

The Keys to Successful Fat and Weight Loss for Life

by Chris Morin

Losing weight is not easy because you
are living in an **Obesogenic
Society**

An environment that promotes
obesity.

USA

1960s - 13.5%

2017 - 38-40 %

Worldwide 1 out of 10 people
obese

Steady Gain

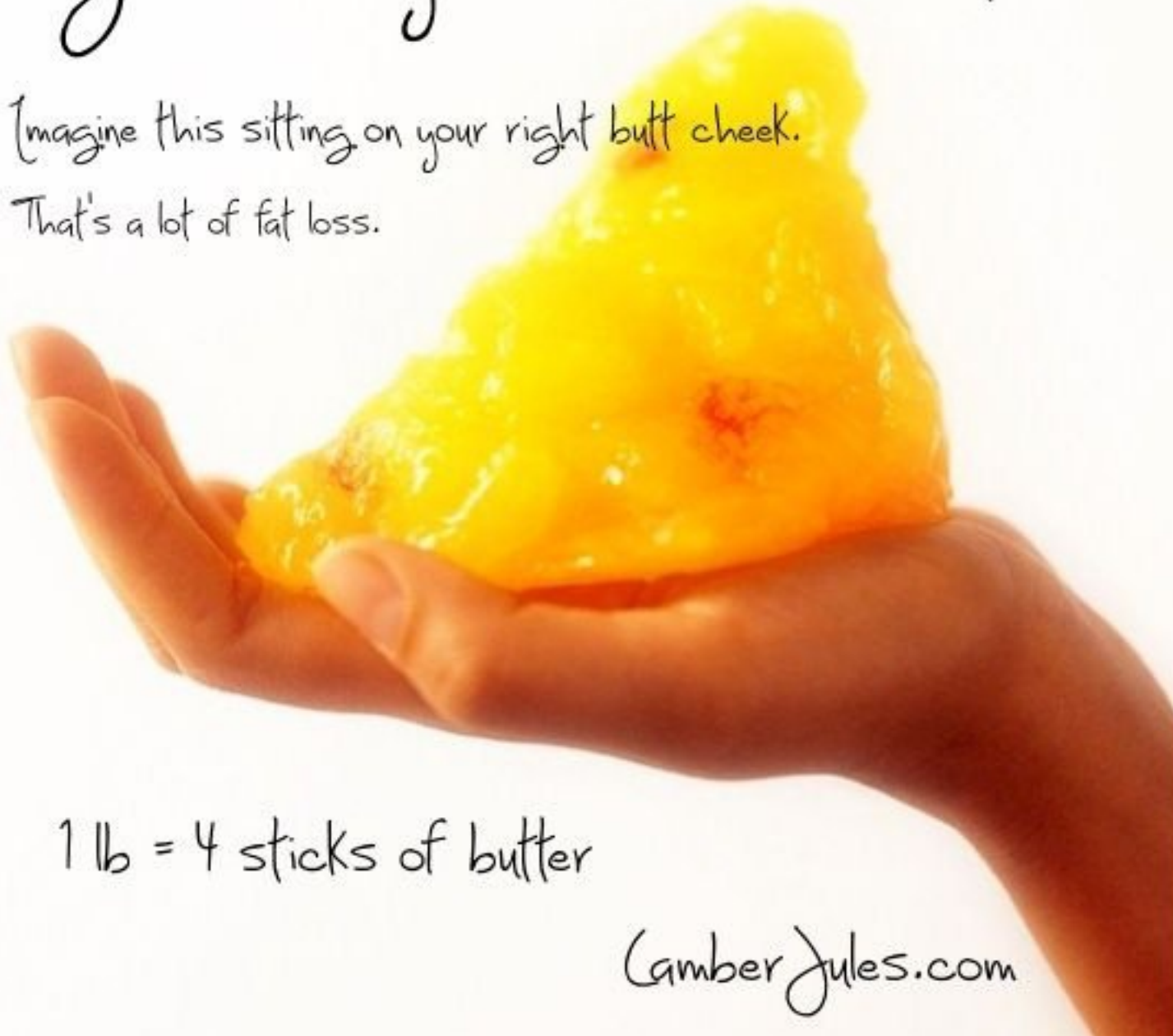
On average adults (>30 yrs)
gain 0.4 - 1.8 lbs of fat
per year till their 60s
despite a decrease in
food

One Pound of Fat takes up Space

You Only Lost 1 lb of fat

Imagine this sitting on your right butt cheek.

That's a lot of fat loss.



1 lb = 4 sticks of butter

CamberJules.com

Serious

- **Obesity Second Leading Cause of Premature Death**

Smoking is #1 *

- **Just being moderately overweight decreases life expectancy by 10-20 years**

Obesity major risk for

cardiovascular diseases such as heart
disease

high blood pressure and stroke
arthritis and other musculoskeletal
disorders

several cancers

type 2 diabetes
and sleep apnea.

Food and Diet

Industry

No Help!

Food Industry Culprit



"Portion Distortion" Doubled the Portions than the past.



People eat fewer fruits and vegetables and whole grains and more sugar and fat than 30 years ago

Americans eat 140 pounds more food per year than a decade ago.

People eat by the package rather than the portion

Many Americans eat out more than at home. On average restaurant meals have 65% or more calories.



Diet Industry

Where to go for help?

Weight loss is a 20 billion dollar industry that does not deliver results. Over 100 million dieters



More than 92-95% of people who set out to lose weight do not succeed.

The Jenny Craig logo, featuring the brand name in a cursive script.

Most don't promote real lifestyle change.

They rely on quick fixes and meal replacements that don't change behaviors.

The logos for Nutrisystem (with a green leaf icon) and a blue square logo with a white letter 'D'.

There is no magic bullet or potion.

The Weight Watchers logo, featuring a colorful swirl icon and the brand name.

Step One

Diet

for Fat and Weight

Loss for Life

Health Coach

Perspective

Trying to figure out the
Best Diet

Looking at the
Genetic, Metabolic, and
Microbiotic Fingerprints
will help to identify who is
predisposed to lose on
one diet versus the other.



Mystery

**One Diet does not work
for all.**

Large Meta-Analysis of Weight Loss Studies suggests that People Lapse

- Most People Lapse in a Year no matter what Diet **especially low carb diets**
- People Start a Diet Strong, but they Lapse after several Months by Eating More
- Weight re-gained not because their metabolism slowed down in most cases

**Understanding
Trending Diets
Most of them are
Elimination Diets**

Diets

What's Trending

High protein diets

Low carb diets

High fat diets

(Paleo & Atkins)

Detox diets

Elimination diets

Trending: Low-Carb Diets

Many Weight Loss Programs of Today

Feature this diet,

What is a Low-Carb Diet?

Less than 20% of calories from carbs.

This amount is Too Low!

You need at least 400 calories from carbs a day to function.

I can not recommend eating less than 40-45% of calories from carbs.

Why are carbs important?

- Only fuel source for your brain and nervous system
- #1 Fuel source during exercise
- It is hard to burn body fat without having carbs present

Why do people lose a lot of weight initially when on a low-carb diet?

- Your body has a reserve of carbohydrates (storage form called glycogen) of around 1000 to 3000 grams
- For every gram of carbohydrate stored you store 2.2 to 3 grams of water with it
- When you don't eat carbohydrates your body depletes its carbohydrate reserves therefore water is lost

Why do people lose weight when on a low-carb diet?

- Do the math-if you lose 1000 grams of carbs from not eating carbs you lose up to 3000 grams of water which is 3 kg or 6-7 lbs of water (that is 3/4 of a gallon)
- As soon as you introduce carbohydrates back into your diet you gain weight even if you are still losing fat.



3/4 of a gallon water
diuresis-excessive water
loss

**It is a false
weight loss**

Very Low Carb Diets < 20% Calories

Weight gain very rapid after introducing carbs back into diet. It is not a lifestyle change.

Risks of a low-carb diet

Headache

Bad breath

Weakness

Fatigue

Constipation or diarrhea

Vitamin or mineral deficiencies

Bone loss

Gastrointestinal disturbances and may increase risks for various chronic diseases. Severely restricting carbohydrates to less than 20 grams a day can result in a process called ketosis.

In 13 low carb diet studies only one reached goal after one year

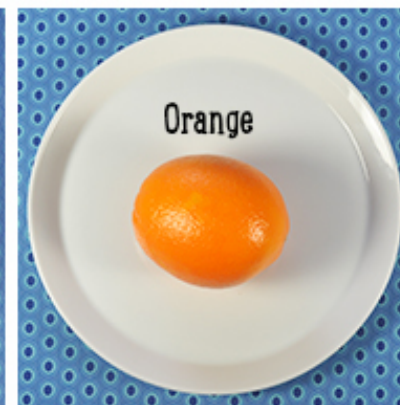
As a Health Coach I
can not
recommend a plan that
has less than 400
calories from carbs.
That would be a no to
low carb diet.

Key: Say no to very low carb diets. Make sure the carbs you eat are healthy (ie fruits, vegetables, and whole grains).

Carbs are not EVIL.

**What does 100
calories of carbs
look like?**

**You need 400 calories of
carbs a day or 100 grams**



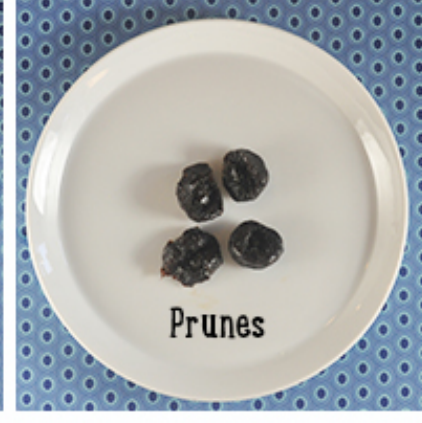
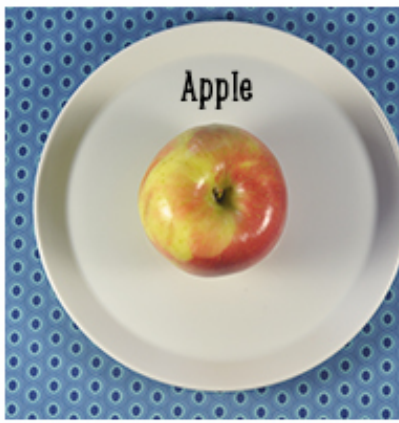
What Does 100 Calories of Grains Look Like?



