



Tired of Cancer?

What to Do About Fatigue
Associated with Cancer and its
Treatment

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What is fatigue?



According to the dictionary:



- “A weariness or exhaustion from labor, exertion, or stress”



What about cancer-related fatigue (CRF)?

“Cancer-related fatigue is a distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer treatment that is not proportional to recent activity and interferes with usual functioning”

-National Comprehensive Cancer Network



Let's break that down...

Cancer-related fatigue is a

1. distressing, persistent, subjective sense of
2. physical, emotional, and/or cognitive tiredness or exhaustion related to cancer treatment that is
3. not proportional to recent activity and
4. interferes with usual functioning

Different beasts

Fatigue

- A weariness or exhaustion **from labor, exertion, or stress**

Cancer-related fatigue

- A distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer treatment that is **not proportional to recent activity** and interferes with usual functioning

Different beasts

Fatigue

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Cancer-related fatigue

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Different beasts

Fatigue

Cancer-related fatigue

- ✓ More severe
- ✓ More upsetting
- ✓ More disabling
- ✓ More long lasting
- ✓ More difficult to relieve

What does CRF feel like?

“I feel like someone let the plug out somewhere and all my energy drained out”



What does CRF feel like?

“When I’m tired . . . even chewing food can make me tired”



What does CRF feel like?

“Tired means that you can hardly put one foot in front of the other”



What does CRF feel like?

“I didn’t have the strength to even turn on the TV”



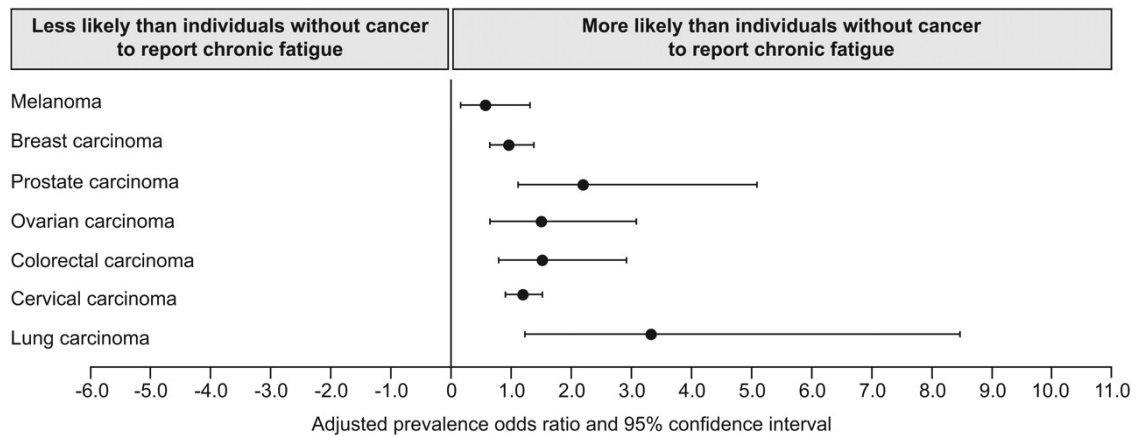
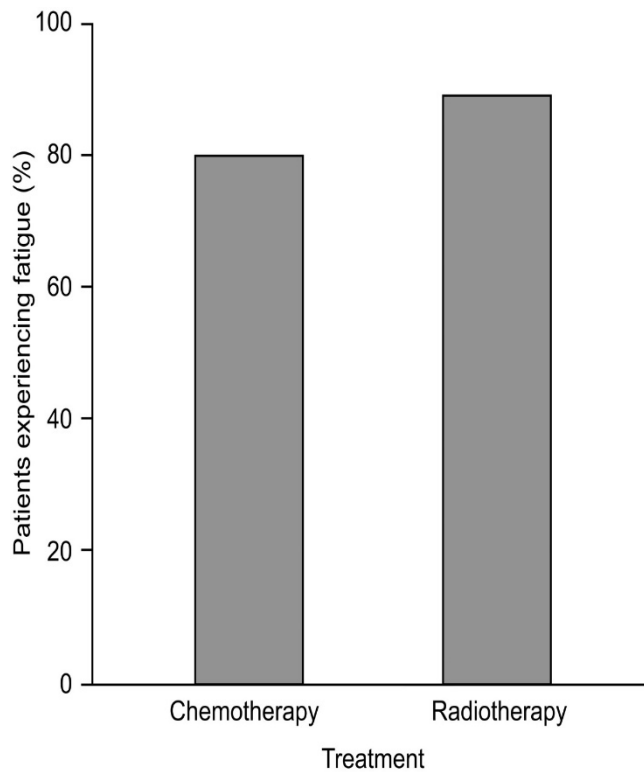
How common is CRF?

