

Strategies to Help Cope with Cancer Related Fatigue

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**WHAT
ARE YOU
THINKING?**

**Think of some words
that people may use
to describe their/your
fatigue**

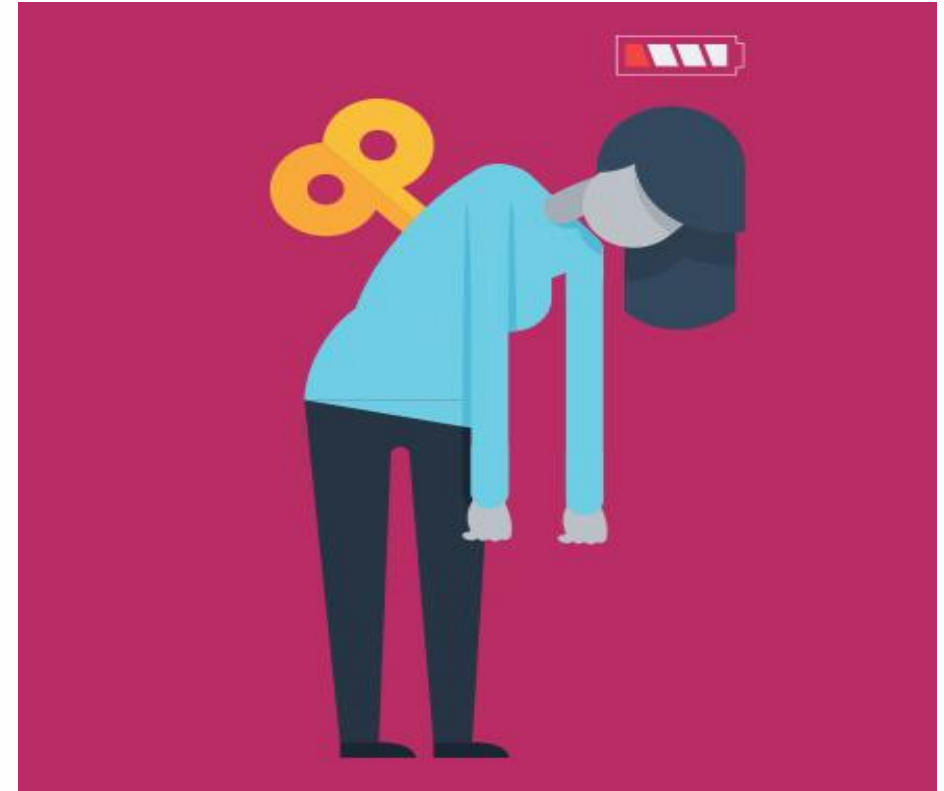
How the participants in my study described cancer related fatigue (Sheehan et al., 2018)

- “A tiredness sleep won’t cure or lying down won’t cure” CRF022
- “You kind of couldn’t function you are so tired” CRF019
- “The tiredness is unreal, I mean emptying the dishwasher I could be like ‘Oh my God I am wrecked now I could go to bed’” CRF013
- “Sometimes you wouldn’t be able to do it but, you would have to make yourself do it”. CRF018
- “Ah is this in my head, am I just after getting lazy, is that what is wrong with me” and “you kind of get to a point where tis like ‘Ah come on like, is it in my head, when is it going to stop?’” CRF013
- “I wasn’t sleeping at all, I would get very depressed with it” CRF014
- “I was afraid then to do something because it was a case of if I do it I will be tired then and I am own with the kids tomorrow so I have to be able to look after them, and you do actually become ‘Ah sure look I will do nothing now because I need to save my energy for tomorrow’” CRF013
- “It depends on your situation too, I had two kids and I had to get up whether I was tired or not I wanted, I was wrecked as well, you know everyone is different aren’t they, they have different things to cope with as well and you just have to get on with it and that is it” CRF 012

Cancer related fatigue defined as

“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), 2014, p. 1012).