SPARKPEOPLE®

Read article for detailed portion sizes and more.

What Does 100 Calories of Fruit Look Like?



SPARKPEOPLE®

Read article for detailed portion sizes and more.

100 Calories Carbs of Veggies



this what
100 calories
of
vegetables
look alike



Trending: High Protein Diets

Moderate to High Protein Diets for Fat and Weight Loss

- Research suggest that replacing some of the carbs in your diet is beneficial to weight and fat loss (you still need carbs though).
- Helps in fat burning
- Helps maintaining muscle mass and metabolic rate

**Very High Protein Diets 50%
calories (i.e. Atkins, Paleo)**

NO!

**I can not recommend Very
High protein Diets**

**Moderate to High Protein
Diets 15-30 % calories**

Yes!

Why is Protein Important for Weight Loss?

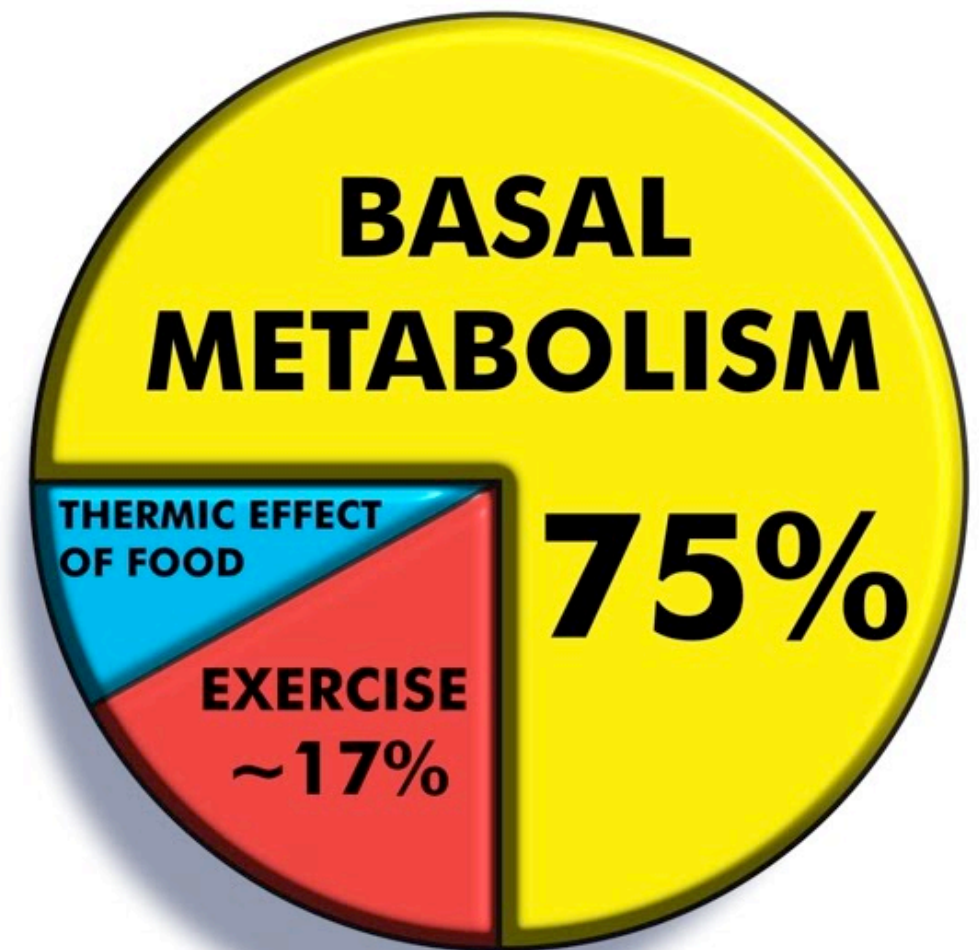
THERMOGENESIS

To Understand Weight Loss you need to know

Thermogenesis=Calorie Burning

Daily energy expenditure consists of three components:

- basal metabolic rate
- diet-induced thermogenesis and the
- energy cost of physical activity - very variable based on amount of exercise



It takes energy to digest and absorb food (esp. protein)=Thermic effect of food

TABLE OF THERMIC EFFECTS

Fat: 0.4-2%

Carbohydrate: 5-12%

Protein: 23-30%

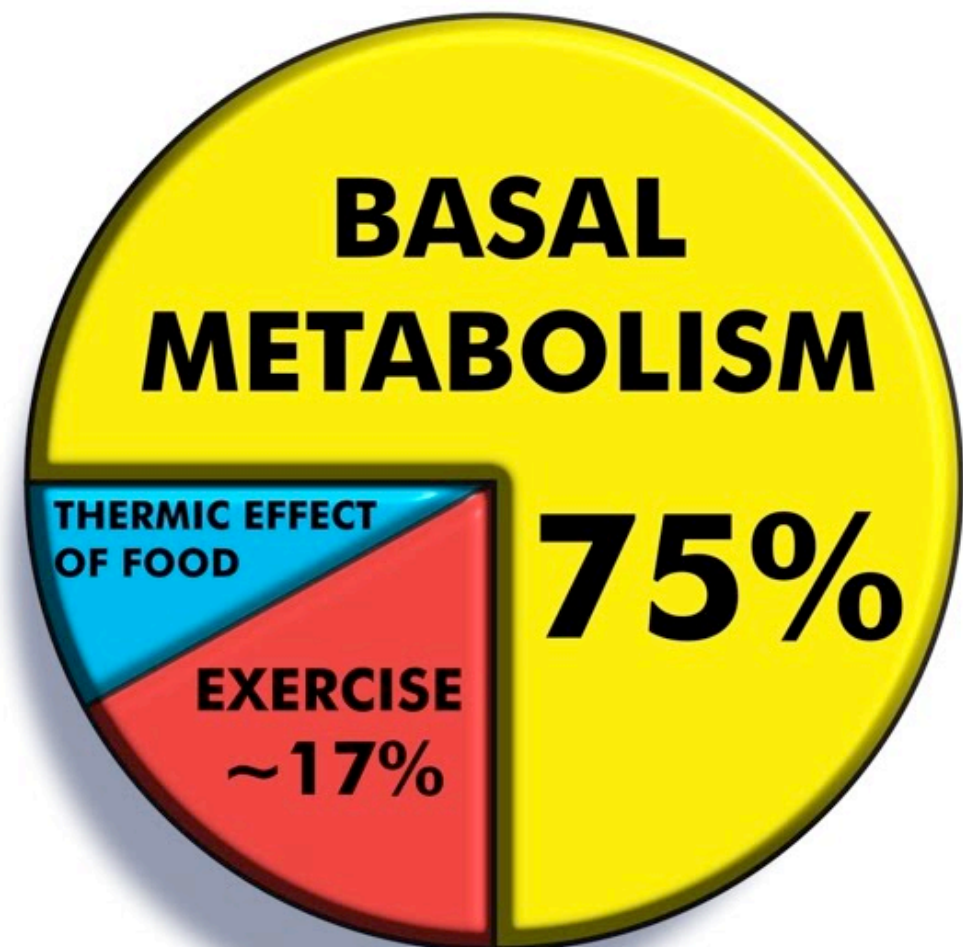
Protein plays a key role in body weight regulation through satiety related to diet-induced thermogenesis.

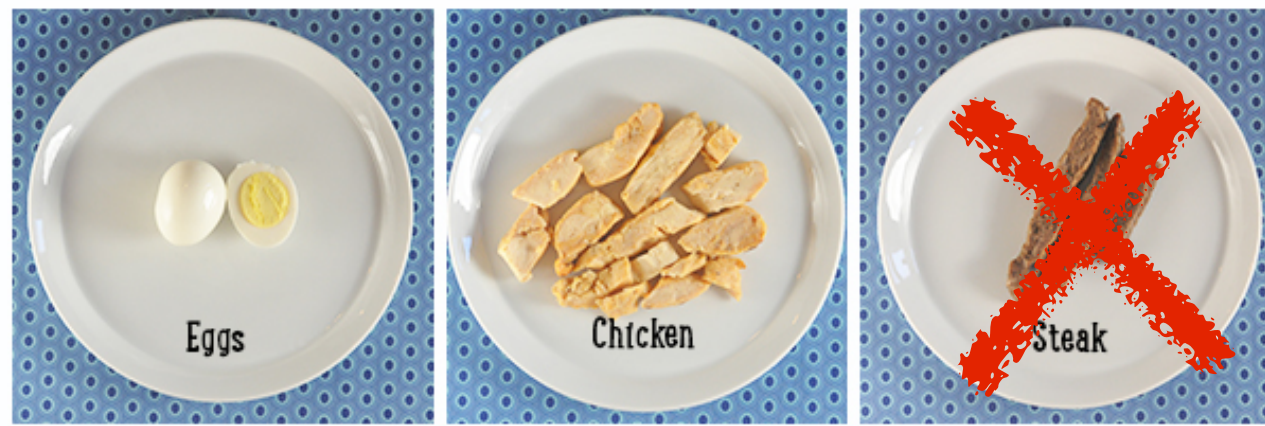
23-30% of calories from protein you eat goes to digesting and absorbing the protein.

