	eight Manage .me	ment Follow-up V	/1S1t 		1	Date	OMS II	
	Cur	rent weight	Ma	dication		BMI	Ī	
Initial weight								
	I act vicit							
Last visit				*UPT		Resting energy	·	
Change since last visit  Change since last visit				OI I		Resulting energy		
D.I	C							
PI	ease answer	the questions be	elow and on the r	next page				
If y	ou are you takir Any side effects Are you able to	ng a <b>medication*</b> , a ? □ <b>none</b> □ dry r take the medication a	you having with your ware you finding it helpf mouth □ jitteriness □ as directed? □ yes experiencing?	iul? □ yes □ headache □ insomn				
Ex	<b>ercise</b> : What ty	pe and how often?						
	w well do you <b>s</b> l through the nigl		ly but can't stay asleep	□ difficulty falling	asleep □ freque	ent or early mornin	ng wakening	
Are you having  □ hunger  □ cravings  □ irritability  □ lack of control		any symptoms or p  ☐ fatigue ☐ chest pain ☐ rapid heart beat ☐ fluid retention	ohysical problems sir ☐ fainting ☐ short of breath ☐ diarrhea ☐ constipation	nce starting this prop indigestion joint pain muscle cramps rashes	gram? □ none □ headache □ weakness □ numbness □ dizziness	☐ tremors ☐ depression ☐ anxiety ☐ moodiness	☐ trouble sleeping ☐ hair loss ☐ cold intolerance ☐ irregular periods	
			•				0 1	
	• Instead o	f labeling your mea 3 meals a day, mini	it as well as WHAT yo l as "breakfast" pleaso mize snacks, eat your f what you eating in a	e identify your eatin larger meal mid-da	y and your final		e evening	
W	eight Mainte	enance Session #	II: Overeating Epi	sodes, Part 2				
I)	Do you sometimes feel depressed or guilty after overeating? □ yes □ no							
2) If you have your favorite leftovers in the house, do you have difficulty going to sleep at night without eating them? ☐ yes ☐ no								
3)	I often feel disgusted with myself because of my overeating.  □ yes □ no							
4)	Do you sometimes experience a loss of control over how much you are eating? $\square$ yes $\square$ no							
5)	Are you sometimes upset as a result of binge eating behaviors that you experience?  ☐ yes ☐ no							

# 1) Do you sometimes feel depressed or guilty after overeating?

You should try to avoid associating feelings such as depression or guilt to an overeating episode. When you feel depressed or guilty after overeating the next emotion that often occurs is shame. When people feel ashamed of themselves they tend to make life choices that are counterproductive. The feeling of shame could easily trigger another overeating event. This could lead to a negative downward spiral in your weight control efforts. Our goal should be to bounce back quickly after an overeating event by not allowing ourselves to become guilty or depressed over it. Remember in session #I we discussed how important it is to keep overeating events at just one meal, not multiple meals in a row by trying to have positive self-talk to get yourself back on track.

# 2) If you have your favorite leftovers in your house, do you have difficulty going to sleep at night without eating them?

It is important to make your house your safe haven as far as food choices are concerned. You should throw away left overs that are going to tempt you to eat a second dinner before bed. It is better to cook just enough for one meal rather than having leftovers of foods that are tempting for you. You should also avoid having snacks in the house that you tend to overindulge on just because they are around.

## 3) I often feel disgusted with myself because of my overeating.

You should work on your self-talk and not allow yourself to have negative feelings after you overeat. You need to accept that everyone, even naturally thin people, will overeat at times. Our goal is to get you back on track after an overeating episode. This will occur much less often if you are feeling bad about yourself.

Try to say positive affirmations to yourself such as "I only had 3 slices of pizza, I could have easily had 4 but I kept it to 3". "Today's a new day." "I am going to exercise and focus on good food choices and portions today," etc.

## 4) Do you sometimes experience a loss of control over how much you are eating?

You should work hard to evaluate the circumstances in which this occurs. Often times you are eating while really stressed out or anxious about other happenings in your day. It would be ideal if you tried to make time to exercise when you are feeling anxious to help with relieving your stress. This will often times lead to you maintaining control over the amount of food that you will eat at the next meal. Also, make a conscious effort to avoid high carbohydrate comfort type food when you are stressed out. Examples include bread, pasta, chips, cake, cookies, ice cream, macaroni and cheese, etc.

# 5) Are you sometimes upset as a result of binge eating behaviors that you experience?

If this occurs often there is a good chance that binge eating disorder is negatively affecting your health. You should spend time analyzing what circumstances and foods usually lead to binging behaviors. Often times it is as simple as having your trouble foods available in the house. You should eliminate trouble foods if possible from your household. You should try to avoid restaurants that you often binge eat at. You should work hard to make exercise a part of your life. Often times a good workout could help to decrease the unconscious desire to binge eat.

#### Sugar, Inflammation and Cancer

Inflammation is part of the body's natural healing process. During **injury** or **infection**, the body releases <u>chemicals</u> to help protect it and fight off any harmful organisms. This can cause redness, warmth and swelling. Some foods, like SUGAR can also cause inflammation in the body, which is *normal*. However, eating <u>too many</u> inflammatory foods may cause **chronic** low-grade inflammation. This can cause serious **health problems** such as heart disease, diabetes, and cancer.

# The Warburg Effect

In the 1920's, Otto Warburg described a unique feature of cancer cells. The Warburg Effect is the phenomenon in which <u>cancer cells</u> produce additional energy through "increased oxygen-dependent glycolysis followed by lactic acid <u>fermentation</u> with secretion of lactate". TRANSLATION: **cancer cells** survive on the fermentation of **glucose**. Cancer cells <u>cannot</u> survive on the metabolism of fat. Humans (and other animals) can survive on fat metabolism. By depriving our bodies of glucose we can starve the cancer (or pre-cancer) cells.