- Short answer: very common
 - Most common side effect of cancer treatment
 - Can also be a symptom of cancer itself
 - Rated as most distressing

Why does CRF happen?

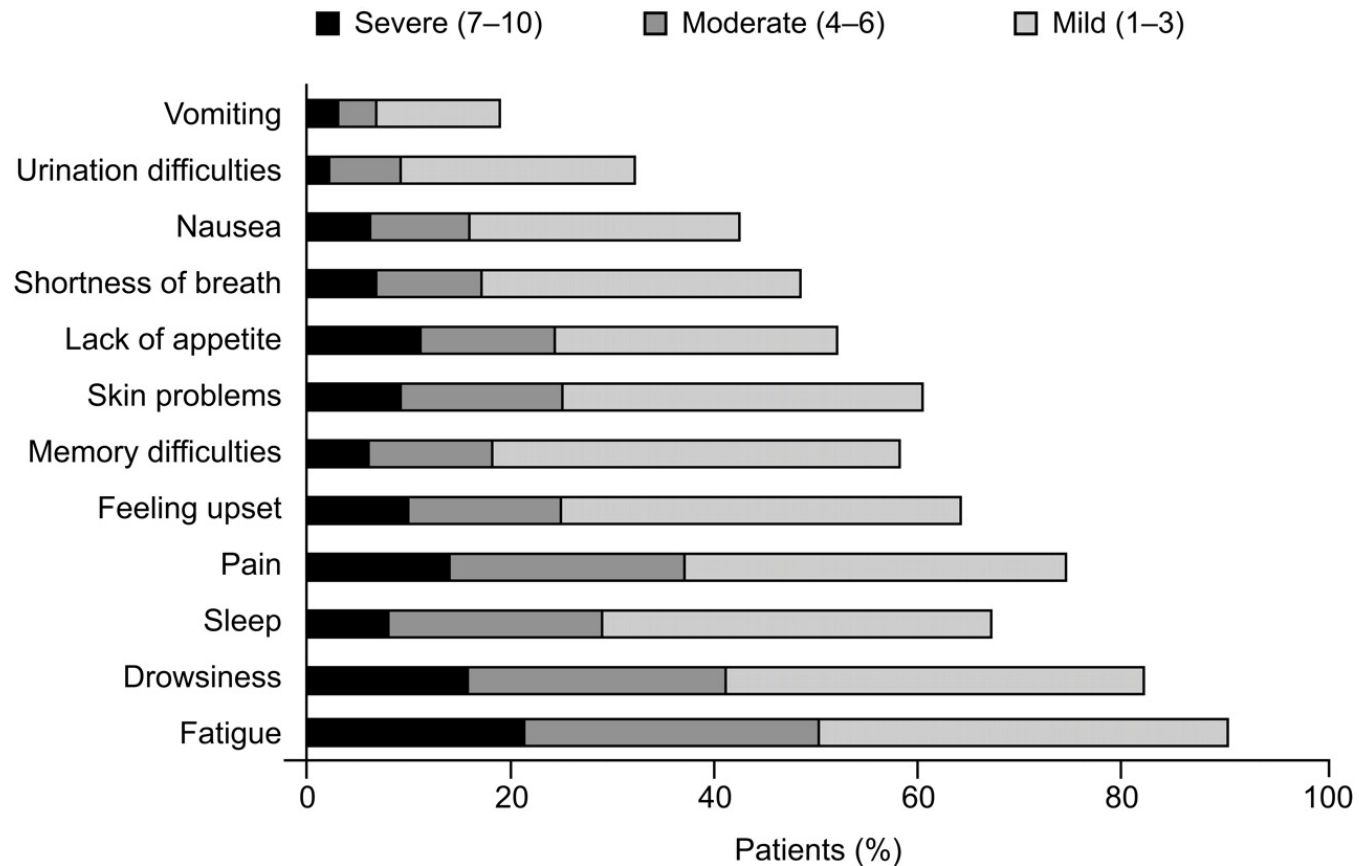
- Potential genetic risk factors
 - Systemic inflammation
- Biobehavioral and psychological risk factors
 - Depression
 - Sleep disturbance
 - Physical inactivity
 - Higher BMI
 - Coping strategies and expectations
- **Mechanisms poorly understood**