While only **0.4 to 2 %** from Fat

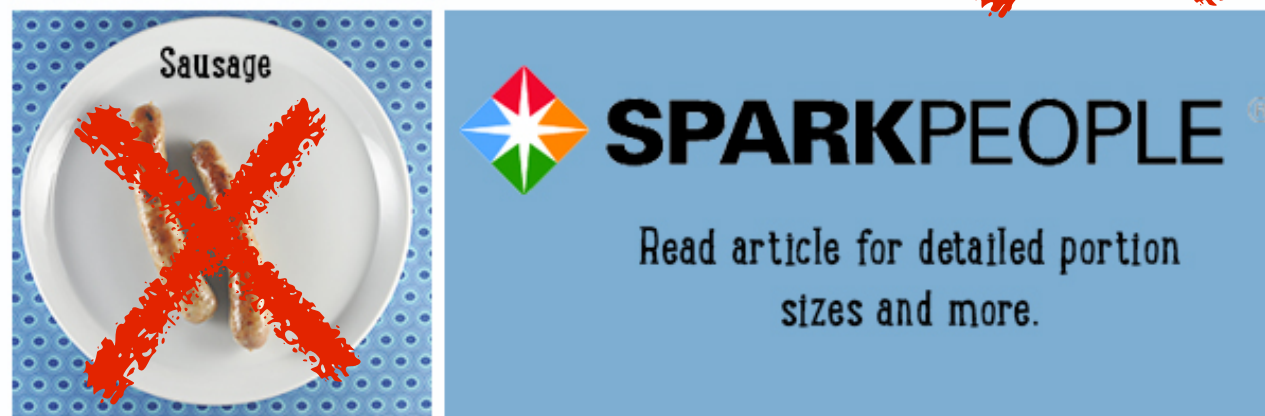
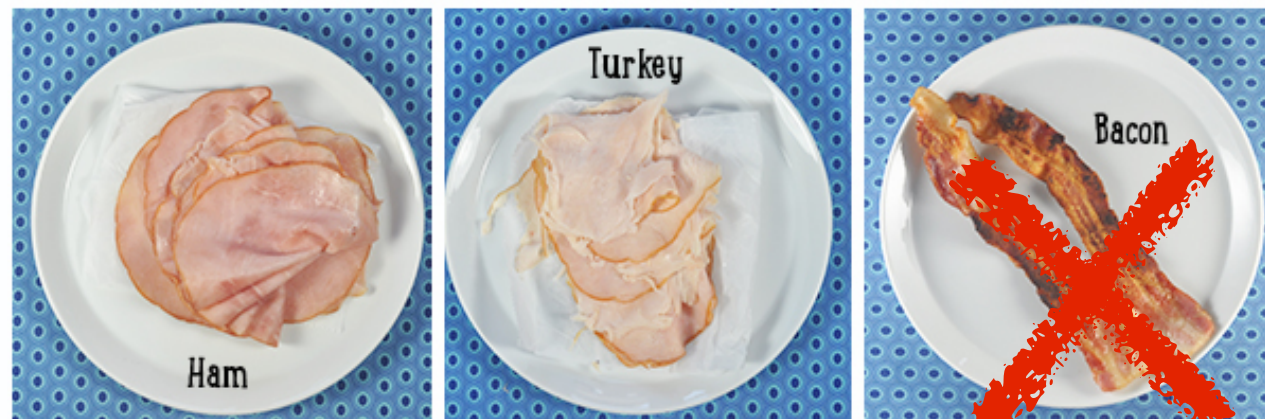
Dietary fat is easily converted to body fat.

Diet induced energy expenditure of 5 to 15 % from the thermic effect of food





What Does 100 Calories of Protein Look Like?



Read article for detailed portion sizes and more.

Protein Foods

.8 grams to 1.2 grams of protein per pound of body weight
55-81 grams for a 150 lbs person
or

- **20-30% of calories**
1200 calorie diet = 60-90 grams

Try to have 20-30 grams per meal

Try to stay away from Red and Processed Meats as protein source

Shortcut: An ounce of meat or fish has approximately 7 grams of protein.

Beef

- Most cuts of beef – 7 grams of protein per ounce

Chicken

- Chicken breast, 3.5 oz - **30 grams protein**
- Chicken thigh – 10 grams (for average size)
- Drumstick – 11 grams

Fish

- Most fish fillets or steaks are about
- 22 grams of protein for 3 ½ oz (100 grams)
- Tuna, 6 oz can - 40 grams of protein

Pork

- Pork chop, average - 22 grams protein
- Pork loin or tenderloin, 4 oz – 29 grams
- Ham, 3 oz serving – 19 grams

Eggs and Dairy

- Egg, large - 6 grams protein
- Milk, 1 cup - **8 grams**
- Cottage cheese, ½ cup - **15 grams**
- Yogurt, 1 cup – usually 8-12 grams, check label, Greek yogurt 15 grams
- Soft cheeses (Mozzarella, Brie, Camembert) – 6 grams per oz
- Medium cheeses (Cheddar, Swiss) – 7 or 8 grams per oz
- Hard cheeses (Parmesan) – 10 grams per oz

Beans (including soy)

- Tofu, 1 oz, 2.3 grams
- Soy milk, 1 cup - 6 -10 grams
- Most beans (black, pinto, lentils, etc) about 7-10 grams protein per half cup of cooked beans

Nuts and Seeds

- Peanut butter, 2 Tablespoons - 8 grams protein
- Almonds, ¼ cup – 8 grams
- Peanuts, ¼ cup – 9 grams
- Cashews, ¼ cup – 5 grams

Protein Servings

Average Size Person 150 lbs. Needs 54 grams Protein a day.

My Favorites

- Low fat Yogurt, 1 cup – usually 8-12 grams, Greek 15-16 grams
- Low fat Milk, 1 cup - 8 grams
- Chicken breast, 3.5 oz - 30 grams protein
- Tuna, 3 oz can - 20 grams of protein
- Peanut butter, 2 Tablespoons - 8 grams protein

Protein is Key to Weight and Fat Loss- Have at every Meal

- 23-30% of calories from dietary protein goes to digestion and absorption
- Protein decreases the glucose response from a meal that has carbs in it
- Protein increases meal satiety (fullness)
- Protein is not stored in body so your body needs a daily supply
- Adequate protein prevents muscle loss when on a reduce calorie diet

Does High Fiber Foods have a High Thermic

YES

Lean **meat, fish, eggs, dairy, legumes (high fiber), nuts, and seeds (high fiber)** — could help increase your metabolism for a few hours. This is because they require your body to use more energy to digest them. This is known as the thermic effect of food (TEF).

High Fat Diets

**High Fat Diets NO! Atkins,
Paleo**

No more than 35% of calories

Very Low-Fat Diets NO!

- You need healthy fats in diet for good health
- Consume healthy fats from oils and nuts in moderation
- Concentrated calories - 9 calories per gram (1 tbs oil = 120 calories)
- Does not increase satiety (fullness, feeling satisfied) as once thought
- Very low dietary thermogenesis (0.4 to 2 %), therefore excess dietary fat is easily converted to body fat



Almonds

Cocoa Almonds

Cashews

What Does 100 Calories of Nuts Look Like?



Macadamias

Peanuts

Peanut Butter



Pistachios

Walnuts

Soy Nuts



Sunflower Seeds



SPARKPEOPLE

Read article for detailed portion sizes and more.

Dietary Fat Intake

are important for good health but they are concentrated calories

If you are on a 1200 calorie diet 20-35% of calories

=240 (20%) to 360 (30%) calories.

That is 2-3 tbs of oil or butter or 2-3 servings of nuts or 4 to 6 servings of most salad dressings.



Acceptable Macronutrient Intake Range- I can not recommend anything beyond these ranges

Carbohydrates **45-65** % of total calories

Protein **10-35** % of total calories

Fats **20-35** % of total calories

I can recommend at most 35% Protein and try to keep the Carbs and Fats near the low end of the above range for weight loss. High Protein Diets like **Atkins** recommend Protein Intakes of up to 50%-that is too much.

Key: Say **NO** to very high protein diets but yes to moderate to high protein diets.

Key: Say **NO** to high fat diets, but make sure you have 20-35% of calories from healthy fats

Trending: Detox Diets

Fasting and Detox Diets immediate weight loss but interferes with sustained loss.

Could reduce metabolic rate making it harder to lose weight.

Fad diets, like detox, are not recommended could be dangerous.

Trending: Intermittent Fasting

There are various types. All of them eliminate the amount of time you eat rather than food.

A systematic review of 40 studies found that intermittent fasting was effective for weight loss, with a typical loss of 7-11 pounds over 10 weeks. There was much variability in the studies, ranging in size from 4 to 334 subjects, and followed from 2 to 104 weeks. There are pitfalls. Please read paper. Also, if you are a very active exerciser or athlete or someone trying to build muscle this type of diet may slow your progress.

Trending: Ketogenic Diet

Unlike other low-carb diets, which focus on protein, a keto plan centers on fat, which supplies as much as 90% of daily calories. The diet aims to force your body into using a different type of fuel. Instead of relying on sugar (glucose) that comes from carbohydrates (such as grains, legumes, vegetables, and fruits), the keto diet relies on ketone bodies, a type of fuel that the liver produces from stored fat.

Foods you can eat on the keto diet include fish and seafood, meat and poultry, non-starchy vegetables like bell peppers, broccoli, and zucchini, avocados, berries, nuts and seeds, eggs, high-fat dairy products, olive oil and other oils, and high-cocoa chocolate. **As a Health Coach I can not recommend such a diet. Your medical provider can. It is sometimes used in certain medical conditions.** People also complain of brain fog, bad breath, and constipation with this diet.

