

Ban The Belly Fat

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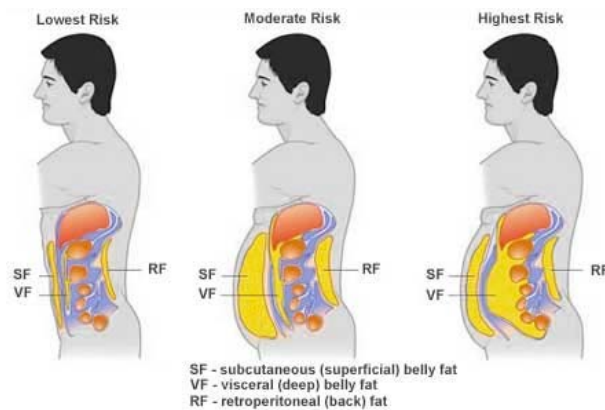
Ban The Belly Fat

- Americans spend countless hours and billions of dollars trying ***anything and everything*** to attain a flat stomach

Ban The Belly Fat

- What is Belly Fat?
- 4 different types of fat
- Fat can accumulate just underneath the skin: subcutaneous fat. Looser fat that lets you “pinch an inch”
- Retroperitoneal: fat behind the abdominal wall
- Intramuscular fat within the skeletal muscles
- Visceral fat – packed between your abdominal organs (stomach, liver, kidneys, etc). This is intra-abdominal or **Belly FAT**

Ban The Belly Fat



Ban The Belly Fat

- Visceral fat affects the abdominal area; it causes a person to have a thicker waistline or “pot belly”
- Having too much fat is always bad, but visceral fat is *far worse* than subcutaneous fat for serious health problems – including *heart disease, high blood pressure, stroke, diabetes and even some cancers such as breast and colon cancer*

Visceral Fat



- **Visceral fat** is deeper inside, around the vital organs (heart, lungs, digestive tract, liver, etc.) in the chest, abdomen and pelvis
- It's so deep inside that you can't notice it from the outside
- Many people are sub-conscious about the fat they can see (subcutaneous fat) – but actually it is the hidden fat – **the visceral fat** – that does harm

Belly Fat

- We all need SOME visceral fat
- It provides **necessary cushioning** around organs
- When a body becomes overweight/obese, it runs out of safe places to store fat and begins storing it ***in and around the organs***

Belly Fat

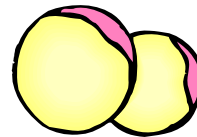
- Fatty liver disease was, until recently, very rare in non-alcoholics
- Now it is common
- With obesity increasing, fat deposits become so full that the fat is deposited into the organs like the ***liver***, and around the ***heart*** as well



Fatty Liver



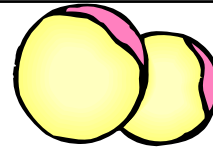
Belly Fat



Fat Cells

- At one time it was thought that fat cells were simply **inert storage depots for surplus calories**
- Studies have established that fat cells can secrete certain **hormones and other substances** much like other organs in the body
- Hormone leptin, which controls appetite, and adiponectin, which makes the body more sensitive to insulin and controls blood sugar levels

Belly Fat



Fat Cells

- Fat is an **ACTIVE ORGAN** that **sends chemical signals to other parts of the body**
- Study in the American Chemical Society's *Journal of Proteome Research* reported on the discovery of **20 new hormones and other substances not previously known to be secreted into the blood by human fat cells**. 80 different proteins produced by fat cells.
- This study also verified that fat secretes dozens of **hormones and chemical messengers – some of these are pro-inflammatory chemical messengers**

Belly Fat



- Belly fat can be thought of as an **endocrine organ** – an organ that secretes chemicals into the bloodstream that elicit significant changes in the activity of other organs
- Belly fat cells produce and secrete several types of **immune system stimulants called cytokines**
- These molecules circulate around the body revving up certain cells of immunity that are in charge of **inflammation**
- This can encourage the growth of **arterial plaque**

Belly Fat

- The amount of fat in your cells is determined not just by how much fat enters, but also by how much fat leaves them
- When the amount entering and the amount leaving over a period of time are equal, fat cells don't enlarge
- They properly perform their job of storing fat temporarily as you eat and then releasing it between meals so that you don't feel hungry before your next meal

Belly Fat



- Fat cells are **not intrinsically evil**
- They serve a very useful purpose
- They allow us to do important tasks such as go to work, exercise, run errands, etc. instead of having to eat all the time to maintain energy levels
- But when **insulin levels stay high** by eating all the time or eating very high glycemic foods, our fat cells keep fat locked up in the cells and won't release it.