**Cancer related fatigue has been described in the literature as a multidimensional construct having physical, cognitive and emotional factors
(Reuter & Harter, 2004; Barsevick et al., 2013)**

Prevalence of CrF in survivorship

- CrF persists for more than one-third of cancer patients following completion of their treatment (Hofman et al., 2007).
- In a survey of breast, prostate, and colorectal cancer survivors, an estimated one-third ($n = 1294$) reported clinically relevant CrF levels present up to 6 years following treatment, which was also associated with greater levels of disability (Jones et al., 2016).
- However, because CrF is often undiagnosed, its prevalence may be underestimated



Impact and management of CrF



- Cancer survivors often report never returning to their pre-diagnosis energy level, which in turn diminishes their overall quality of life (Gledhill, 2005).
- CrF is regarded as the most problematic side effects of cancer and has the greatest impact on a survivor's daily life (Curt et al., 2000).
- It has been ranked as having the greatest negative impact on activities of daily living (ADL) and QOL, being identified as more problematic than other cancer-related symptoms including pain, depression, and nausea (Curt et al., 2000; Stone et al., 2000).
- One-third of all cancer survivors had not returned to employment by 18 months after their diagnosis (Mehnert, 2011).

- Difficult to identify but, it is a multidimensional construct comprising multiple physical, biological, psychological, and contextual factors and their interactions. (Berger et al., 2015; Neefjes, van der Vorst, Blauwhoff-Buskermolen, & Verheul, 2013).
- Factors contributing to the development and persistence of CrF both during and after treatment may include the cancer itself, the treatment and consequent comorbidities, adverse effects of medication, nutritional problems, deconditioning, mood disturbances, pain, higher body mass index. (BMI), and **sleep dysfunction** (Mitchell, 2010)



Studies have shown that sleep disturbance is



1. positively associated with fatigue,
 2. worse in fatigued individuals compared to non-fatigued individuals
 3. a significant predictor of fatigue
- (Anderson et al., 2003; Bower et al., 2000; Broeckel, Jacobsen, Horton, Balducci, & Lyman, 1998; Redeker, Lev, & Ruggiero, 2000).
- A cross-sectional study found that overly fatigued patients were 2.5 times more likely to suffer from insomnia (Davidson, MacLean, Brundage, & Schulze, 2002).
 - In fact, 51% of cancer survivors report difficulties sleeping (Savard et al., 2001)

CrF and sleep disturbance continued

- Psychobehavioural aspects of cancer related fatigue include psychological distress and sleep disturbance (Payne, 2002; Ramsey, Berry, Moinpour, Giedzinska & Andersen, 2002).
- Cancer patients often suffer from insomnia with the prevalence ranging from 18% to 68% (Zhou, Partridge, Syrjala, Michaud, & Recklitis, 2016).
- Chronic insomnia has been reported to cause fatigue, cognitive dysfunction as well as psychological issues such as depression and an increased risk of suicide (Otte et al., 2016).



What my study found

- The change in FACT-F score (measure of fatigue) was negatively correlated with changes in insomnia severity ($r = 0.66$, $p = 0.002$)

As fatigue decreased, scores for insomnia severity decreased
(Sheehan et al., 2020)

Other interesting findings

- There was a strong negative correlation between the change in insomnia severity and cognitive function ($r = -0.80$; $p < 0.001$); as insomnia severity decreased, cognitive function increased (Sheehan et al., 2018)
- We also found that higher fatigue levels were significantly associated with higher insomnia severity (Sheehan et al., 2018), in line with a previous study (Broeckel et al., 1998).