Constipation could be from very limited fruits, veggies, and whole grains. Another reason I do not like this set is lack of compliance since. **Most people stop adhering to it after 1 to 3 months.** See more about this diet. As with intermittent fasting I do not recommend this diet if you are a very active exerciser or athlete or someone trying to build muscle.

What is Satiety?

**It is very
important for
weight loss.**

What does **satiety** mean?

sa·ti·e·ty

sə'tītētē/

noun: **satiety**

1.the feeling or state of
being satisfied
(appetite) to the full

**Feeling Full is more about
volume, not calories.**

**Your body requires a certain
amount of volume each day
to feel full.**

**That is why veggies and fruit
are filling they have a lot of
volume.**

Water and the water found in veggies and fruit can make you feel full.

Thirst, which is triggered by mild dehydration, is often mistaken for hunger by the brain. You may be able to decrease appetite by drinking water if you are, in fact, low in water not calories. Consuming water shortly before eating may help decrease food intake by up to 22% (study). Results of a large-scale showed that those who replaced one serving of a sugar-sweetened beverage for water or a low-calorie drink every day for 4 years gained 0.49 fewer kilograms (kg) than a similar group who had made no changes.

Temperature of water matters. Drinking about two cups of 71°F water led to a 30% average increase in the metabolic rates of 14 healthy adults in a study published in the *Journal of Clinical Endocrinology & Metabolism*. Water found in food can make you feel full.

Veggies and fruit loaded with water and fiber.

Low volume versus high volume



400 calories
of oil



400 calories
of chicken



400 calories
of vegetables

Key: Food, Meals and
Strategies to increase
Satiety is key to weight
loss.

Example: having
protein and veggies or
fruit at every meal.

SOUPS INCREASE SATIETY, HELPS IN WEIGHT LOSS, AND IMPROVES OVERALL

HEALTH: Research show that healthy soups are great for weight loss. Soups because of their water content can make you feel full. Epidemiological studies have revealed that soup consumption is associated with a lower risk of obesity. Moreover, intervention studies have reported that soup consumption aids in body-weight management. A study found that soup consumers had a lower body weight, a lower waist circumference, and a trend towards a lower total energy intake. . Soup consumption was also associated with a reduced intake of total fat and an increased intake of protein, carbohydrate and dietary fibre, as well as several vitamins and minerals. Researchers do suggest that consumers need to pay attention to their sodium intake and choose low sodium products for a healthier diet.

See 10 Healthy Soups That Can Help Support Weight Loss

What Foods Satisfy?

SATIETY INDEX				LIVE FROM WITHIN
Bakery Products		Carbohydrate-Rich Foods		
Croissant	47%	White Bread	100%	
Cake	65%	French Fries	116%	
Doughnuts	68%	White Pasta	119%	
Cookies	120%	Brown Rice	132%	
Crackers	127%	White Rice	138%	
Snacks & Confectionary		Grain Bread	154%	
Mars Bar	70%	Wholemeal bread	157%	
Peanuts	84%	Brown pasta	188%	
Regular Yoghurt	88%	Potatoes, boiled	323%	
Crisps	91%	Protein-Rich Foods		
Ice Cream	96%	Lentils	133%	
Popcorn	154%	Cheese	146%	
Cereals with Milk		Eggs	150%	
Special K	116%	Baked Beans	168%	
Cornflakes	118%	Beef	176%	
All-Bran	151%	Fruits		
Oatmeal	209%	Bananas	118%	
Note: All values are compared to White Bread, ranked as 100%		Grapes	162%	
		Apples	197%	
		Oranges	202%	

If you've ever wondered why you fill up on a bowl of oatmeal but can eat three doughnuts before feeling satisfied, the reason is the comparative satiety levels of these foods. Susanna Holt, PhD, developed a satiety index, reported in the *European Journal of Clinical Nutrition*. Taking 240-calorie portions of popular foods, she ranks them according to how they compare with a slice of white bread, which carries a rank of 100. Oatmeal has a high satiety level at 209, while a doughnut's rank is 68. Interestingly, a 240-calorie serving of boiled potatoes rank highest at 323, but French fries score just 116.

High Satiety

Soluble fiber attracts water and turns to gel during digestion. This slows digestion. Soluble fiber is found in oat bran, barley, nuts, seeds, beans, lentils, peas, and some fruits and vegetables. It is also found in psyllium, a common **fiber** supplement.

Insoluble fiber appears to speed the passage of foods through the stomach and intestines and adds bulk to the stool. It is found in foods such as wheat bran, vegetables and whole grains.

Breaking Down Fiber: Soluble vs. Insoluble

	Soluble	Insoluble
oranges	Oatmeal/oat bran	Whole-wheat breads
	Nuts and seeds	Barley
	Dried peas	Couscous
	Beans	Brown rice
broccoli	Lentils	Wheat bran
	Apples	Carrots
	Pears	Zucchini
	Strawberries	Celery
	Blueberries	Whole-grain cereals



Vegetables and Fruit are keys to Health and Weight Loss

**How many vegetables/fruit
servings a day do
Americans get?**

Most American get don't get enough Fruits and Vegetables a Day

Only about 1 in every 10 Americans eats enough fruits and vegetables, a new government report shows.

Just 13 percent of U.S. residents consume one and a half to two cups of fruit every day as recommended.

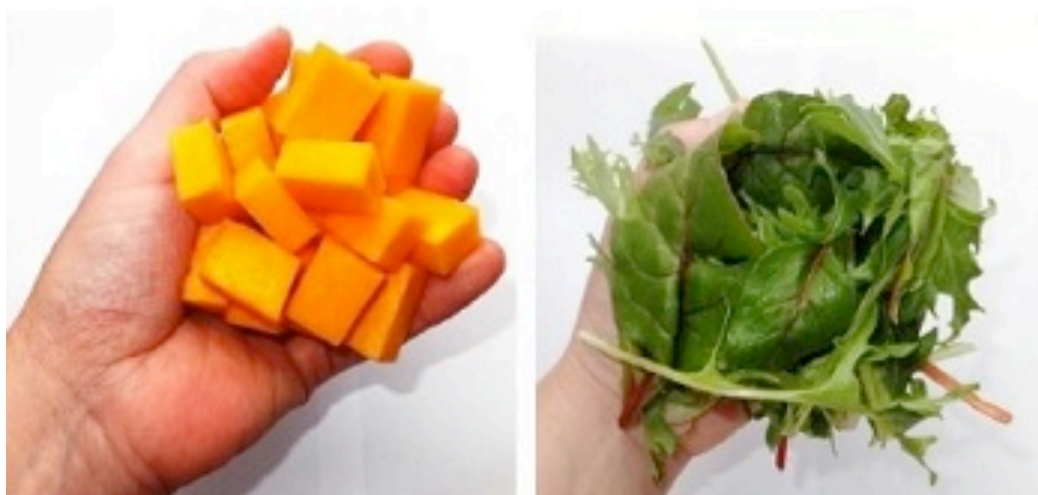
Less than 9 percent of Americans eat two to three cups of vegetables every day as recommended.

Recommended Amount of Fruit and Vegetables

4 servings of fruit and 4 or more servings of vegetables



This is what
one serve
of different
vegetables
looks like



Do you eat
5 handfuls
every day?


mactavish:west



100 Calories of Veggies



this what

100 calories

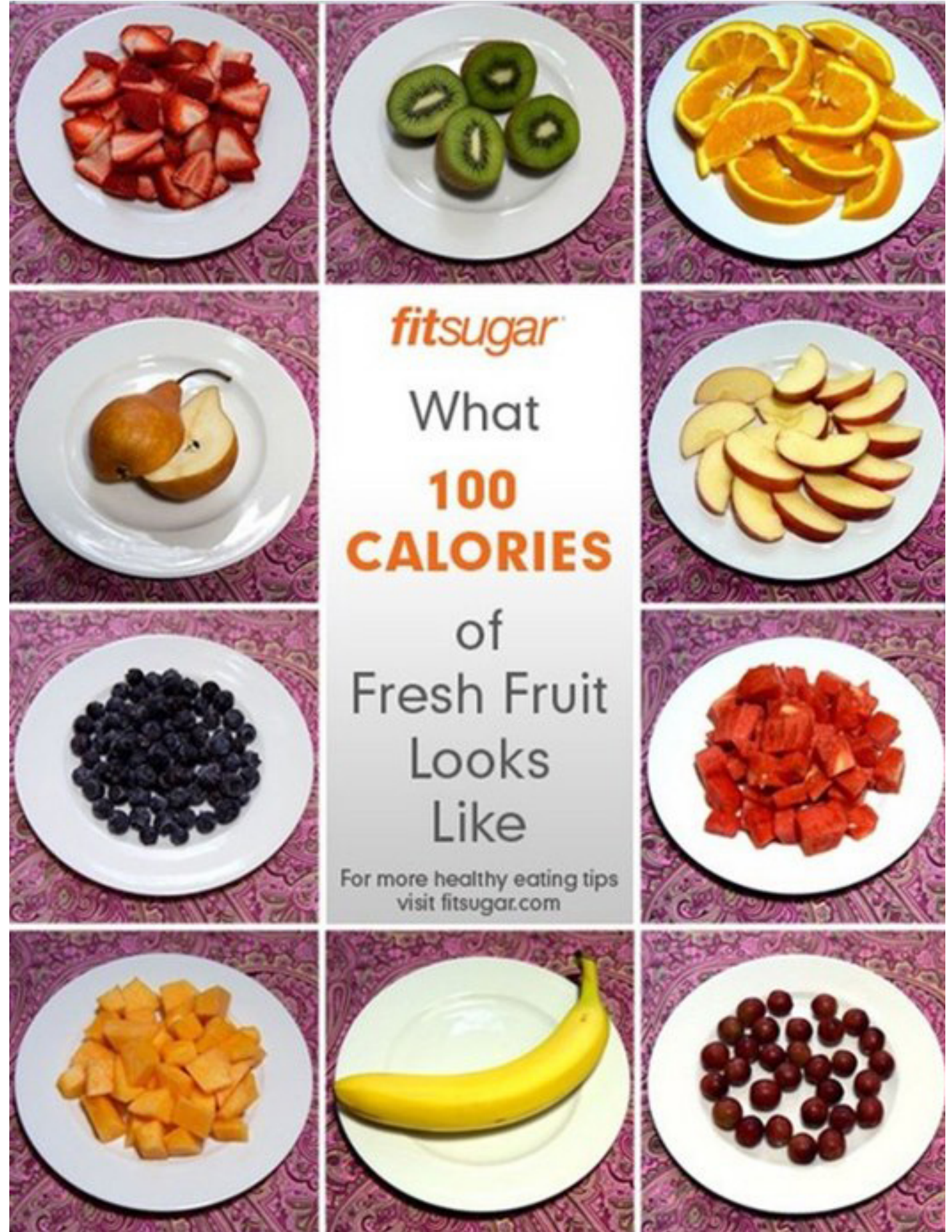
of

vegetables

look alike



100 Calories of Fruit



Vegetables and Fruit are keys to Health and Weight Loss

**They are key because of the
fiber count!**

The health of your gut bacteria—and therefore your overall health—is directly impacted by the fiber you eat

Advancing research shows that maintaining a healthy balance of **bacteria** in your gut can help in weight loss and prevent weight gain and metabolic problems like diabetes.