Belly Fat

- When insulin level is high, fat cells are locked in the ***fat-storing mode***
- When insulin is kept low, the switch is turned off and ***fat can be released*** for use by the body
- Trick is to keep insulin levels LOW!!

Belly Fat

- One of the other tasks insulin performs is the regulation of blood sugar
- As more glucose (food/drinks) enters the blood, more insulin is required to control it
- **Carbohydrates cause insulin** to spike higher than either fats or protein
- Refined carbs, or rapidly digested carbs, cause the insulin to spike even higher!

Belly Fat

- High carbohydrate intake = high insulin release
- High refined carbohydrate intake = **very** high insulin release
- Higher Insulin release = ***higher fat storage***

Fat Cells

- Once fat cells form, they might shrink during weight loss, but they **do not disappear**
- Weight gained is caused by the **creation and expansion of white fat cells, or adipose tissue.**
- Dieting can shrink fat cells but not eliminate them

Belly Fat

- So, how much is TOO MUCH??
- Get a measuring tape, wrap it around the waist, just above your hipbone and check your girth
- Do it while standing up
- For best health, waist size should be:
- **Less than 35" for women**
- **Less than 40" for men**



Belly Fat

- Having a pear shape with fatter hips and thighs is considered **safer** than apple shape with a wider waistline

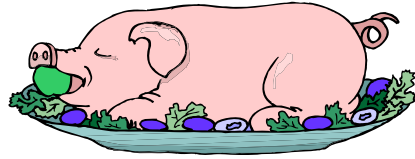
Belly Fat

- Many women notice an increase in belly fat as they get older, **even if they aren't gaining weight**
- Likely due to a **decreasing level of estrogen**, which appears to influence where fat is distributed in the body

Ban The Belly Fat

- So why do we get belly fat?
- Our bodies are designed to store fat – we're very good at it
- When humans were hunters-gatherers, **we needed the ability to store fat so we could then burn it during the winter months when food was scarce**

Ban The Belly Fat



- Now food is plentiful in our environment all the time and it's NOT feast or famine
- It's **FEAST ALL THE TIME!**
- Now we're eating all the time and, as a result, storing all the time
- If you're consuming more calories than you're expending, fat will develop

Ban The Belly Fat

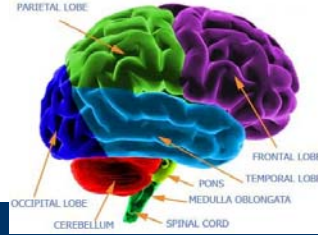
- Fat distribution is most influenced by genetics, gender and age
- Those are factors we cannot change
- But **stress, overeating (especially sugar/carbs) and physical inactivity** can cause belly fat to accumulate out of proportion to the other areas where fat is deposited

Insulin



- When we eat food, the pancreas releases insulin
- Insulin's job is to get the glucose from the food into the cell where it can do its job
- When insulin levels are constantly elevated, the body is in "fat storage" mode
- **High insulin levels generate a signal that keeps fat packed in fat cells instead of being released for the body to use**

Insulin



- Our brains respond to high insulin by **stimulating the appetite centers** that send out hunger signals – even if you just ate an hour ago!
- As a result – instead of burning up the fat we already have, we end up eating MORE!
- Explains why losing weight is so difficult
- Food we eat puts us in perpetual “fat-storage” mode, results in overeating!

Insulin

- 2007 Jay Cutler was the quarterback for the Denver Broncos
- During the season, despite working out with weights and eating thousands of calories per day, he lost almost 35 pounds!
- Diagnosed with Type 1 diabetes
- Without any insulin to store energy, he lost a lot of weight
- Subsequently regained his lost weight once he was placed on insulin

Insulin Resistance

- Doctor can measure fasting insulin levels
- Correlates with degree of insulin resistance
- Low insulin levels suggest you are sensitive to insulin: good thing!
- High insulin levels suggests pancreas is over-secreting insulin to compensate for insulin resistance
- At this point no established “ideal” normal vs abnormal insulin levels. Goal is generally 3-25. On the lower end is good.