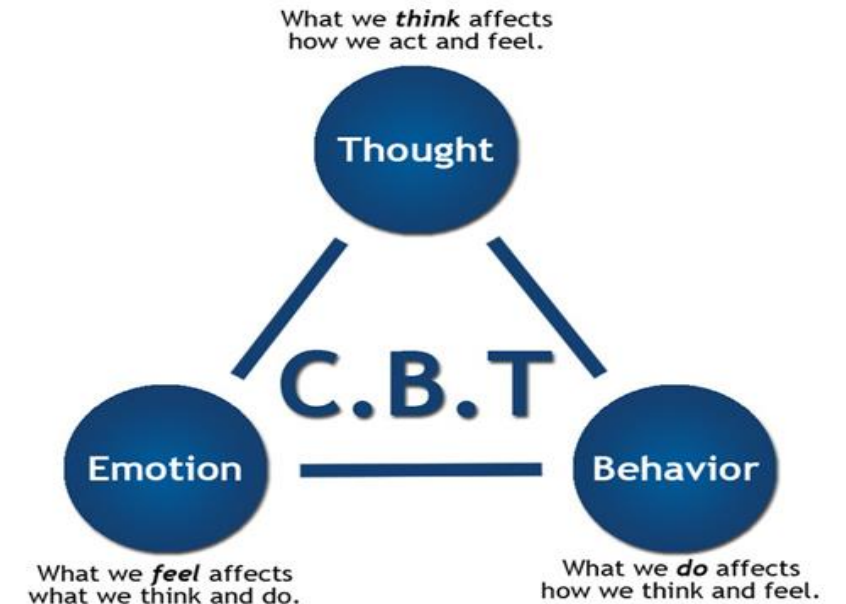


I will explain how we achieved these results later

So what can we do to help manage and treat CrF and sleep disturbance ?

Cognitive behaviour therapy

- Based on the principle that certain thinking habits, feelings and behaviours hamper your recovery.



Concepts of CBT that may help you !

- Problems and goals – specific to you, write them down, break them down into current, smaller, manageable problems, tackle them bit by bit
- Once broken down you can convert them into goals



Let's think of some examples



PROBLEM - I am too tired to see my friends

- ***Solution 1 - I will use the phone or Facebook to keep in contact with my closest friends***
- ***Solution 2 – I will identify a time in the day that I feel more energetic and meet them then***

ACTIVITY, REST & TIREDNESS

Some people may :

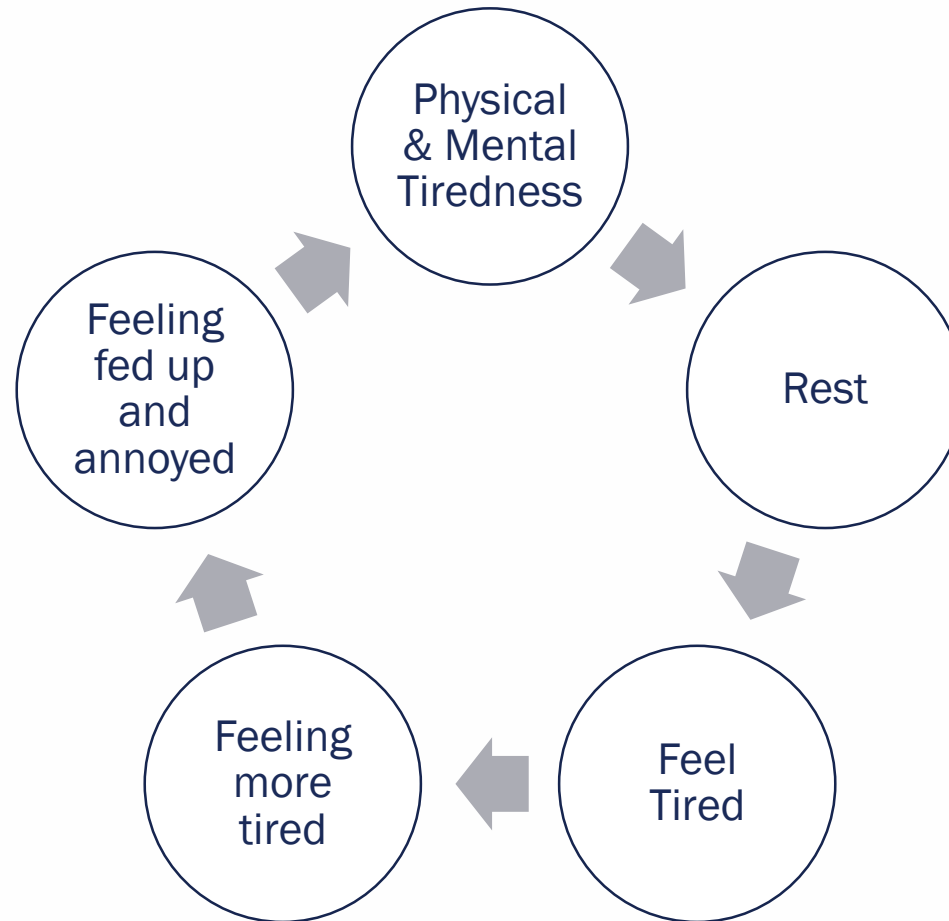
- Adjust their lifestyle considerably
- Feel they lack the energy to do the things they used to do
- Try to cope by reducing their level of activity and by resting more
- Try to strive to do everything at the same pace as before the illness
- Do too much on the days you feel good
- Give up altogether