The **Insulin Hypothesis** states that sugar-heavy diets can result in permanently elevated levels of insulin. Insulin is released by the pancreas and tells cells to take up glucose. Insulin and another hormone IGF-1 (insulin-like growth factor). Both activate metabolic proteins linked to cancer. Excessive amounts of sugar lead to insulin resistance. It is really insulin itself that's getting the tumor started by telling cancer cells to take up sugar <u>all the time</u>. Elevated insulin is also strongly associated with obesity which is expected soon to overtake <u>smoking</u> as the leading cause of **preventable** cancer.

## Obesity and Cancer

Currently, about 2 out of 3 adults in the US are **OVERWEIGHT** (defined as having a body mass index or of 25-29.9 kg/m<sup>2</sup>) or **OBESE** (having a body mass index of 30 kg/m<sup>2</sup> and higher). Body mass index (BMI) is simply calculated by a person's weight (in kilograms) divided by the square of the person's height (in meters).

In 2017, the CDC identified 13 cancers that have increased risk due to their link to obesity. These include **postmenopausal breast cancer**, **uterine cancer** and **ovarian cancer** as well as meningioma, multiple myeloma, adenocarcinoma of the esophagus, and cancers of the thyroid, gallbladder, stomach, liver, pancreas, kidney, colon and rectum.

Obesity is the single biggest cause of CANCER in women

40% of ALL cancers diagnosed in the US are attributed to being overweight or obese 55% of ALL cancers diagnosed in WOMEN in the US are attributed to being overweight or obese Cancers associated with overweight and obesity have <u>increased</u> 7% between 2005-2014 Obesity <u>increased</u> among adults younger than age 75

## Obesity and breast cancer

Obesity is a risk factor for the development of **hormone receptor-positive breast cancer** in postmenopausal women. The hormone estrogen stimulates these cancers to grow. Breast cancer patients who are obese have a poorer prognosis.

## What is the link of obesity to cancer?

Obesity causes an inflammatory state. Obesity increases the activity of aromatase. This is the direct link to postmenopausal breast cancer <u>regardless</u> of weight (or BMI). Of note, BMI is a measure of body fat based on your weight in relation to your height but NOT specific to age, gender or ethnicity.

## "Normal weight" obesity

Women with inflammation have enlargement of breast fat cells even if they have a <u>normal BMI</u>. Aromatase activity is increased in the inflamed breast tissue of women even with a normal. Inflamed breast tissue is associated with changes in inflammatory and metabolic markers in blood. Normal BMI women with inflamed breast tissue are metabolically obese or normal weight obese. Genetic and metabolic changes increase the risk of breast cancer.

#### The Women's Health Initiative (WHI)

This study enrolled postmenopausal women with <u>normal BMI</u> aged 50-79 years, starting in the 1990's. They had no history of breast cancer. Measurements of body fat were obtained at baseline in 3,460 women. Women were followed for 16.4 years to determine the relationship between body fat and estrogen-dependent breast cancer. They were followed based on levels of **inflammatory** and metabolic factors in the blood.

# Study results

Normal BMI women with the highest level of body fat were **TWICE** as likely to develop breast cancer as women with the lowest level of body fat. Higher levels of body fat were associated with significant increases in blood levels of inflammatory factors—insulin, leptin and C-reactive protein (hsCRP). The LINK between body fat and breast cancer is likely due to **local changes** in the breast such as increased aromatase as well as changes in levels of inflammatory blood factors.

#### **Obesity & Breast Cancer**

Obesity and breast cancer are both on the rise worldwide. These two disorders are also linked to one another. Excess body weight, poor diet and physical inactivity have been associated with an increased risk of breast cancer in postmenopausal women. With 70 percent of postmenopausal women in the U.S. estimated to be affected by excess weight or obesity, this is cause for concern.

The good news is that weight management also plays a key role in the prevention of breast cancer and in improving the prognosis once breast cancer is diagnosed. The relationship between obesity and breast cancer, however, is complex and not fully understood.

#### What do we know about the relationship between excess body fat and breast cancer?

A strong relationship exists between **obesity and many cancers**, particularly postmenopausal breast cancer. Excess body fat may increase the risk of developing postmenopausal breast cancer through factors that include:

Insulin resistance Changes in the level of sex hormones Chronic inflammation

In contrast to postmenopausal breast cancer, the relationship between excess body fat and premenopausal breast cancer is less certain. We also know that many pre and postmenopausal women, after receiving a breast cancer diagnosis, end up gaining weight. Weight gain and obesity lead to poorer breast cancer prognosis, more obesity-related conditions like heart disease and diabetes and worse surgical outcomes including higher infection rates, poorer healing, lymphedema, fatigue and functional decline.

#### Why is this important?

Breast cancer is the most common cancer among American women, excluding skin cancer. About 1 in 8 women in the U.S. will develop invasive breast cancer in their lifetime. Understanding the connection between excess weight and breast cancer risk gives individuals more reasons to better manage their weight and decrease risks of developing this all-too-common and life threatening disease. It can also empower individuals to take control of their weight after a breast cancer diagnosis.

#### **Understanding Breast Cancer Risk Factors.**

A risk factor is anything that increases your risks of developing a disease. Different types of cancer have different risk factors. However, risk factors don't tell the whole story. Some women can have multiple breast cancer risk factors and never develop the disease, while others may have no risk factors and develop the disease. Still, it's important to **be aware of your breast cancer risk factors** and be able to distinguish between the ones you can change, and the ones you cannot change.