Ban the Belly Fat

- There is no magic diet for belly fat
- When you lose weight on any diet, belly fat usually goes first
- What CAN help?

A Fiber-Rich Diet

- Research shows that people who eat **10 grams of soluble fiber per day**, without any other diet changes, build up less visceral fat over time than others
- 10 grams soluble fiber: 2 small apples, a cup of green peas and ½ cup pinto beans, for example

A Fiber-Rich Diet



- Another study from Penn State: (*American Journal of Clinical Nutrition*) 50 men and women, all obese and had **metabolic syndrome** (combination of abdominal obesity, high blood sugar and high blood pressure, high triglycerides)
- For the diet: they all cut calories
- ½ of the participants were told to be sure that all their grains were **whole grains such as oatmeal, whole-grain cereal, brown rice and barley**

A Fiber-Rich Diet

- The other ½ were instructed to choose only refined grains, such as white bread, white pasta and other foods made with white flour
- After 12 weeks, both groups lost about the same amount of weight –an average of 11 pounds (calories count!!)
- The **whole-grain group lost more belly fat** and also reduced their CRP by 38% (measures inflammation)

A Fiber-Rich Diet

- Fiber itself has NO calories, yet it helps to fill you up!
- SLOWS the absorption of food by the body
- Stabilizes blood sugar
- Helps keep appetite satisfied longer
- Helps body absorb LESS fat and cholesterol from foods
- Helps maintain gut/immune health

A Fiber-Rich Diet

- Oatmeal, dry, 1/3 cup
- Oat bran, cooked, 3/4 cup
- Raspberries, 1 cup
- Blueberries, 3/4 cup
- Plums – 2 medium
- Peas, frozen 1/2 cup
- Sweet potato, 1/2 cup
- Navy Beans, 1/2 cup
- All bran, 1/3 cup
- Fiber One, 1/2 cup
- Kidney beans, 1/2 cup
- 2.7 grams fiber
- 4.0 grams fiber
- 3.3 grams fiber
- 1.4 grams fiber
- 2.4 grams fiber
- 4.3 grams fiber
- 4.0 grams fiber
- 6.5 grams fiber
- 8.6 grams fiber
- 11.0 grams fiber
- 7.9 grams fiber

Fiber

- La Tortilla Factory Tortilla 1 8 grams
- Flat Out Wraps 1 8 grams
- Alternative Bagel 1 8 grams



Eliminate Sugary Drinks



- Soda, juice, sweetened tea, “energy drinks,” Starbucks, etc
- **Sugar increases belly fat and fiber reduces it** so when you juice fruit you remove the fiber, leaving pure sugar!
- The average American eats **156 pounds of added sugar each year!**
- The sweet tastes can change the way we perceive food, think about food, and crave food and can even enhance our appetite and influence insulin secretion – turning on an “overeating” response

100 Extra Calories/Day

- It doesn't take much in extra eating and drinking (or too little exercise) to pack on the fat
- Getting just 100 calories a day more than what you need = a 10-pound weight gain in one year
- 3,500 calories in a pound

Sweeteners

<u>Sweetener</u>	<u>Relative Sweet Rating</u>
• Glucose	• 0.8
• Table sugar	• 1.0
• HFCS	• 1.2
• Fructose	• 1.4
• Aspartame	• 180
• Sweet 'N Low	• 300
• Splenda	• 600

Sugar/HFCS



- In the past few hundred years, the human diet has gone from being almost completely sugar free to being laden with sweeteners
- Food manufacturers add different forms of sugar to EVERYTHING
- Sugar and HFCS are the two most frequently used sweeteners in the modern diet
- Average person consumes about 44 pounds of HFCS every year

Stress



- Cortisol is the major hormone of stress
- **Promotes** overeating, fat storage, belly fat
- **As belly fat grows, so does blood levels of cortisol**, which only perpetuates stress and makes it worse
- **Belly fat elevates cortisol** – triggers a more voracious appetite, craving for sugar and fat, and weight gain
- Vicious cycle is hard to break – must pay attention to food intake, exercise AND stress levels

Mindful Eating

- Eat mindfully
- SLOW down
- It takes approximately 15-20 minutes for the signal of fullness to reach the brain
- Portion control can go out the window in that time
- Take small bites, chew 15-20 times
- Savor the food as you chew
- Swallow before taking the next bite
- Pause between bites, assess your hunger level

Can I spot reduce belly fat?