CAN ANY OF YOU RELATE TO ANY OF THESE ?

PERHAPS YOU HAVE DEALT WITH THINGS IN OTHER WAYS ?



Planned rest & activity to stop THE CIRCLE OF TIREDNESS



Tips that may help you to regain your energy and manage your tiredness/fatigue

In order for rest to be most effective it is important that it is planned for set times every day.

In the beginning it is important to get as much rest as you think you need and then alter it week by week.



- Plan how often you will rest during the day.
- Spread this in regular intervals during the day
- State where you will rest.
- State how long you will rest for at each time for example *I will rest on the sitting room sofa for an hour at 11.30am, 3.30pm and at 6.30pm.*
- Try to avoid going to sleep during these rest periods as it may disrupt your sleep at night

Keep track of your daily activity and rest for the next week

DAILY ACTIVITY AND REST DIARY

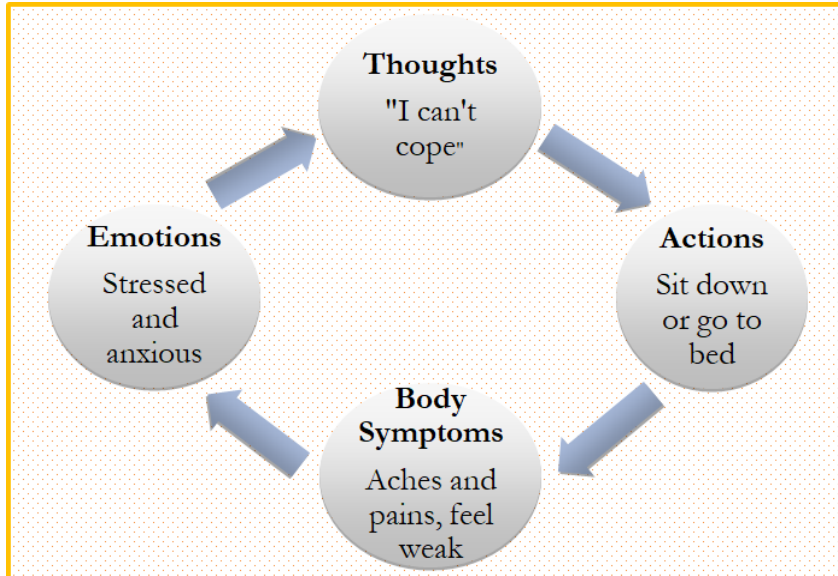
Day							
Slept for (hours)							
Awake at (time)							
8-9am							
9-10am							
10-11am							
11-12noon							
12-1pm							
1-2pm							
2-3pm							
3-4pm							
4-5pm							
5-6pm							
6-7pm							
7-8pm							
8-9pm							
9-10pm							
10-12pm							
Asleep at							