Who experiences CRF?



How severe is CRF?

Prevalence and intensity of side effects experienced by patients during radiotherapy



When does CRF happen?



Diagnosis

Treatment

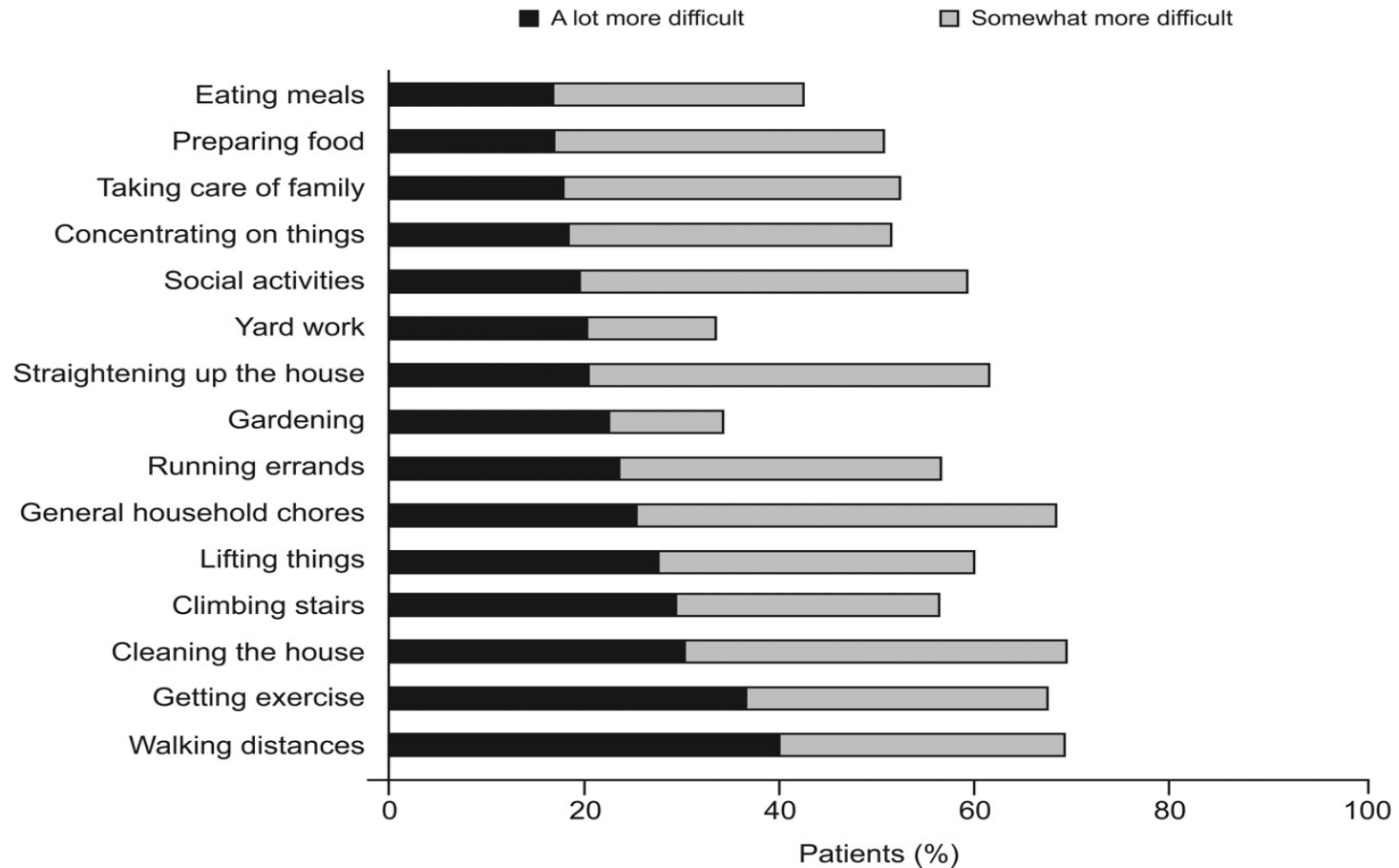
Remission

How long does CRF last?



What impact does CRF have?

Impact of fatigue on usual activities in patients with cancer and a history of chemotherapy (n = 301)



Emotional impact of CRF

“My body has let me down. Sometimes that makes me angry and I feel frustrated because I can’t do the things I want to do”

Cognitive impact of CRF

“It is in the limbs, but also in the head, one is listless to read a newspaper or to watch television, it is ‘total tiredness’”

Physical impact of CRF

“It’s so bad that I know I’m hungry, but I’m too tired to get up and go to the kitchen and fix it. And if I fix it, I’m too tired when I sit back down to eat it. I don’t even feel like chewing . . . it’s hard to describe, it’s not like anything else. It’s horrible”

Social and familial impact of CRF

“Fatigue just, it seeps into every part of your life. I, it doesn’t just affect one thing or two things. It affects my relationship with my kids, my relationship with my husband, my relationship with my friends”

So what can be
done about CRF?



Interventions to treat CRF

INTERVENTIONS FOR PATIENTS POST-TREATMENT^{f,h}

Patient/Family
Education
and Counseling

General Strategies for
Management of Fatigue

SPECIFIC INTERVENTIONS

Nonpharmacologic^g

Pharmacologic^o

Information about known pattern of fatigue during and following treatment

- Monitor fatigue levels
- Energy conservation