- Spot reduction is a common misconception involving fat loss.
- This is the idea that exercising one body part should help reduce the fat surrounding that area.
- This is not true. Reducing body fat levels results in the removal of fat in the entire body.
- According to a study cited on Acefitness.org, a group of men performed 5,000 sit-ups over the course of a 27-day research project.
- Testing showed that they lost fat equally over the entire body, rather than just around the abdomen.

What To Eat

- Eat Breakfast!
- Include lean protein at each meal
- Slow-release carbs
- At least 5 servings (1/2 cup cooked, 1 cup raw) of vegetables
- Two servings of fruit
- Good fats at EVERY meal

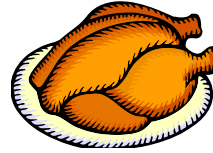




Eat Breakfast

- People who skip breakfast (40% of adults and 60% of children/teens):
- Are **more likely to be overweight or obese – especially around the belly**
- Are less likely to exercise regularly
- Have higher rates of heart disease
- Have higher rates of diabetes
- Are more likely to die of heart failure

Lean Protein



- Breakfast: 2-4 eggs/week if high cholesterol, eggbeaters, cottage cheese, Greek yogurt, whey/plant protein shake
- Lunch/Dinner: Lean poultry, fish, grass-fed beef, lean game meats, lean pork, soybeans, beans/legumes
- Keep red meat (beef, pork, lamb) servings to 1-2 per week or less

Quality Carbohydrates

- Best carbs come from whole foods: vegetables, fruits, whole grains, legumes
- Eat foods in their *most unprocessed form*: oatmeal instead of oat flour, corn instead of cornmeal, orange instead of orange juice

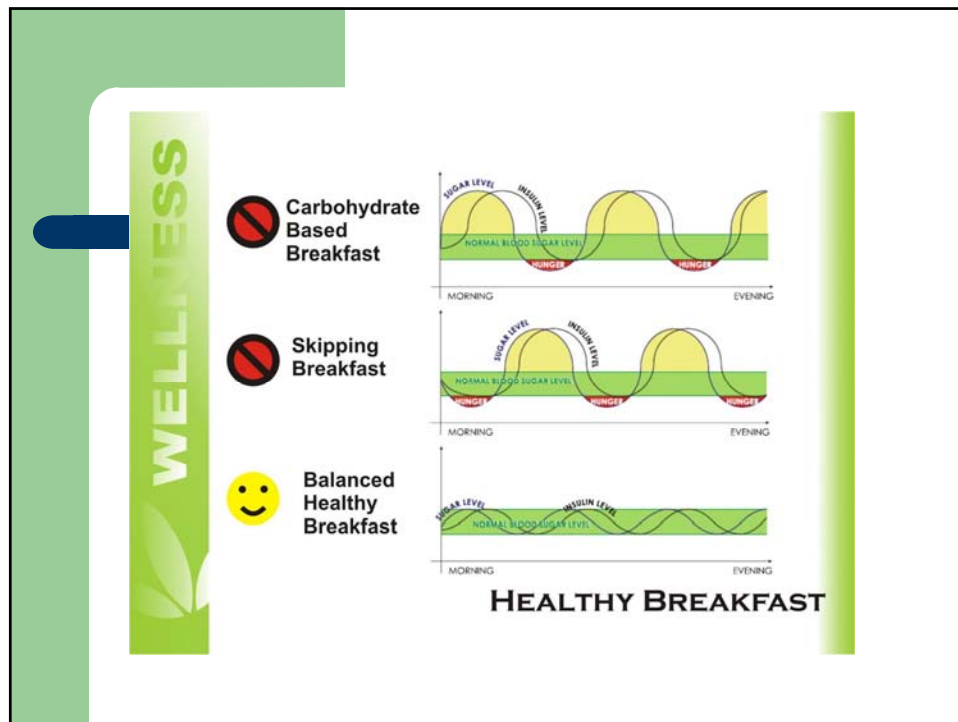


Slow-Release Carbs

- Carbohydrates that are digested SLOWLY
- Raise blood sugar **SLOWLY**
- Carbohydrates with lots of FIBER – fiber takes longer to break down and digest