Gut bacteria use fiber especially soluble fiber as energy (this is known as the prebiotic effect).

It is estimated that around 100 trillion bacteria live in the human gut, primarily in the large intestine.

Some scientist consider flora to be an organ which stresses how important they are for good health.

Your gut bacteria affects nearly every function in your body — from your digestion to your immunity, mood, energy level, skin condition, and even weight gain/loss.

Therefore feed your bacteria with food they can digest - soluble fiber and resistant starch (an indigestible starch).



GUT MICROBES: Nearly every month you see new studies like these linking what you eat to the health of you and your gut bugs. see below for just a few

A number of different studies show a diverse mixture of gut bacteria is one key to staying lean. A study found that thin people have 70 percent more gut bacteria than people who are overweight. Getting even more in depth, researchers found that the species of bacteria are different in people who are obese compared to those who are slim. A study found obese people have about 20 percent more of a bacteria strain called firmicutes. Firmicutes help the body pull calories from complex sugars and turn those calories into fat. When firmicutes microbes were transplanted into normal-weight mice, researchers noticed those mice started gaining twice as much fat. Those same researchers also found that lean people have almost 90 percent more of a bacteria strain called bacteroidetes. Bacteroidetes are believed to help break down starches and fibers into shorter molecules that the body can use as energy.

Gut microbe levels are linked to type 2 diabetes and obesity

June 23, 2014

Endocrine Society

Date:

Source:

Summary:

People with Type 2 diabetes or obesity have changes in the composition of their intestinal micro-organisms -- called the gut microbiota -- that healthy people do not have, researchers have found.

Gut bacteria may contribute to diabetes in black males

March 6, 2015

University of Illinois at Chicago

Date:

Source:

Summary:

African American men at elevated risk for developing type 2 diabetes may have fewer beneficial and more harmful intestinal bacteria, according to new research.

Adjusting bacteria in intestines may lead to obesity treatments

September 24, 2013

Penn State

Date:

Source:

Summary:

A drug that appears to target specific intestinal bacteria in the guts of mice may create a chain reaction that could eventually lead to new treatments for obesity and diabetes in humans, according to a team of researchers.

Soluble Fiber Studies and Weight



Soluble Fibers-Apples don't have just any old fiber, they are a rich source of a particularly powerful kind called pectin. It's what's used as a gelling agent to make jams and jellies, and in our stomach it can delay stomach emptying through a similar mechanism. Researchers at UCLA showed that by swapping in pectin for regular fiber, they could double the time it took subjects' stomachs to empty from about **1 hour to 2 hours**, which meant subjects felt full that much longer.

Another study published in the journal *Nutrition*, scientists found that instructing participants to eat an apple or a pear before meals resulted in significant weight loss where people ate up to **30% less at their next meal.**

Key: Increase Fibers
especially Soluble Fiber to
increase Satiety and feed
healthy gut bacteria.
Add extra fiber slowly to
diet to avoid gastric issues.

New Research

Gut bacteria

Transplanting bacteria from the feces of a lean animal to fat animal and vice versa could change the fat ones into lean and vice versa.

Looking into this with humans. Found it made some less insulin resistant.

Which diet is best for weight loss?

It comes down to calories for weight loss. Look at the Twinkie Diet.

An overweight nutrition professor at Kansas State University put himself on a predominantly snack food diet, with Twinkies prominent, for two months. He lost 27 lbs, and lowered his body mass index (BMI) from nearly 29, to just under 25 — from almost obese to normal. He ate 1800 calories of junk snack foods.

His LDL cholesterol and triglycerides went down, while protective HDL cholesterol went up. I do not recommend this diet—not healthy but it shows the power of reducing calories.



Which diet is best for weight loss?

What we know this far from the
American College of Cardiology, American
Heart Association, Obesity Society Panel
Experts

Two Main Simple Points

- The panel suggests any diet that cuts calories will work.
- Most important view from the panel pick a diet that you can live with permanently.



Key: Cut Calories

Recommendations for Weight Loss

- Cut carbs, fat, portion size that cuts calories
- Start by cutting unhealthy carbs-added sugars and white flour-that we overdo
- Get most of your carbs from fresh or frozen vegetables and fruit
- Pick a diet that you can stick with for the long haul

**How many calories should I
consume for weight loss?**

Calories Suggested for Weight Loss

- Generally decrease calories by 500 to no more than 1000 calories a day from what you currently take in.
- Women no less than 1200 calories a day. Only a physician can prescribe less than 800 calories a day. Have 3 meals a day at 300-400 calories per meal-try for 20-30 grams of protein per meal
- Men no less than 1800 calories a day. Have 3 meals a day at 500-600 calories per meal-try for 25-45 grams of protein per meal

**What should my plate and
meals look like?**

**Design you Plate for Health
and Satiety**

3 Plates a Day



The USDA MyPlate
see link <http://www.choosemyplate.gov/>

HEALTHY EATING PLATE

3 Plates a Day

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.

Eat plenty of fruits of all colors.



STAY ACTIVE!

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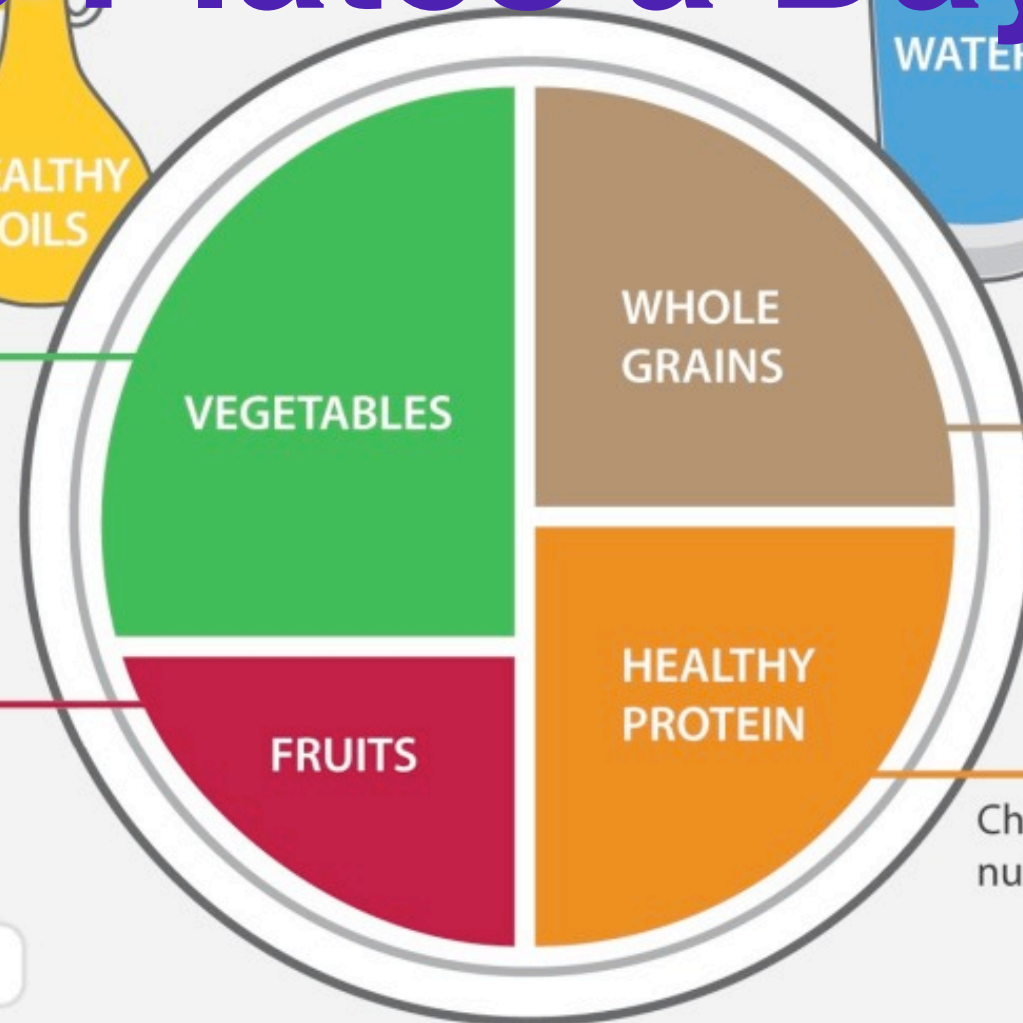
Harvard T.H. Chan School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.