 - ▶ Set priorities and realistic expectations
 - ▶ Pace
 - ▶ Schedule activities at times of peak energy
 - ▶ Limit naps to <1 hour to not interfere with night-time sleep quality
 - ▶ Structured daily routine
 - ▶ Attend to one activity at a time
- Use distraction (eg, games, music, reading, socializing)
- Find meaning in current situation
 - ▶ Emphasis on meaningful interactions
 - ▶ Promote dignity of patient

- Physical activity (category 1)
 - ▶ Maintain optimal level of activity
 - ▶ Cautions in determining level of activity:
 - ◊ Late effects of treatment (eg, cardiomyopathy)
 - ◊ Safety issues (ie, assessment of risk of falls)
 - ◊ Consider initiation of exercise program of both endurance and resistance exerciseⁱ
 - ▶ Yoga (category 1)
 - ▶ Consider referral to rehabilitation: physical therapy, occupational therapy, physical medicine

- Psychosocial interventions (category 1)
 - ▶ CBT/BT (category 1)^k
 - ▶ Mindfulness-based stress reduction (category 1)
 - ▶ Psycho-educational therapies/Educational therapies (category 1)
 - ▶ Supportive expressive therapies (category 1)^l

- Nutrition consultation
- CBT^l for sleep (category 1)
 - ▶ Stimulus control
 - ▶ Sleep restriction
 - ▶ Sleep hygiene

- Consider psychostimulants^m (methylphenidate) after ruling out other causes of fatigue
- Treat for pain, emotional distress, and anemia as indicated per NCCN Guidelines
(See [NCCN Guidelines for Adult Cancer Pain, Distress Management, and Cancer- and Chemotherapy-Induced Anemia](#))
- Optimize treatment for sleep dysfunction, nutritional deficit/imbalance, and comorbidities

