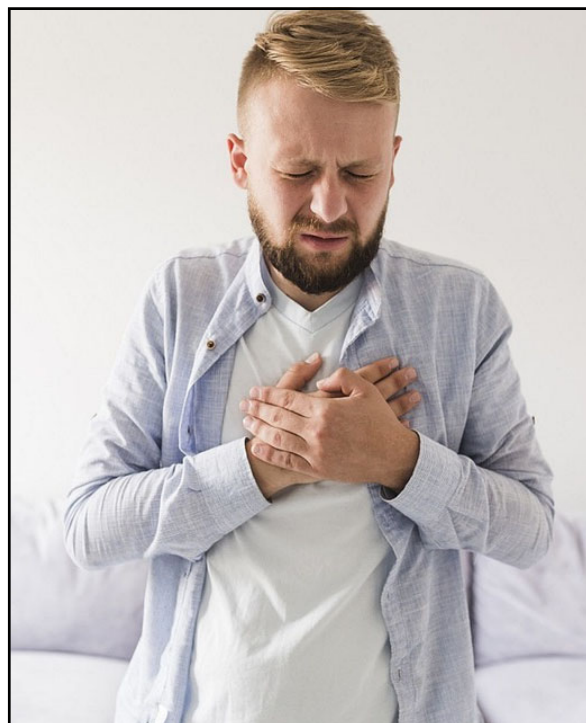
- Decreased physical activity
- Decreased physical conditioning

Nutritional Imbalances

- Weight change
- Motility disorders
- Dehydration with fluid & electrolyte imbalances



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CAUSES OF CANCER RELATED FATIGUE: SYMPTOMS

- Pain
- Anxiety
- Depression
- Sleep Disorders



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SLEEP DISORDERS

- A sleep disorder is often defined as any disorder that affects, disrupts or involves sleep.
- Sleep is essential to life.



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SLEEP DISORDERS IN CANCER PATIENTS

- Approximately 30% to 88% of cancer patients have sleep disorders.
- Lack of sleep is associated with depression, anxiety, decreased cognitive function, an impaired immune system, and reduced quality of life.
- Poor sleep can last far beyond cancer treatment.
- Sleep apnea is more common among cancer patients than the general population.
- Cancer patients are twice as likely as people without cancer to experience insomnia.



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Cancer-related Fatigue is linked to biomarkers:

- Immune/inflammatory
- Metabolic (hormonal disease)
- Genetic factors

Further research is needed in
this area.



Leorey N. Saligan, Karin Olson, et. al., The biology of cancer-related fatigue: a review of the literature, Support Care (2015) 23:2461-2478

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EVALUATION OF THE FATIGUED PATIENT: DETAILED HISTORY & PHYSICAL EXAM

- In-depth fatigue assessment
 - Onset, pattern, duration
 - Change over time
 - Associated or alleviating factors
 - Assessment of how fatigue interferes with daily functioning

National Comprehensive Cancer Network (NCCN) Guidelines Version 1.2021. Survivorship (2021). https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf



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EVALUATION OF THE FATIGUED PATIENT: FUNCTIONAL STATUS

- Routine activities
- Exercise Program
- Describe a typical day
- Memory changes

Escalante CP, Manzullo EF. Cancer-related fatigue: the approach and treatment. J. Gen Intern Med. 2009;24(2): 412-416.



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EVALUATION OF THE FATIGUED PATIENT: DETAILED HISTORY & PHYSICAL EXAM

- Complete review of past medical history
- Accurate medication list
- Complete review of systems to assess other symptoms that are being experienced

CHECKLIST



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EVALUATION OF THE FATIGUED PATIENT: DETAILED HISTORY & PHYSICAL EXAM

- Laboratory Evaluation
 - CBC with differential
 - Comprehensive metabolic panel (electrolytes, hepatic & renal function)
 - Endocrine studies (thyroid function tests and in some patients adrenal function)
- Measurement of fatigue, pain, depression, anxiety & sleep disturbance



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BFI scores range from 0-10

| | |
|------------------|-----------|
| Severe Fatigue | BFI 7-10 |
| Moderate Fatigue | BFI 4-6.9 |
| Mild Fatigue | BFI 0-3.9 |

Mendoza TR, Wang XS, Cleeland CS, et al. The rapid assessment of fatigue severity in cancer patients: use of the Brief Fatigue Inventory. Cancer 1999; 85 (5): 1186-1196.

BRIEF FATIGUE INVENTORY (BFI) SCORE INTERPRETATION



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MANAGING CANCER RELATED FATIGUE

- Optimize the treatment of any existing medical conditions.
- Frequently there are several causes and an individualized treatment plan should be developed for each patient.