Sleep management

- Go to bed and get up at about the same time every day.
- Try not to sleep late into the day after a sleepless night, as this can lead to a disrupted sleep pattern.
- Try to do gentle exercise like walking, as this can help you feel naturally tired and ready for sleep.
- Keep your mind occupied with activities like reading, games or puzzles. This can also help you feel naturally ready to sleep.
- Be aware of how naps affect you. Some people find that daytime naps help them sleep better, others sleep less well after them.

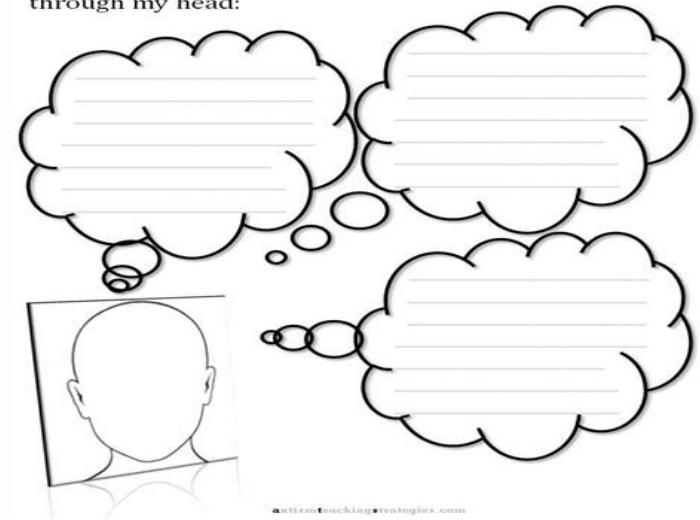
Negative thinking ?

- Why not keep a thought diary !
- Tackle the thoughts when they happen before they snowball into destructive events



Name: _____

2. When I felt _____, these thoughts raced through my head:





- Fill in the date and time of the thoughts - *they may occur more at certain times of the day if so you will be fore warned and ready to tackle them*
- Record the thoughts –keep them simple and clear - *I won't be able to do the grocery shopping today*
- Write down how you feel - *fed up, browned off, sad, mad*
- Come up with different ways of seeing this thought
- Write down what was the result of you challenging the thought - *felt more in control when I decided to do just go to the butchers today*
- Keep the diary simple and to the point it is not intended to be a difficult or time consuming activity
- Fill in the diary as soon after you have the negative thought
- The quicker you catch yourself thinking in a negative way the better your chance of challenging this thought and stopping the cycle

Once aware of your negative thinking you can now challenge the thoughts !

- "What evidence do I have for this thought?" "Is there an alternative way of looking at the situation?"
- "How would someone else think about the situation?"
- "Are my judgements based on how I felt rather than what I did?" (Feelings are not facts!)
- "Am I setting myself an unrealistic or unobtainable standard?"
- "Am I forgetting relevant facts or over-focusing on irrelevant facts?"
- "Am I thinking in all-or-nothing terms?"



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Exercise is more effective than health education in reducing fatigue in fatigued cancer survivors

[Patricia Sheehan](#), [Suzanne Denieffe](#), [Niamh M. Murphy](#) & [Michael Harrison](#) 

[Supportive Care in Cancer](#) **28**, 4953–4962(2020) | [Cite this article](#)



Purpose

- To determine the effects of a 10-week exercise intervention compared with a health education intervention on fatigue, quality of life outcomes and functional fitness in cancer survivors with documented fatigue.
- To determine the sustainability of changes for an additional 16 weeks post-intervention