Repeat screening and evaluation
See (FT-3) and (FT-4)

INTERVENTIONS FOR PATIENTS ON ACTIVE TREATMENT^{f,h}

Patient/Family Education and Counseling

Information about known pattern of fatigue during and following treatment
• Reassurance that treatment-related fatigue is not necessarily an indicator of disease progression

General Strategies for Management of Fatigue

- Self-monitoring of fatigue levels
- Energy conservation
 - ▶ Set priorities and realistic expectations
 - ▶ Pace
 - ▶ Delegate
 - ▶ Schedule activities at times of peak energy
 - ▶ Assistive devices^g
 - ▶ Postpone nonessential activities
 - ▶ Limit naps to <1 hour to not interfere with night-time sleep quality
 - ▶ Structured daily routine
 - ▶ Attend to one activity at a time
- Use distraction (eg, games, music, reading, socializing)
- Find meaning in current situation
 - ▶ Emphasis on meaningful interactions
 - ▶ Promote dignity of patient
- Consider referral to appropriate specialist or supportive care provider

Nonpharmacologic

- Physical activity (category 1)
 - ▶ Maintain optimal level of activity
 - ▶ Cautions in determining level of activity:
 - ◊ Bone metastases
 - ◊ Thrombocytopenia
 - ◊ Anemia
 - ◊ Fever or active infection
 - ◊ Limitations secondary to metastases or other comorbid illnesses
 - ◊ Safety issues (ie, assessment of risk of falls)
 - ▶ Consider starting and maintaining an exercise program, as appropriate per health care provider, of both endurance (walking, jogging, or swimming) and resistance (light weights) exercisesⁱ
 - ▶ Yoga (category 1)
 - ▶ Consider referral to rehabilitation: physical therapy, occupational therapy, and physical medicine
- Physically based therapies
 - ▶ Massage therapy (category 1)
- Psychosocial interventions
 - ▶ Cognitive behavioral therapy (CBT)^j/Behavioral therapy (BT) (category 1)^k
 - ▶ Psycho-educational therapies/Educational therapies (category 1)
 - ▶ Supportive expressive therapies^l
- Nutrition consultation
- CBT^j for sleep
 - ▶ Stimulus control/Sleep restriction/Sleep hygiene
- Bright white light therapyⁿ

SPECIFIC INTERVENTIONS

Pharmacologic

- Consider psychostimulants^m (methylphenidate) after ruling out other causes of fatigue
- Treat for pain, emotional distress, and anemia as indicated per NCCN Guidelines ([See appropriate NCCN Guidelines for Supportive Care](#))
- Optimize treatment for sleep dysfunction, nutritional deficit/imbalance, and comorbidities

Repeat screening and evaluation
[See \(FT-3\)](#) and [\(FT-4\)](#)

Patient/Family Education and Counseling



- Education about fatigue, especially if undergoing fatigue-inducing treatments (e.g., RT, CT)
- Fatigue not necessarily sign that treatment not working or that disease progressing
- Fatigue can be a consequence of treatment
- May need nutrition consult
- **Ask your doctor!**

General Strategies

- Energy conservation
- Maintain a diary
- Distraction
- Daytime naps < 1 hour

Pharmacologic Interventions



- Psychostimulants such as methylphenidate may be helpful, but larger scale studies are needed.
- Consult with your physician!

Non-pharmacologic interventions



1. Physical Activity



2. Psychosocial Interventions



3. Bright light therapy



Physical Activity

Physical Activity



- 72 studies (5367 patients) in active treatment or follow-up.
- Moderate effect of exercise in reducing CRF compared to control group.
- Exercise type does not matter.
- Tailored to you – may benefit from physical therapy or other exercise program.
- **Check with your doctor first!**

Examples of physical activity found to be effective

Supervised training

- Multidisciplinary sessions incorporating self paced exercise.
- Yoga
- Cycling
- Aerobic exercise

Unsupervised training

- Strength training
- Aerobic training
- Cardiovascular exercise
- Flexibility exercise
- Walking
- Tai Chi
- Walking



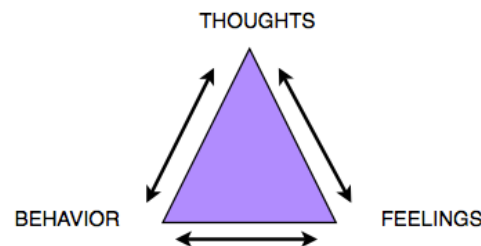
But, I'm too tired to exercise....