Glycemic Index/Glycemic Load

- Glycemic index is a measure of *how fast* a carbohydrate-containing food raises blood glucose
- Glycemic load of food is a number that estimates how much the food will raise a person's blood glucose level after eating it – based on glycemic index
- Glycemic load is defined as the grams of available carbohydrate in the food x the food's GI / 100.
- Low glycemic load foods are absorbed more *slowly*, ensuring more stable blood sugar
- By reducing post-meal blood glucose levels, low glycemic load foods/meals *reduce insulin surges*



High-fiber/Low-glycemic breakfast

- Greek yogurt, berries, whole wheat bread with almond butter
- Cottage cheese/fruit, Alternative bagel with peanut butter
- High-fiber tortilla, eggbeaters and veggies with low-fat cheese
- Greek yogurt and Kashi Go-Lean cereal
- Veggie Omelette

High-fiber/Low-glycemic lunch/dinner

- Lunch/Dinner: Lean protein with Vegetables, Beans/Legumes, Sweet potato, peas, beets (in small quantities: brown rice, whole grain pasta, whole-grain bread) High-fiber tortillas
- Always include a small serving of healthy fat, as fat helps to slow down digestion and regulate blood sugar

Fruits

- Fruits can be high in sugar so 2 servings a day is good for most people
- Berries are lower on the glycemic index than fruits like bananas and pineapple
- 1 banana = 2 fruit servings
- Buy organic and eat the skin with lots of fiber
- Keep dried fruit and juice to a minimum

Good Fats

- Nuts/nut butters, seeds
- Olive, canola, walnut, almond oil
- Avocado
- Flaxseed, ground
- Olives

Herbs and Spices

- Herbs and spices can add a lot more than flavor, color, and variety to your favorite foods
- They maximize nutrient density because they contain vitamins, minerals, antioxidants and phytochemicals
- They can **increase thermogenesis** – you burn more calories after eating spicy foods

Herbs and Spices

- The complex flavors they impart decrease the need for salt
- Certain herbs and spices such as cinnamon and coriander allow your body to handle glucose more effectively
- Chilis and peppers increase fat burning
- Cumin, Sage and Turmeric improve brain function
- Basil, cinnamon, thyme and ginger have immune-boosting powers

Green Tea



- Green tea contains EGCG, which has been shown to increase metabolic rate
- One study found that people who consumed green tea extracts had a 4% increase in thermogenesis and an overall increased energy expenditure of 4.5%
- *Journal of Nutrition* study found that exercisers who drank about 4 cups of green tea per day for 12 weeks lost over 8 times more ab fat than those who drank an ordinary caffeinated beverage – nearly 8% versus less than 1%

Antioxidants

- Antioxidants are chemicals found in plant foods such as fruits, vegetables, coffee and red wine
- These chemicals protect you against the damage done by belly fat because they deactivate the dangerous by-products of metabolism – preventing oxidation of LDL and other fats

Water

- Of all the nutrients in our diet, water is the most important
- Although you can live for weeks without food, you can only survive a few days without water
- Water is essential to all the life processes that go on in your body
- It is how you transport oxygen, red blood cells, vitamins/minerals, enzymes and hormones throughout your body

Water

- Water eliminates waste and toxins
- Required for digestion and absorption, brain function, muscle contractions, nerve transmission and controlling body temperature
- More than 60% of your body composition is made up of water
- Your brain is composed of 70-80% water

Water

- Not getting enough water – feel tired and fatigued, stresses your entire body, including your heart and brain
- Not getting enough water – could lead to eating too much
- Study presented at the American Chemical Society in Boston in 2010 showed that **middle aged and older people who drink 2 cups of water before eating a meal ate 70 to 90 fewer calories than their non-water-drinking counterparts**
- During the 12-week period, the water drinkers lost 5 pounds more than the people who didn't drink water.
- They kept the weight off as long as they continued to drink

Water

- How much water do you need?
- Your urine should be a light yellow in color
- Usually at least 8 glasses of water/day

Exercise

- Large research studies show that about 55% of adults don't get any physical activity beyond the basic activities of daily living
- 33% get none at all
- That leaves only about 12% of American adults engaging in at least moderate level of activity
- No wonder we have such a staggeringly high rate of chronic diseases associated with too much belly fat

