

The Dangers of Losing Weight During Treatment



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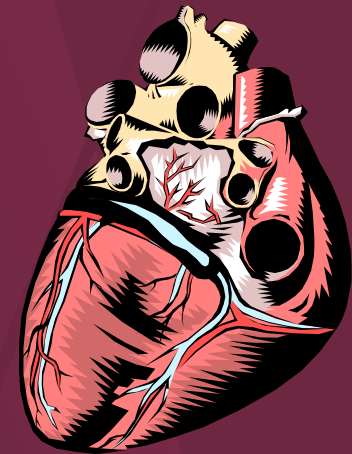
Before Starting...

You must understand the definition of *lean body mass*...

Lean body mass is any substance in your body other than fat

Examples Of *Lean Body Mass* include:

- Muscle
- Bone
- Vital organs like your heart
- Skin
- Blood cells and antibodies
- Enzymes, etc...



Pop Quiz Review Questions:

- What is lean body mass?

Any substance in the body other than fat

- What are examples of lean body mass?

Muscle, bone, vital organs, parts of the immune system, skin, blood cells, enzymes...





**Remember the definition of lean
body mass as we learn about
*'the dangers of weight loss
during treatment'...***

But, Weight Loss Is Healthy, Right??

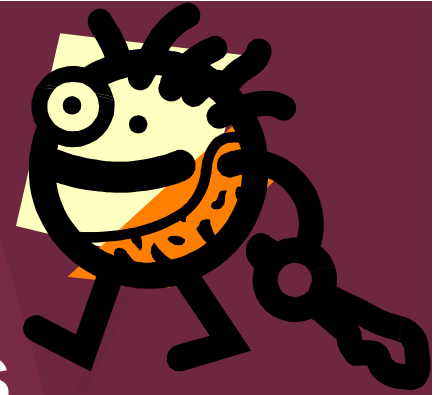
If you are overweight and DO NOT have cancer, yes...

- In this case, weight should be lost slowly
- 1-2 pounds a week with a nutritious diet and exercise
- Safe, slow loss (WITHOUT CANCER) will be composed of mainly excess fat

If You DO NOT Have Cancer and Lose Weight...

Your body adapts to protect itself...

1. Your metabolism slows to conserve calories (especially if you diet without exercising)
2. Your appetite increases
3. Your body will attempt to burn mainly fat to preserve your *lean body mass* from breaking down



These are your body's “survival strategies”

**Imagine the caveman days during
harsh winters...**

**These “survival strategies” helped
these cavemen survive for days or
weeks without food.**

When You DO HAVE Cancer....

Weight loss affects your body differently

**Even a small weight loss can
compromise your health and cause your
quality of life to decline during and after
treatment**

The Differences With Cancer...

- Your body's metabolism changes
- Your appetite **DECREASES**
- It does not use the “survival strategies” we discussed earlier and instead reverses them...
- You lose mostly muscle and other *lean body mass* **INSTEAD** of fat
- Your metabolism either stays the same or **INCREASES**, burning more calories

This Means That When You Lose Weight...

**...you will lose muscle, as well as bone,
blood cells, parts of your immune system,
instead of losing fat**

AND

**...you may need more calories than usual to
maintain your weight, yet not be hungry
enough to eat them**

If Lean Body Mass Is Lost... What's the Big Deal?

Actually, this is a very big deal...

Having healthy lean body mass is essential to feeling your best and remaining strong during treatment

Remember the Examples of Lean Body Mass...

- Muscle
- Bone
- Vital organs like your heart
- Skin
- Blood cells
- Antibodies
- Enzymes, etc...



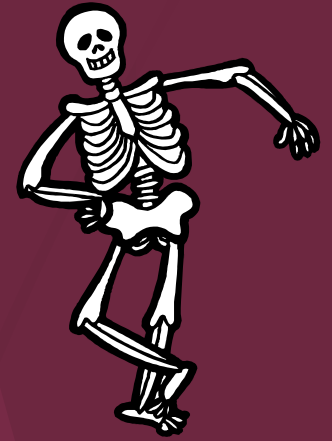
Let's Break It Down...

The following, are the effects of weight loss on all types of lean body mass...

Muscle – The largest portion of lean body mass lost. This causes extreme weakness and fatigue...

You may feel as if you cannot perform normal daily activities (like getting the mail or cooking dinner)


**Vital organs – to a much lesser
extent you may risk weakening
your heart, lungs, and other
organs which are composed of
muscle**



Bone – decreased bone mass which may also be caused by low intake of calcium

This puts you at higher risk for developing osteoporosis

http://www.anemia.org/patients/warning_signal.jsp; D'Olimpio JT. US Oncological Disease. 2006

Blood cells – anemia may occur, related
to low intake of iron, folate, vitamins
 **B12 or B6**

Anemia can add to the fatigue you may
already have due to inadequate
nutrition

Immune system – becomes weak, causing...