Key findings

	Health Education Group		Exercise Group		
Outcome	Pre-	Post	Pre-	Post	26 wk
‡ Fatigue (FACT-F)	21.9 ± 2.2	29.6 ± 2.5 *	19.3 ± 2.2	40.3 ± 2.4 *	42.5 ± 3.1*
‡ Fatigue (EORTC QLQ 30)	52.5 ± 5.1	48.1 ± 5.8	53.1 ± 5.1	27.2 ± 5.8 *	22.2 ± 5.0 *
‡ Global Quality of Life	48.1 ± 4.7	50.5 ± 4.9	50.0 ± 4.6	69.3 ± 4.7 *	69.3 ± 4.7 *
‡ Cognitive Functioning	50.9 ± 7.9	51.9 ± 6.7	41.2 ± 7.7	71.9 ± 6.5 *	77.4 ± 4.7*
‡ Insomnia Severity	15.5 ± 2.0	13.3 ± 1.8	15.2 ± 1.8	8.2 ± 1.6 *	6.4 ± 1.6 *
‡ Fear of physical activity	28.3 ± 6.3	27.1 ± 3.7	28.9 ± 6.3	13.1 ± 3.7 *	9.2 ± 2.9 *
‡ 6 min walk test (m)	462.0 ± 19.3	496.3 ± 21.1	438.3 ± 16.0	601.8 ± 18.3 *	625.8 ± 23.3 *
‡ 30 sec Sit to Stand (reps)	11.6 ± 0.8	12.6 ± 1.2	13.4 ± 0.8	23.8 ± 1.2 *	27.7 ± 2.4 *
MVPA (mins per week)	3.3 ± 3.3	0.0 ± 0.0	3.7 ± 3.2	297.3 ± 52.8*	215.3 ± 37.4*
Pulse Wave Velocity (m/s)	7.9 ± 0.8	7.7 ± 0.6	5.8 ± 0.8	6.2 ± 0.6	7.9 ± 8.3
C reactive protein (mg/L)	3.1 ± 0.7	2.9 ± 0.9	1.9 ± 0.6	2.9 ± 0.8	3.1 ± 0.7
Values are mean ± SEM. ‡ significant group (2) x time point (2) interaction using Analysis of Variance. * p<0.05 compared to pre- value in same group. MVPA Moderate to Vigorous Physical Activity					

Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

• Prevention of 7 common cancers*

Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise







• Survival of 3 common cancers**

Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

*Bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers

**breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
Strong Evidence	Dose	Dose	Dose
 Cancer-related fatigue	3x/week for 30 min per session of moderate intensity	2x/week of 2 sets of 12-15 reps for major muscle groups at moderate intensity	3x/week for 30 min per session of moderate aerobic exercise, plus 2x/week of resistance training 2 sets of 12-15 reps for major muscle groups at moderate intensity
 Health-related quality of life	2-3x/week for 30-60 min per session of moderate to vigorous	2x/week of 2 sets of 8-15 reps for major muscle groups at a moderate to vigorous intensity	2-3x/week for 20-30 min per session of moderate aerobic exercise plus 2x/week of resistance training 2 sets of 8-15 reps for major muscle groups at moderate to vigorous intensity
 Physical Function	3x/week for 30-60 min per session of moderate to vigorous	2-3x/week of 2 sets of 8-12 reps for major muscle groups at moderate to vigorous intensity	3x/week for 20-40 min per session of moderate to vigorous aerobic exercise, plus 2-3x/week of resistance training 2 sets of 8-12 reps for major muscle group at moderate to vigorous intensity
 Anxiety	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Depression	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
 Lymphedema	Insufficient evidence	2-3x/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence
Moderate Evidence			
 Bone health	Insufficient evidence	2-3x/week of moderate to vigorous resistance training plus high impact training (sufficient to generate ground reaction force of 3-4 time body weight) for at least 12 months	Insufficient evidence
 Sleep	3-4x/week for 30-40 min per session of moderate intensity	Insufficient evidence	Insufficient evidence