Hazards of Sitting Too Much

- How many hours do you sit in a day?
- Driving, at desk, watching TV, working on computer?
- If 6 hours or more, you may be putting your health at risk
- People with sitting jobs have twice the rate of cardiovascular disease as people with standing or walking jobs

Hazards of Sitting Too Much

- As soon as you sit down, calorie burning drops to about 1 calorie per minute
- The enzymes in your skeletal muscles that help break down fat and keep LDL cholesterol levels low reduce their activity by as much as 90% as soon as you sit
- After 2 hours of sitting, HDL (good) cholesterol levels drop by about 20%

Exercise



- Not just for our bodies!
- Many studies have documented exercise's effectiveness as a treatment for mild to moderate depression
- Exercise has been shown to be as effective as antidepressant medication in some people
- Helps control stress
- People who exercise regularly have lower rates of insomnia and anxiety

Exercise



- Vigorous exercise trims fat, including visceral fat
- Slows down the build up of belly fat
- How much is enough?
- Half an hour of vigorous aerobic exercise, done 4 times a week minimum, a Duke University study showed
- Add 3 sessions of strength training per week
- Vigorous – jogging or walking briskly uphill or on an elliptical or stationary bike

Exercise



- Moderate exercise also helps
- It slows down how much belly fat you gain
- But to get rid of belly fat, you may need to be more vigorous
- Rake leaves, walk, garden, go to Zumba class, play soccer with your kids or grandkids
- If you are not active now, it is a good idea to check with your healthcare provider before starting a new fitness program

Exercise

- Walk! Speed up your walk
- University of Arkansas found that even when exercisers burned exactly the same number of calories a week, those who did **shorter, high-intensity workouts had a 20% drop in belly fat after 3 months** while those who did longer workouts at a moderate pace had not change
- Aim for 3 weekly speed sessions lasting about 30 minutes. Intensity: can speak only a few short words at a time. Can also do intervals

Exercise



- Pump some iron!
- A 12-week Skidmore College study found that exercisers who did a higher intensity total body resistance routine combined with cardio lost more than twice as much body fat – in particular 4 times as much belly fat compared with cardio-only exercisers

Exercise



- Recommendation is 150 minutes per week or more
- 30 minutes 5 times a week aerobic
- 2-3 x per week strength training – 20-30 min each session
- You don't have to do it all at once, but you have to continue your activity at least 10 minutes at a time to get maximal benefit

Exercise

- Unfortunately, sit-ups and crunches can't eliminate visceral fat directly
- You can't reduce fat from specific parts of your body by exercising that body part
- Our bodies don't work that way
- You can tone the muscle, but not burn the fat
- These exercises can strengthen your core

Is Sleep Important?

- Chronic sleep loss increases risk of diabetes/heart disease
- Associated with weight gain in adults and children
- Decreases leptin, increases ghrelin



Sleep

- Getting enough sleep can help reduce belly fat
- In one study, people who got 6-7 hours of sleep per night gained less visceral fat over 5 years, compared to those who slept 5 or fewer hours per night or more than 8
- Canadian researchers found that adults who averaged just 5 or 6 hours a night were 35% more likely to gain 10 pounds and were nearly 60% heavier around the middle than those who slept 7-8 hours

Sleep



- Research Columbia University: 6 hours or less a night – 23% more likely to be obese than people who slept 7-9 hours
- 5 hours or less – 50% more likely
- 4 hours or less – 73% more likely to be obese

Healthy Sleep

- Have a standard relaxing bedtime routine- keep it regular
- Dark, cool, quiet bedroom
- Exercise regularly – at least 3 hours before bedtime
- Avoid caffeine, cola, tea – 8 hours
- Avoid alcohol – several hours
- Sleep and sex only – no work, TV!

Alcohol and Appetite



- Stimulated by alcohol -
- Impairs judgment – dis-inhibition of dietary constraint
- LOWERS blood sugar!
- Alcoholics – extreme, loss of appetite but when do eat – eat mostly carbs
- Up to 1 drink per day for women
- Up to 2 drinks per day for men
- WITH Food

Summary

- Eat breakfast
- Low glycemic carbs
- Balance protein, fat, carbs
- Fiber, fiber, fiber!
- Drink water
- Slow Down Your Eating
- Rev Up Your Exercise
- Get some sleep
- Watch the alcohol