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MANAGING CANCER RELATED FATIGUE

- Possible causes:
 - Anemia
 - Hypothyroidism
 - Obstructive sleep apnea
 - Other poorly controlled medical conditions (i.e. heart disease, diabetes, etc.)
- Medication Adjustments due to side effects




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MANAGING CANCER RELATED FATIGUE: DEPRESSION

- Depression correlates with the degree of fatigue in cancer patients.
- Some patients benefit from anti-depressants.
- Exercise can also have a positive effect on depression.
- Possible referral to Psychiatry Clinic



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MANAGING CANCER RELATED FATIGUE: PAIN

- What is the severity of the pain?
- Prescription of medication to alleviate the pain
- Possible referral to Pain Clinic

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GENERAL STRATEGIES

- Energy Conservation
 - Set priorities
 - Pace yourself
 - Delegate chores
- Schedule activities at times of peak energy



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ENERGY CONSERVATION



- Postpone nonessential activities
- Naps that do not disrupt night-time sleep
- Structured daily routine
- Attend to one activity at a time



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EXERCISE



Exercise may improve a patient's functional performance, thus decreasing fatigue.



An exercise program should be individualized for each patient.



A good goal is 30 minutes of exercise 5 days per week.



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WALKING

- Walking is one of the best forms of exercise for cancer patients for several reasons.
- Safe, convenient, cheap, stimulates energy, maintains balance & mobility, major component of ADL



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| MODE OF EXERCISE | RECOMMENDATION |
|-------------------------------|--|
| <u>Aerobic Exercise</u> | Achieve a weekly volume of 150 minutes of moderate intensity exercise or 75 minutes of vigorous intensity exercise, or some combination of the two. |
| <u>Resistance Exercise</u> | Perform strength training exercises 2-3 times per week. Include exercises that target all of the major muscle groups. |
| <u>Flexibility Exercises</u> | Include stretching exercises for all of the major muscle groups on all the days that other exercises are performed. |
| <u>Additional Information</u> | Return to normal activity as soon as possible during and following cancer treatment. Some exercise is better than none. Start slowly and progressively increase. Strive to achieve the recommended levels of exercise. See a medical professional if any questions or concerns arise. See an exercise oncology professional for assistance with exercise testing, prescription and monitoring. |

Mustian KM, Sprod LK, et. al., Exercise Recommendations for Cancer-Related Fatigue, Cognitive Impairment, Sleep problems, Depression, Pain, Anxiety, and Physical Dysfunction: A Review. *Oncol Hematol Rev.* 2012;8(2):81-88.

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GOOD SLEEP HYGIENE

- **Set a constant sleep schedule**
Go to bed at the same time and wake up at the same time.
- **Regular bed time rituals**
Same activity every night before bedtime like a warm bath, listen to music, reading an inspirational book
- **Get regular exercise**
At least 2 hours before bedtime.
- **Healthy Diet**
Avoid large meals before bedtime. A small snack tends to promote sleep.

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GOOD SLEEP HYGIENE

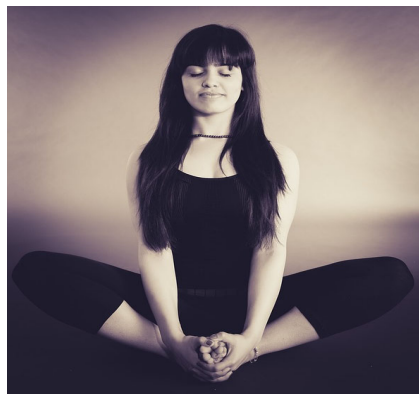
- **Limit Caffeine**
Limit intake to less than 2 servings per day and don't drink after noon.
- **Avoid Nicotine**
Tobacco users who stop smoking are able to fall asleep faster and sleep better once withdrawal symptoms subside.
- **Avoid alcohol 4 to 6 hours before bedtime.**
- **Limit afternoon naps to less than 30 minutes.**
- **Use your bedroom for sleep only.**