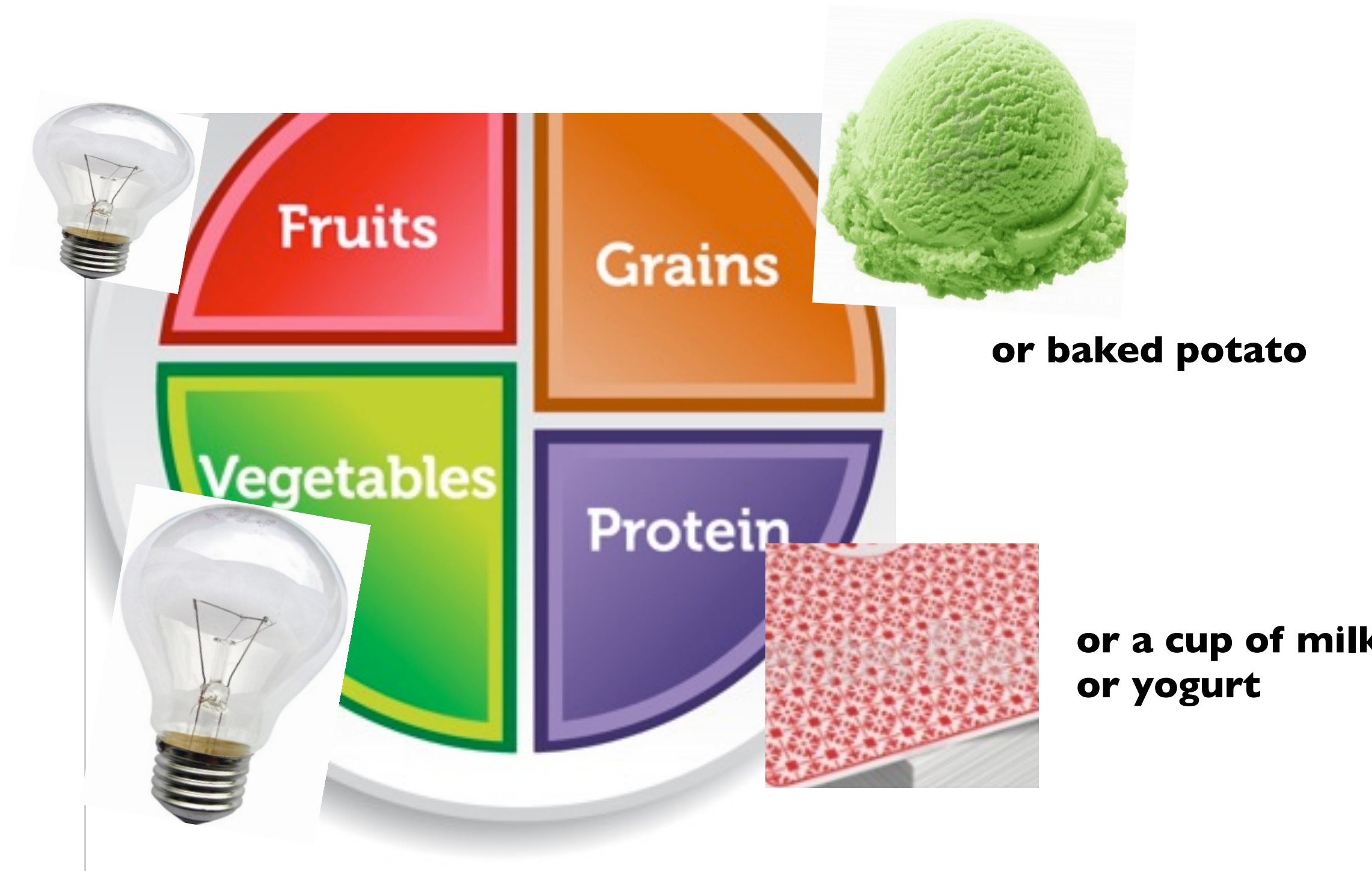
Harvard Medical School
Harvard Health Publications
www.health.harvard.edu



Harvard Healthy Plate

see link <http://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/>

PORTION DISTORTION SOLUTION



3 Plates a Day

**Ping
Pong**

**1/2 ping pong ball of Oil or Peanut
Butter**

Key: Follow 3 Ss for Diet

- Safe
- Sustainable
- Simple

Step 2

Exercise

for Fat and Weight Loss
for Life

How about just exercise and weight loss?

Not that Great!

Typically people just see modest losses with exercise eventually they get discouraged.

Example: One hour of walking (3.5 mph) burns roughly 350 calories with same diet you would lose approximately one pound every 10 days (3500 calories = one pound of fat).

This kind of weight loss is **unacceptable for most**.

Unfortunately many feel it is **OK to have a larger portion or treat** if they exercise, which further slows the process.

Study

Exercise alone does not help in losing weight

Date:

August 17, 2015

Source:

Loyola University Health System

Summary:

Physical activity has many health benefits, ranging from reducing the risk of heart disease, diabetes and cancer to improving mental health and mood. But contrary to common belief, exercise does not help you lose weight, public health scientists report. "While physical activity has many benefits, multiple lines of evidence lead to the conclusion that an increase in physical activity is offset by an increase in calorie intake, unless conscious effort is made to limit that compensatory response," they said.

But exercise and diet makes people successful in keeping weight off.

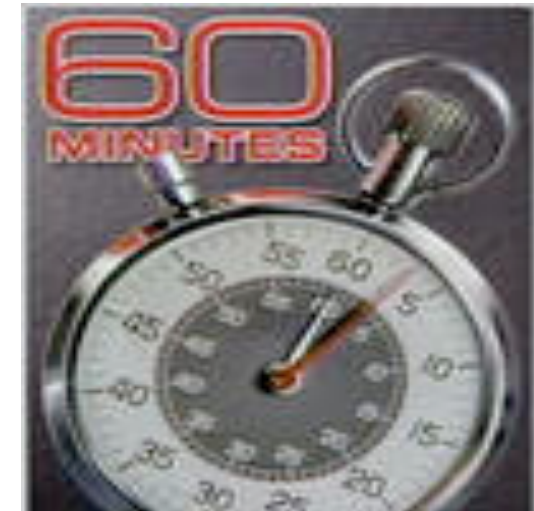
Study: Slightly overweight women were put on an 800-calorie diet until they lost an average of about 27 pounds each. Some walking program, some weight-training regimen and others no exercise; all returned to their old eating habits.

Those who stuck with either of the exercise programs regained less weight than those who didn't exercise and, even more striking, did not regain weight around their middles.

The women who didn't exercise regained their weight and preferentially packed on these new pounds around their abdomens.

How much exercise for weight loss?

60 minutes



US Dietary Guidelines for Americans (2015)

The guidelines address three levels of health.

- 1) **reduce the risk of chronic disease**, suggests at least 30 minutes of moderate intensity physical activity at work or at home, on most days of the week.
- 2) **to help manage body weight and prevent gradual body weight gain**, suggests approximately 60 minutes of moderate to vigorous physical activity at work or home on most days of the week.
- 3) **sustaining weight loss in adulthood**, suggests daily physical activity of moderate to vigorous intensity for 60 to 90 minutes is recommended.

60 MINUTES OF EXERCISE IF YOU DON'T WATCH WHAT YOU EAT.....

These recommendations are based on research findings from large populations that include individuals who were obese, had pre-diabetes, and who lost **70 pounds or more and kept it off for longer than three years**. (Weight Loss Registry).

Big Problem

Appetite and Exercise

Appetite and Exercise

**The effects of exercise on the appetite not consistent.
Popular belief is that exercise blunts appetite.**

**Intense aerobic exercise in men seem to blunt
appetite while in women it can stimulate.**

**Therefore women be aware of increased appetite
when doing intense exercise (intense exercise is
where it is difficult to talk while performing).**

Based on a study of JUST MEN

Healthy young men ran for an hour and a half on a treadmill at a fairly high intensity, their blood concentrations of acylated ghrelin (hunger hormone) fell. Exercise blunted their appetites. Recent Study by Dr. Braun
18 overweight men and women walking on treadmills Afterward, the men displayed little or no changes in appetites, much as in the other study.

But the women uniformly had increased blood concentrations of acylated ghrelin and decreased concentrations of insulin after the sessions. Their bodies were directing them to replace the lost calories. The results “are consistent with the paradigm that mechanisms to maintain body fat are more effective in women”.

Scientific proof that life is unfair. Female bodies, inspired almost certainly “by a biological need to maintain energy stores for reproduction,” Braun says, fight hard to hold on to every ounce of fat. Exercise for many women (and for some men) increases the desire to eat.

Big Problem

Extreme Exercise

Extreme Fitness

Not great for weight loss

- High drop out rate
- Increased risk injury
- Increased appetite in women



Extreme CrossFit

- In a recent study published in the Journal of Strength and Conditioning Research, researchers surveyed 132 CrossFit athletes. They found that "97 (73.5%) participants had sustained an injury that had prevented them from working, training or competing." Of these injuries, nine required surgery.
- In another Crossfit study 9 out of the original 54 participants, a total of 43 (23 males, 20 females) fully completed the training program and returned for follow up testing. Of the 11 subjects who dropped out of the training program, two cited time concerns with the remaining nine subjects (16% of total recruited subjects) citing overuse or injury for failing to complete the program and finish follow up testing.

Exercise tips for weight/fat loss

- **Enjoyable exercise** has a greater chance of being continued.
- **Convenient** at home or work, just try to get it in.
- **Flexible** to fit into a person's lifestyle (10 minutes morning 10 minutes at night). **Cross train**, try a variety of activities.
- **Be reasonable**, too much too soon will end up in failure, be true to yourself, don't over commit. A great example is Oprah Winfrey's dramatic weight loss and regain. Go "**slow and steady**"
- **Make a plan.**
- **Walking** is the best exercise most days a week.
- Try a **variety** of activities. Cross training is fun.
- Try to **work at a somewhat hard intensity**, not too hard at points.
- Achieving a **high number of calories expended** should be your goal.