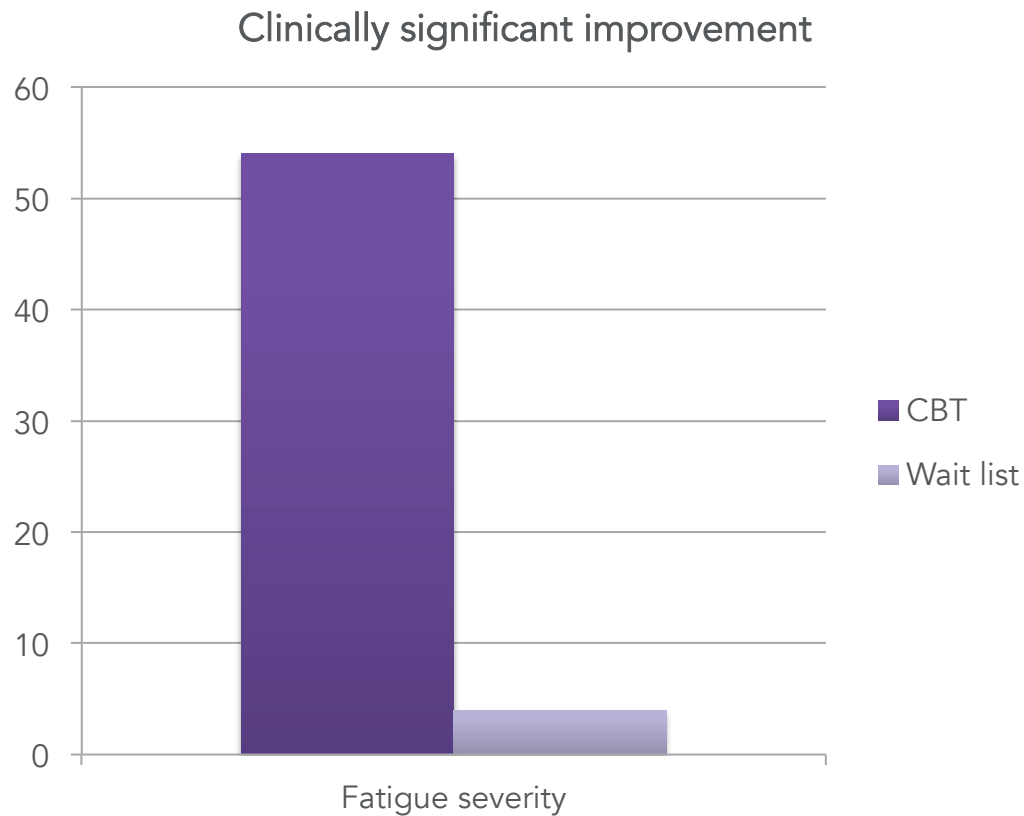
Psychosocial Interventions

Cognitive behavioral therapy (CBT)

- Learning about the links between thoughts, feelings, behavior
- Education about fatigue
- Activity management
- Coping techniques such as stress management/relaxation
- Recent research shows that online CBT for insomnia in cancer patients helps with fatigue as well



Example: Gielissen, Verhagen, Witjes, Bleijenberg (2006). Effects of CBT in severely fatigued disease-free cancer patients compared with patients waiting for CBT: A randomized controlled trial. Journal of Clinical Oncology



What does CBT look like?