- Slower healing
- Lower resistance to infections
- Worse side-effects from the cancer or treatment such as... nausea, vomiting, diarrhea, constipation, and many more depending on where your cancer is located



Skin – becomes brittle, causing easier breaking and bruising

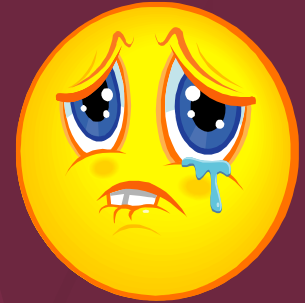
- This can be especially troublesome if you are undergoing radiation therapy



Let's Put It Together...

If you have severe skin irritation, and have lost weight, PLUS your immune system is weak (from weight loss), you may have slower healing of skin

Emotionally..



- Problems like depression and/or anxiety may sometimes occur due to the stresses of cancer and its treatment. These can contribute to a poor appetite and weight loss.
- On the flip side, losing substantial weight and experiencing side effects, can lead to psychological problems such as social isolation, depression and/or anxiety

**In any case, depression and anxiety
can worsen nutrition-related
problems**



**Remaining strong and well-
nourished may help you have a
more positive outlook**

Weight Loss Can Also Affect Your Treatment...

It can lead to...

- Lower response to, and/or more severe side effects from chemotherapy and radiation
- Missed radiation treatments, especially if skin is weak, brittle, and irritated

May result in less effective treatment overall!

Remember...

- **The more weight you lose, the more your appetite decreases...**
 - Your metabolism may become faster (due to both cancer and weight loss), you begin to enter a vicious cycle...
 - You need more calories to maintain your weight than usual, but are not able to consume them because you are not hungry or have side-effects like nausea
 - This results in faster weight loss which is harder to stop

So, What to Do?



Prevent weight loss before it starts!

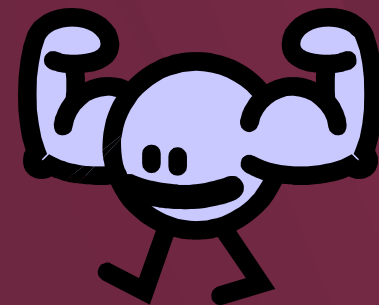
If you have already experienced weight loss, try your best to slow or stop the loss as soon as possible...

It's never too late to take action!

If You Are Overweight...

- It is still very important that you Do Not lose weight during treatment
- You will still lose lean body mass and have similar problems as those who started treatment at a healthier weight

...In fact, if you do carry excess weight, it is especially important to keep your muscles strong to support it



How Do I Prevent or Stop Weight Loss?

- If you have access to a registered dietitian, *make an appointment*
 - A registered dietitian can help tailor your diet to meet your nutrition needs and minimize side effects such as nausea, diarrhea, constipation, mouth sores, etc.

If a registered dietitian is not available to you, take advantage of the following tips...

Monitor Your Intake

- If you notice you are eating less than usual at meals, add snacks between meals
- Aim to eat a protein-packed snack or meal every 2-4 hours



Examples of Protein Snacks

- Peanut butter and crackers
- Cheese and crackers
- Trail mix
- Cottage cheese and peaches
- Yogurt and granola

Increase the Protein and Calories

This is important if you are not able to eat large amounts of food at once

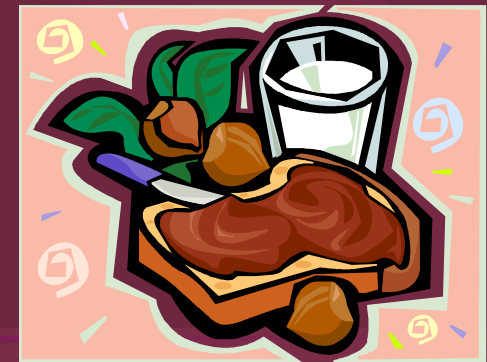
- **Add cheese, heavy cream, ground meat, and/or extra eggs to recipes like casseroles**

Increase the Protein and Calories

- **Use whole milk instead of low fat or skim**
- **Use milk instead of water in oatmeal, cream soups, cream of wheat, hot chocolate to add extra calories and protein in the same volume of food**

More Protein and Calorie-Packed Suggestions....

- Add nonfat dry milk powder to moist foods like bowls of cereal, macaroni and cheese, mashed potatoes for extra protein
- Dip veggies in peanut butter, salad dressing, or cheese sauce
- Snack on nuts or trail mix
- Add mayonnaise and/or avocados to sandwiches



Think Outside the Box...

The suggestions on previous slides are just a starting point...