Informal

Exercise

NEAT-non-exercise

thermogenesis

Just Move More and

Try to Stand More.

No time for formal exercise.

Studies have found standing health benefits.

Standing for a few hours a day is better for your health than 30-60 minutes of moderate aerobic activity and then sitting and burns 200-400 calories.



**Prolonged Sitting Causes Disease,
Standing Fights It**

**Standing does not increase appetite like
aerobic exercise does.**

Standing causes fat in the blood to be up taken into the muscle

Lipase enzyme is turned on while standing fat goes into muscle.



**SITTING
DOWN**

**STANDING
UP**

Some studies suggest that the rate of heart disease and diabetes **doubled or tripled in those who sit a lot.**

**What about
resistance
training for
weight loss?**

A Harvard study finds that resistance (weight) training will have the biggest positive effect on your waistline compared to aerobic exercise or not exercising at all. A University of Pennsylvania supports this study.

Resistance training decreases belly fat while maintaining or increasing metabolic rate.

The Studies: Mekary and colleagues scrutinized the physical activity, waist circumference and body weight of 10,500 healthy American men, aged 40 and older, who had been participating in the Health Professionals Follow-up Study between 1996 and 2008. Men who increased the amount of time spent in weight training by 20 minutes a day had less gain in waistline measurements compared to those who increased moderate to vigorous aerobic exercise by a similar amount, they found.

Not surprisingly, those who increased the amount of time spent in sedentary behaviors, like watching TV, had the greatest increase in their waistlines.

Weight loss expert Kathryn Schmitz says a study she did last year suggests that the results would be similar in women.

“We did a two-year intervention study in premenopausal women who did only twice weekly weight training,” says Schmitz, a professor at the Perelman School of Medicine of the University of Pennsylvania. “We didn’t ask them to do any aerobic activity or to make any dietary changes. We found that twice weekly weight training substantively prevented increases in belly fat in women who got the intervention versus those who did not.”

Fight back the bulge and hormonal changes

Spot reduction does not work.

Exercise. In fact, you may notice that your tummy bulge is the first area to shrink when you start exercising.

Strength training. Some research has shown that exercising with weights is effective in trimming tummy fat. Weight training can increase growth hormonal levels that help burn fat, while increasing insulin sensitivity.

Miriam Nelson, a Tufts University researcher, showed that a group of women who followed a weight loss diet *and* did weight training exercises lost 44% more fat than those who only followed just the diet.

Healthy diet. As mentioned.

Tone your tummy. While you can't "spot-burn" belly fat, you can firm up your abdominal muscles and get a flatter belly. Traditional sit-ups aren't the most effective way **CORE TRAIN.**

Hormone therapy. Although there are good reasons for some women to try hormone replacement therapy (HRT) after menopause, fending off belly fat isn't one of them. It's true that some studies have demonstrated that postmenopausal women who take HRT are less likely to accumulate abdominal fat than are postmenopausal women who forgo HRT. Other studies, however, found no difference. Meanwhile, questions about the risks and benefits of HRT persist. Talk to your doctor in detail about the risks and potential benefits of hormone therapy before trying it.

Sleep more and stress less, Sleep deprivation increases the appetite-stimulating hormone, ghrelin, and decreases the satisfaction hormone, leptin, say researchers from the University of Chicago-study 68,183 women for 16 years, they found that those averaging five hours of shut-eye per night were 32 percent more likely to gain 33 pounds than those who got seven hours a night. **Appetite-stimulating hormone, ghrelin-INCREASES while satisfaction hormone, leptin-DECREASES with lack of sleep.**

**Does Spot
Reduction work?**

Does Spot reduction work?

No!

Spot reduction refers to the fallacy that fat can be targeted for reduction from a specific area of the body and that it can be achieved through exercise of specific muscles in the desired area, such as exercising the abdominal muscles in an effort to lose weight in or around one's midsection. Advertisers exploit this concept when advertising exercise-related products. Many fitness experts believe, and studies have shown, that it is not possible to reduce fat in one area by exercising that body part alone. Instead, fat is lost from the entire body as a result of diet and regular exercise. Muscle growth in the abdominal region does not reduce fat in that region. Instead, being on a caloric deficit is recommended for reducing abdominal fat.

Are products that use electrical muscle stimulation effective in reducing stored abdominal fat?

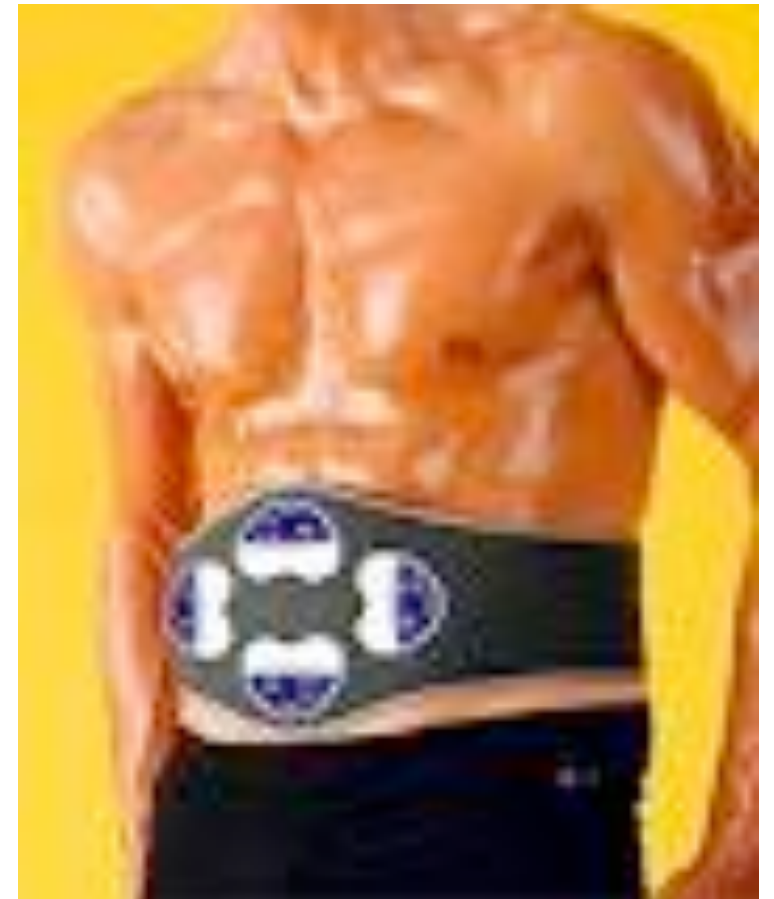
No

There have been a number of products marketed to consumers on the premise that the activation of electrical muscle stimulation units on the abdomen can decrease subcutaneous abdominal fat. This is another fallacy.

The “Ab Energizer Exercise System” was recently pulled off the market by the Federal Trade Commission. This system included an exercise belt that included multiple electrical pulses. The individual was supposed to wear the belt with claims that the unit would create “six-pack” abs with “no pain, no work, and no sit-ups”.

The underlying concept of the produce was that of “spot reducing”. The marketers insinuated that the product would stimulate the underlying muscles and that the overlying fat would melt off. They claimed that the device would tighten and tone the muscles while creating a slimmer appearance.

In its ruling of the product and its claims, the Federal Trade Commission permanently banned the owners of the product from claiming that the Ab Energizer or any similar device was effective at “weight loss, inch loss, fat loss, muscle growth, or well-defined abs” (McArdle, W.D., Katch, F.I., & Katch, V.L., 2006).



Step 3

Behavior Modification for Fat and Weight Loss for Life

Eating evolved from survival to a
behavioral response

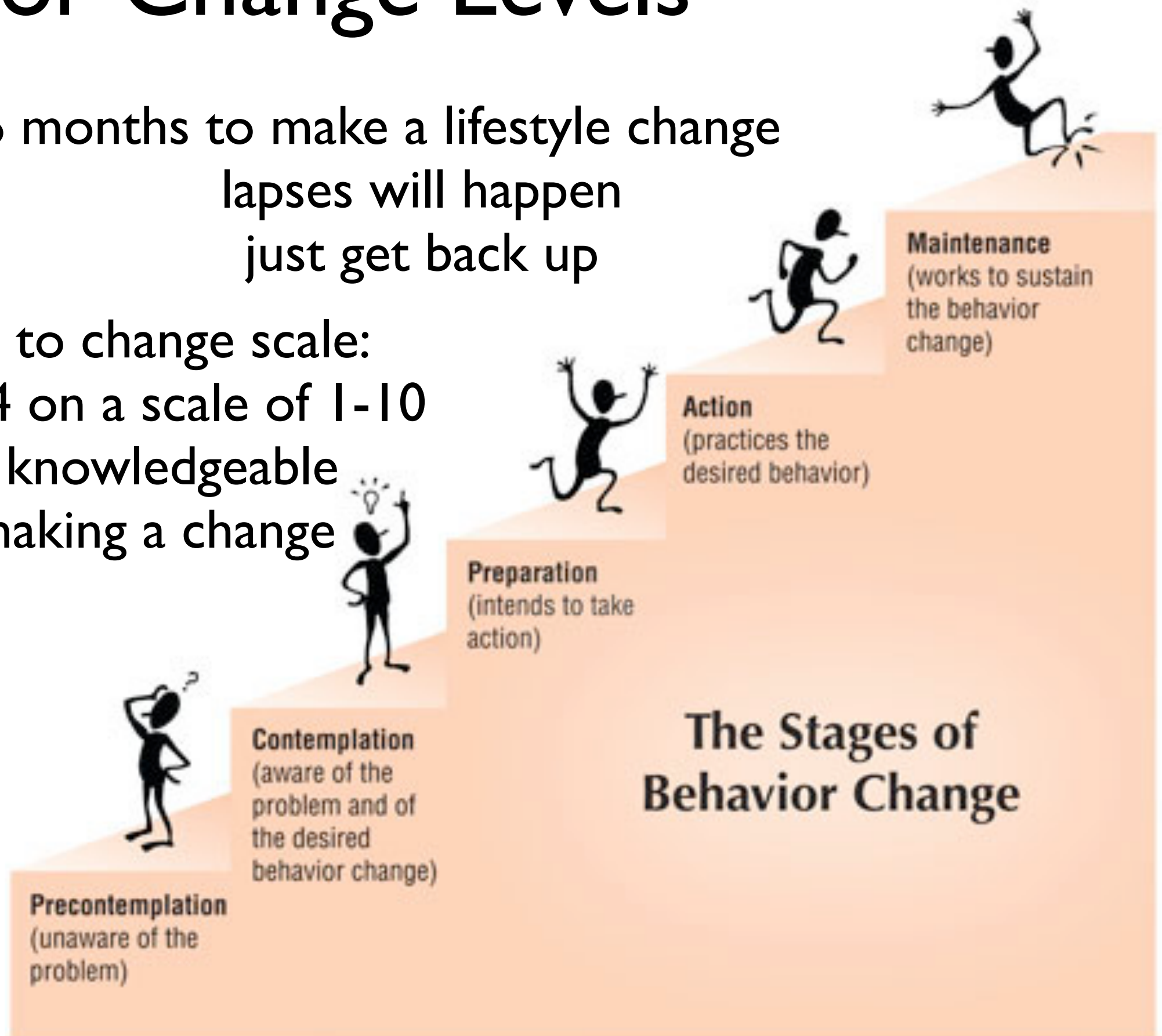
To make a change
Do it for You
Become Knowledgeable
Surround yourself with Support
Consider the following