- 1 hour/week interactive sessions with a therapist
- Tailored to the patient
- Average of 12 sessions attended
- Techniques:
 - Challenging dysfunctional thoughts, e.g., “I cannot do anything about it, I am helpless”
 - Learning coping skills, e.g., scheduling fixed sleep-wake times.
 - Activity management
 - Homework

Mindfulness-based stress reduction (MBSR)


Jon Kabat-Zinn

- Education regarding cancer and its treatment concerns and symptoms
- Meditation
- Supportive group interaction
- Integration into daily life
- Can reduce fatigue in cancer patients more than usual care – more research needed



What does MBSR look like?

- Structured 8-week group program
- 2.5 hour sessions
- 1 all-day silent retreat
- Techniques taught:
 - Sitting meditation
 - Walking meditation
 - Hatha yoga
 - Body scan
 - Transition of mindfulness into everyday life

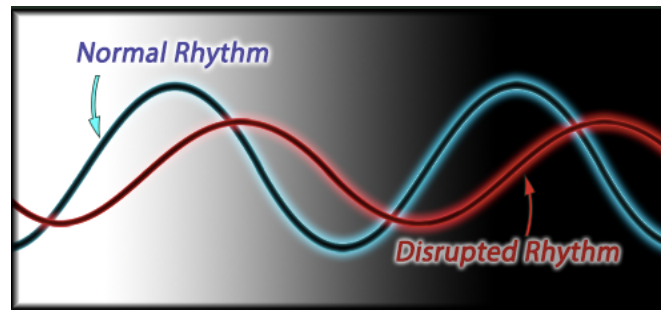


But,
...I can't afford to see a clinician for psychosocial treatment
...I'm too busy
...I live far from providers
...I'm just not interested/motivated

Could light therapy be another tool?



- Circadian disruption may occur due to cancer and/or cancer treatments → fatigue

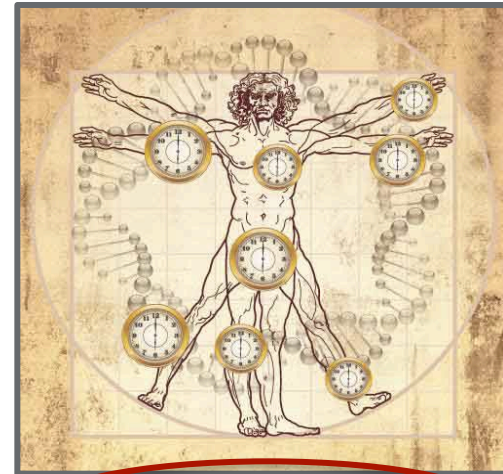
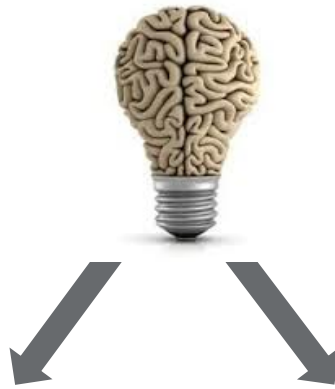


- 24 hour rhythmicity of behavior, physiology, biochemistry e.g., sleep/wake, alertness, body temperature.
- Prepare the body for rest/activity at specific hours.
- Entrainable to environment (e.g., light!)