- **When deciding what to eat, try to be creative and add high calorie ingredients that sound good to you**
- **Other potential additions... butter, gravy, cream cheese, and half n half**



Remind yourself!!

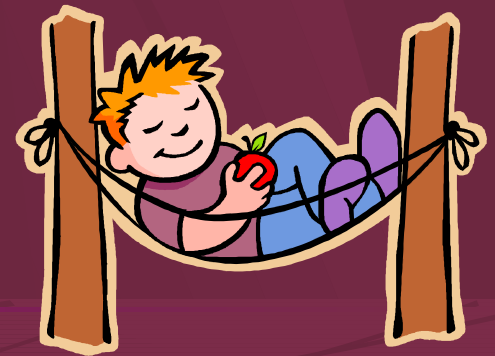


It can be easy to forget to eat frequently if you are not hungry...

- Set a watch, your cell phone or oven timer to go off every 2-4 hours. When the bell dings, it's time to eat!!
- Schedule your meals/snacks in your day planner
- Post reminders on your fridge, bathroom mirrors, and other noticeable places

Make Eating Easy

- If walking to the kitchen is a chore, keep a bowl or basket of your favorite snacks next to where you rest
- Keep portable snacks with you, especially if you will be out most of the day.
 - Good options include:
peanut butter or cheese and cracker snack packs, trail mix, string cheese, or protein bars





Stay Hydrated

Dehydration can lead to fatigue, nausea, constipation and other side-effects

- **Keep beverages with you all day and take sips every few minutes**
- **Stock up on water, flavored water, sports drinks, herbal/decaffeinated teas, milk and juices.**
- **If you are on chemotherapy, or have vomiting or diarrhea, remaining hydrated is a must!!**

If You Don't Feel Like Eating... Drink Supplements!

You must get calories from somewhere if you are not tolerating solid foods!!!

■ **TIP:** *Try and try again! If you do not like one supplement, try another.*

Supplements to Try

Boost PLUS or Ensure PLUS

- The “plus” means more protein and calories in the same 8-ounce can!
- Contains 360 calories and 14 grams protein
- Found in most grocery stores and/or pharmacies or at www.boost.com

More Supplements

Carnation Instant Breakfast

- Prepare with 8 ounces of whole milk for a higher calorie beverage (280 calories and 13 grams protein)
- Found in the breakfast foods aisle of grocery stores
- Check out www.carnationinstantbreakfast.com for the location nearest you

Supplements continued once more...

Resurgex Select

- **This high calorie supplement is formulated for cancer patients undergoing treatment**
- **Prepare with 8 ounces whole milk for a calorie and protein boost (contains 500 calories, 23 grams protein when prepared)**
- **Order from www.resurgex.com**

Prosure or Resource Support

- High calorie/protein beverages made for people with cancer
- Contains EPA, an omega-3 fatty acid, which has been shown to promote an increase in appetite and lean body mass in cancer patients if consumed in proper dose
- Drink 2 cans per day to get the recommended amount of EPA (Without the proper EPA dose, these will not be effective,so you must drink 2 cans per day!!)

Prosure: 300 calories, 17 grams protein

■ **Ask your pharmacist or order from:**

<http://www.prosure.com/purchaseProsure.asp>

Resource Support: 360 calories, 21 grams protein

■ **Ask your pharmacist or order from:**

<http://www.novartisnutrition.com/us/productDetail?id=334#OrderingInformation>

Supplement Tips

- Mix these supplements with ice cream in the blender for a delicious milkshake
- Add milk or juice to supplements for variety
- Pour over cereal, in oatmeal, grits, etc.
- Heat up and enjoy a hot chocolate or vanilla
- Powders can be mixed in applesauce, pudding, or other similar foods

Keep in Mind...



If you are eating nothing, and only drinking supplements...

- **To consume 2000 calories you must drink...**
 - 4 cans of Resurgex Select with whole milk per day
 - 6 cans of Boost Plus or Ensure Plus per day
 - 7 cans of Carnation Instant Breakfast with whole milk per day
 - 9 cans of regular Boost or Ensure per day

Points to Remember

- **Maintain your weight as best as possible to feel your strongest during treatment**
- **Be creative with your foods! Add high calorie and protein ingredients that suit you.**
- **See a registered dietitian for personalized advice**
- **Keep snacks with you at all times**
- **Try supplements if you don't feel like eating**
- **Stay hydrated!**

Even if you feel as though everything is beyond your control, remember this...

You have 100% control over your diet and nutrition...

Being well-nourished provides a solid base for your treatments to be as effective as possible



Keep on Eating!

**If you would like more
information about nutrition
and cancer, contact:**



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 **Pictures from Microsoft Office Online at:**

<http://office.microsoft.com/en-us/clipart/default.aspx?cag=1>