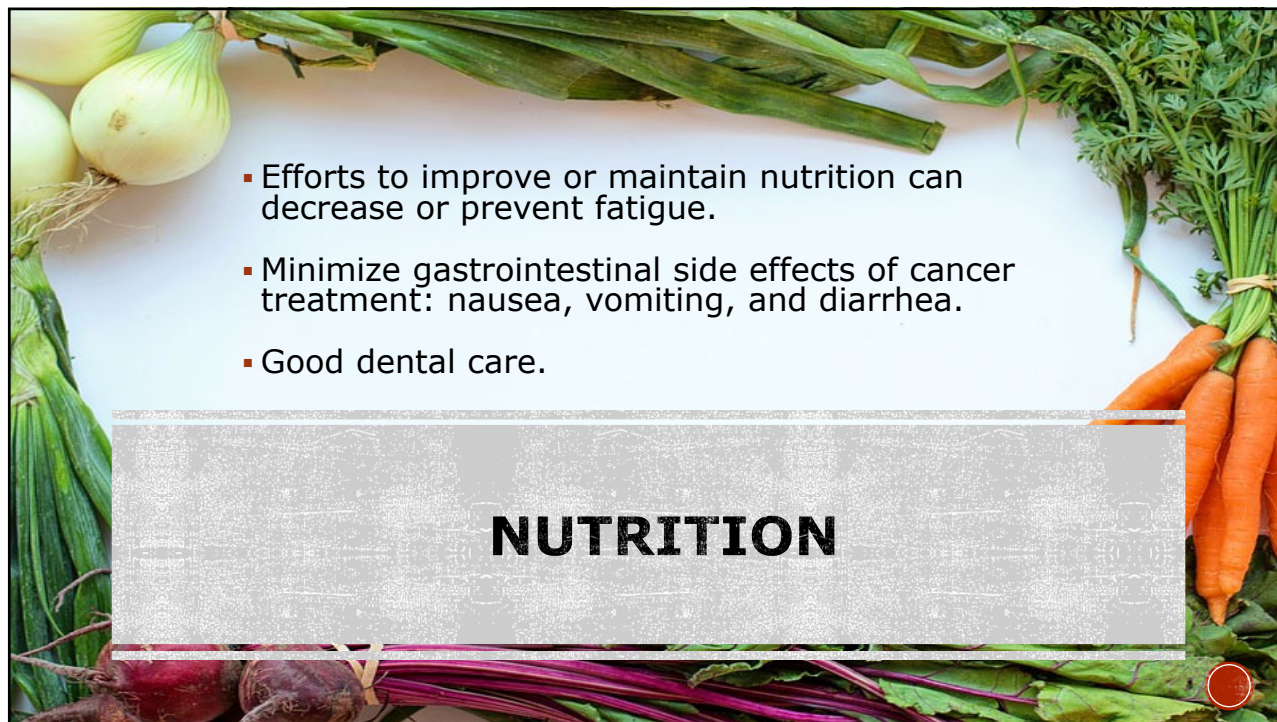
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RELAXATION & SELF HYPNOSIS

- New alternative therapy for the treatment of fatigue
- Provides: tranquility, less pain, concentration, hope, healing, love oneself, etc.



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- Efforts to improve or maintain nutrition can decrease or prevent fatigue.
- Minimize gastrointestinal side effects of cancer treatment: nausea, vomiting, and diarrhea.
- Good dental care.

NUTRITION

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PHARMACOLOGIC INTERVENTIONS FOR CFR STIMULANTS

Methylphenidate

- CNS stimulant (short plasma half-life of 2 hours, rapid onset of action, duration of action 3 to 6 hours)
- Baseline dose is usually 5 mg in morning and at noon
- Can be tolerated up to a maximum dosing 1 mg/kg/d
- Most frequent side effects are tachycardia, nervousness, insomnia, and anorexia.

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PHARMACOLOGIC INTERVENTIONS FOR CFR STIMULANTS

Modafinil

- CNS stimulant approved for the treatment of narcolepsy
- Usual dose is 100 to 200 mg in the morning with second dose at noon.
- Maximum dose of 400 mg per day.



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CANCER RELATED FATIGUE EDUCATION



- All cancer patients and their families should be educated on the phenomenon of cancer related fatigue and management strategies.
- Patients and their families should be educated that management of fatigue is an essential component of total health care.



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WHAT ABOUT OUR CAREGIVERS?



Take some quality time for yourself: schedule off a day at home.



Watch for signs of stress.



Don't be afraid to ask or accept help from friends



Use resources



Ventilate your feelings



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IN CONCLUSION

- Fatigue is the most common and distressing symptom in cancer patients and survivors.
- Patients with cancer-related fatigue require a complete medical evaluation including an assessment for possible associated symptoms.
- Treatment for cancer related fatigue consists of a variety of non-pharmacologic and possible pharmacologic interventions and should be tailored to the individual patient. All patients with cancer related fatigue should be educated on lifestyle management strategies.
- Continued research is necessary to better define the pathophysiologic mechanisms and assist with further development of treatment strategies.



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Questions?

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