Light and the Brain



IMAGE-FORMING FUNCTION



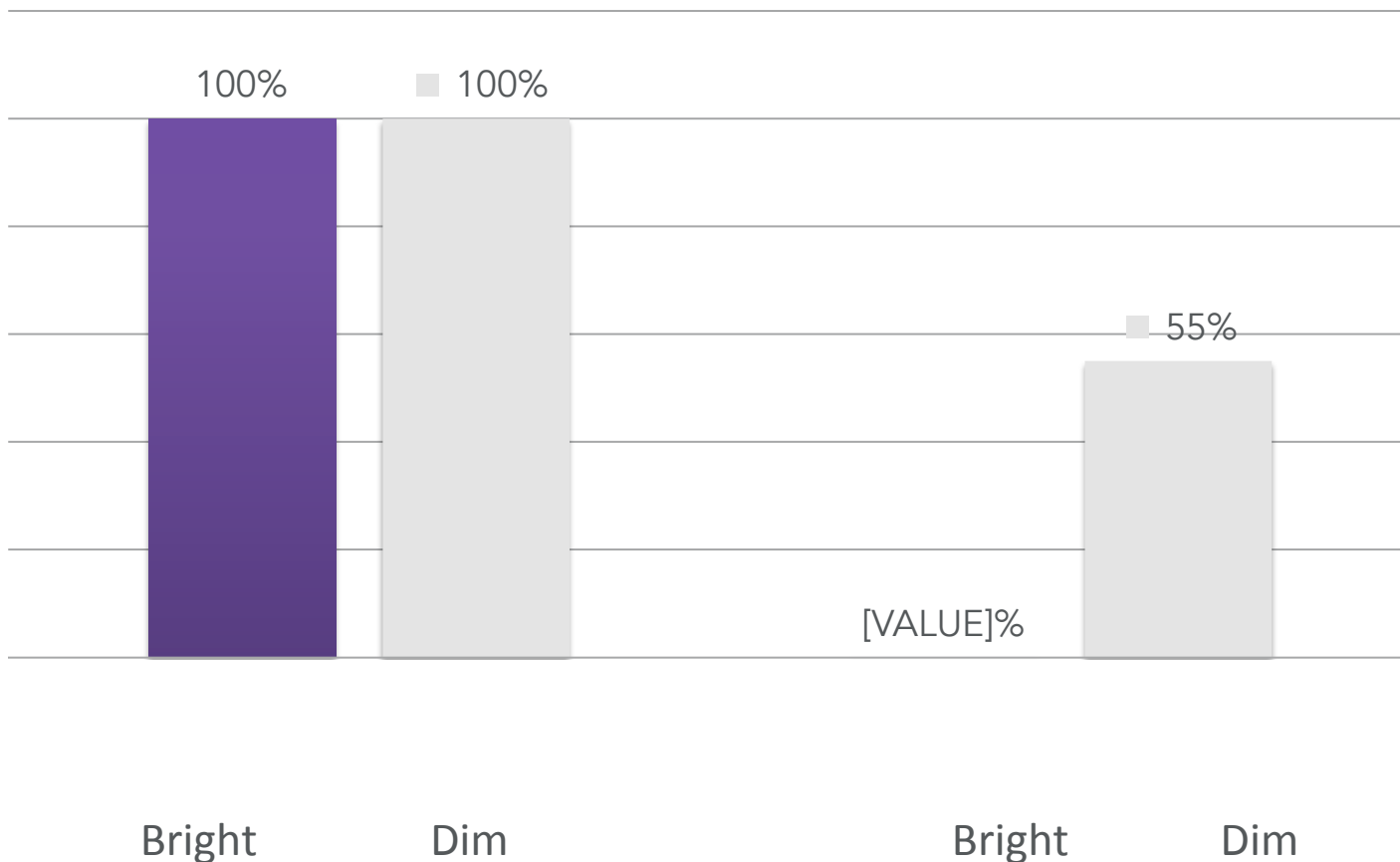
NON-IMAGE FORMING FUNCTIONS

Bright light therapy

- Commonly used to treat seasonal affective disorder
- Systematic exposure to bright light may normalize circadian rhythms
- Pilot studies show that it may prevent/treat fatigue in cancer patients and survivors.

Example: Redd et al. (2014). Systematic light exposure in the treatment of cancer-related fatigue: a preliminary study. Psychooncology.

Clinically significant fatigue (FACT-F <34)



What does bright light therapy look like?

- 30 minutes each morning upon awakening
- 4 to 8 weeks
- Bright light (broad spectrum)
- Small lamp, 45 degree angle, arm length away
- Light goggles are another option

The Bottom Line

- CRF is real and is different from regular fatigue
- Common, severe, impactful, and long-lasting
- Causes and mechanisms are unknown
- There are a variety of tools available to treat or help with the management of CRF
- Always consult your physician first!

Thank you for listening!