Exercise For Cancer Prevention and Treatment



Exercising during and after cancer treatment:

- decreases fatigue, anxiety and depression
- improves physical function and quality of life
- does **NOT** exacerbate lymphedema



For cancer survivors, incorporate exercise to improve survival after a diagnosis of breast, colon and prostate cancer

Citation: <http://bit.ly/moving-through-cancer>

Exercise
is Medicine™

AMERICAN COLLEGE
of SPORTS MEDICINE®

ACSM Consensus statement and American Cancer Society-same as Irish PA guidelines, i.e. -a minimum of 150 minutes of moderate to vigorous PA per week or 75 minutes/week of vigorous exercise -Strength training 2-3 times/week

- Avoid Inactivity
- Return to normal daily activities as quickly as possible
- Continue normal daily activities and exercise as much as possible during and after non-surgical treatments
- Comprehensive review of current evidence recommend adults aim to participate in at least 60 minutes of moderate activity or 30 minutes or more of vigorous activity daily as a means of reducing cancer risk.



- What is moderate intensity ?
- What is vigorous intensity ?
- How do we measure them ?





Moderate and Vigorous Activity

Effort Scale

0	No effort at all
1	Very, very little effort
2	Light effort (stretching)
3	Moderate effort
4	Somewhat hard
5	Hard
6	
7	Very Hard
8	
9	
10	Highest Possible Effort Very, very hard (running fast, like you're being chased)

The Talk Test

Another way to rate your exercise intensity
is to try the **Talk Test**.

If you can carry on a conversation
and **talk in sentences** =
Very light Effort
(like 1 and 2 on the Effort Scale).

If you can talk,
but **not in full sentences** =

Moderate Effort

If you can talk,
but you'd **rather not** =

Hard Effort

If you **cannot say a word** =
Very, Very Hard Effort

(like a 10 on the Effort Scale).

Moderate effort



BORG SCALE

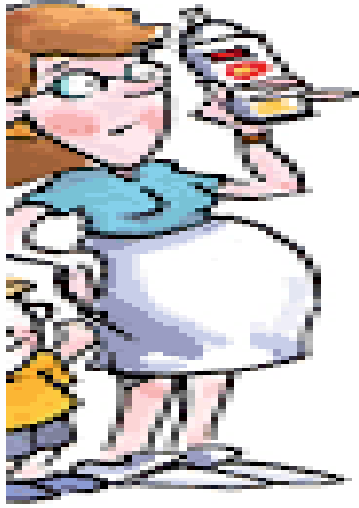
Rating of Perceived Exertion

6	
7	Very very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very very hard
20	

Fear of exercise

- Am I doing too much ?
- Am I doing too little ?
- What type should I be doing ?
- Am I doing more harm than good ?

**F
E
A
R** | **FALSE
EVIDENCE
APPEARING
REAL**



Is it SAFE?

Exercise is safe both during and after most types of cancer treatment ... Patients are advised to avoid inactivity and return to normal daily activities as soon as possible after surgery, and during adjuvant cancer treatments. The standard age appropriate guidelines are also appropriate for cancer patients”

(ACSM, 2014)

GUIDELINES
ARE DIFFERENT
TO PRESCRIPTION
SPECIFICITY IS KEY.
LET ME EXPLAIN.



Food for thought

- Exercise should be embedded in the care of all Irish cancer survivors. It should be the next step in cancer treatment and should be viewed as a key therapy in the rehabilitation stage of a person's cancer journey.
- Just as medication is used to treat the disease, exercise should be used to pre/rehabilitate the individual to help in reducing the burden of common side effects such as fatigue and improve the overall QOL of cancer patients/survivors.
- This could potentially be achieved via channels such as The National Physical Activity Plan (Department of Health, 2016) and The National Cancer Strategy 2017–2026 (Department of Health, 2017).

Thank you for listening