- To change behavior you must feel autonomous (from you), competent (correct information), and have social support.
- When a spouse or a close friend gains weight studies show people gain weight.
- When a spouse or a close friend loses weight studies show people lose weight.
- Spouse being on board is key to behavior change
- People lose more weight when working with a group versus just a counselor

Behavior Change Levels

6 months to make a lifestyle change
lapses will happen
just get back up

Readiness to change scale:
If you are a 4 on a scale of 1-10
then get knowledgeable
before making a change



Self Control = Self

Regulation = Willpower

- Self control is a limited resource - Renewed everyday.
Need to minimize amount needed - make changes simple.
Example: Clean up food environment.
- Self control highest in morning - People who exercise or diet in morning stick with it.
- Make changes a habit therefore need for less self control
- example: eat veggies at every meal, only buy what is on a grocery list, fruit in car.
- Once thought obese and overweight people limited self-control - Not the case - Most have unrealistic goals

Stressed!

Do not start a weight loss program when you are stressed.

It will increase stress.

Lifestyle change is hard enough.

Coping when stressed takes a great deal of self-control.

Be Mindful

- Periodically ask yourself, "On a scale of 1 to 10, how hungry am I now?"
- **Ask yourself “Do I really need to eat this?”** "On a scale of 1 to 10, how much do I want this?"
- **Being Mindful of Portions and Energy Density.** Recent study published in the *American Journal of Clinical Nutrition*. Reducing portion size and energy density by **25%** is the key to weight loss. For example, instead of eating two slices of pizza, lower the energy density by substituting vegetables for some of the cheese, and eat just 1.5 slices. "Slight reductions in portion size and energy density combined help people lose weight."

Simple Habits and Behavioral Strategies Works

- **Chew gum** While chewing gum, people felt less hungry and had fewer junk-food cravings, according to two studies.
- **Serve yourself healthy stuff first, eat less of the other stuff**
- **Plate color matters** The more the food blends in with the plate color, the more food you're likely to take, research shows. So consider using plates in a different hue.
- **Use smaller bowls and plates.** The size of your dishes and utensils gives your brain cues about how much you're "supposed" to eat -- and a bigger dish means more food. In one study, people at a Chinese buffet who got a large plate served themselves 52% more food, and ate 45% more, than those with smaller plates.
- **Keep unhealthy snacks out of sight.** Stash junk foods like candy and chips where you can't see them. You might eat less. When office workers kept chocolates on their desks, they ate 48% more than when the candies were 6 feet away. If they put chocolates in their desk drawers, they ate 25% less than if the sweet stuff was on their desks.
- **Always order the "small."** A large container can tempt you to eat more food, even if you're full or it doesn't taste good. In one study, moviegoers were given free popcorn in either medium or large tubs -- some was fresh and yummy, and some was stale. People given the fresh stuff in large containers ate 45% more than those who got it in medium tubs did. Even those who got stale popcorn in large containers ate 33% more than those with medium tubs of it.
- **Eat slowly, and drink water.**

What works? - Look at successful losers behaviors.

National Weight Control Registry Facts

80% of persons in the registry are women and 20% are men.

The "average" woman is 45 years of age and currently weighs 145 lbs, while the "average" man is 49 years of age and currently weighs 190 lbs.

How did they lose.

- 45% of registry participants lost the weight on their own and the other 55% lost weight with the help of some type of program.
- 98% of Registry participants report that they modified their food intake in some way to lose weight.
- 94% increased their physical activity, with the most frequently reported form of activity being walking.

National Weight Control Registry Facts

How did they keep it off.

There is variety in how NWCR members keep the weight off.

Most report continuing to maintain a low calorie, low fat diet
and doing high levels of activity.

- 78% eat breakfast every day.
- 75% weigh themselves at least once a week.
- 62% watch less than 10 hours of TV per week.
- 90% exercise, on average, about 1 hour per day-mostly walking.

“Exercise and a low calorie diet are constants among people who’ve maintained their weight loss.”

Step 4

Self-Monitoring

One of the most important components of weight loss.

- **Daily to weekly weigh-ins**
- **Workout and diets logs**
Apps or paper logs
- **To change lifestyle it takes 16 to 26 weeks**

Weight Loss

Goals

make it SMART

simple

measurable

attainable

relevant

time bound

Short Term Weight Loss Goals

Fast Weight Loss Does Not Work in the Long Run

- An excepted goal is **1-2 lbs.** a week
- Professionally I can not recommend more than a 2 lbs per week loss per week
- Rapid loss usually is associated with rapid regain
- Rapid loss is associated with a decrease in muscle mass and a decrease in metabolic rate which will both contribute to easier weight regain

Long Term Goals

**Goal Weight Loss 5-10% of
Bodyweight - 5 % great goal**

Recent Study Just 5%

In obese patients, 5 percent weight loss has significant health benefits

For patients with obesity, researchers have found the greatest improvements to health come from losing just 5 percent of their body weight. That relatively small weight loss lowered patients' risk for diabetes and cardiovascular disease and improved metabolic function in liver, fat and muscle tissue.

For someone 200 lbs. that is a 10 lbs drop.

Slow weight loss=Permanent loss

Slow weight loss= fat loss, muscle retention, and lifestyle change



The infographic features a central image of a fit woman with long blonde hair wearing a light blue sports bra. The background is dark with white and yellow text. The title 'WEIGHT LOSS VS FAT LOSS' is at the top. Below 'WEIGHT LOSS' is the subtitle 'by crash dieting and improper training'. Below 'FAT LOSS' is the subtitle 'with correct nutrition and training'. The infographic is divided into two columns of outcomes. The left column, under 'Muscle + Fat + Water Loss', lists negative outcomes with red 'X' icons. The right column, under 'Stored Body Fat Loss', lists positive outcomes with green checkmark icons.

WEIGHT LOSS by crash dieting and improper training	VS	FAT LOSS with correct nutrition and training
Muscle + Fat + Water Loss		Stored Body Fat Loss
✗ Decreased Fitness		✓ Improved Fitness
✗ Decreased Strength		✓ Greater Strength
✗ Poor Performance		✓ Peak Performance
✗ Early ageing		✓ Delayed ageing
✗ Reduced Immunity		✓ Reduced risk of diseases

Keys Reviewed

Be a Grazer Not a Gorging

Studies have shown that people who eat small, frequent meals throughout the day tend to consume fewer calories and fat grams at the end of the day.

You burn more calories metabolizing food when you spread it throughout the day.

Grazing also prevents tiredness brought on by drops in blood glucose, and it's easier on your stomach.

Practice the art of distraction.

Distraction works well with weight loss. Busy-If your busy you will be less likely to eat.

- **Eat Breakfast**
- **Drink Cold Water**
- **Eat More Fiber and Eat More Veggies-Probiotic Foods?**
- **Have Protein at each Meal**
- **Limit Liquid Calories (soda, juices, alcohol)**
- **Move More and Stand at Work**
- **Do aerobic exercise for 20-30 minutes most days**
- **Strength train twice a week**
- **Sleep Better**
- **Practice Art of Distraction**
- **Destress**

Good Tips

**How about
sleep?**

Sleep is crucial for health!

Sleep loss boosts hunger, unhealthy food choices

Date:

February 29, 2016

Source:

University of Chicago Medical Center

Summary:

Cutting back on sleep boosts levels of a chemical signal that can enhance the pleasure of eating snack foods and increase caloric intake, report investigators. It may be part of a mechanism that encourages overeating, leading to weight gain, they say.

**How about
weight loss
drugs?**

Not much works! All come with issues.

Example of one Product on TV that works but not much.....

Side effects

Alli — OTC version of prescription drug orlistat (Xenical)

Decreases absorption of dietary fat

Effective: 3-5 lbs very modest



Side Effects: Loose stools, oily spotting, frequent or hard-to-control bowel movements; reports of rare, but serious liver injury

**How about
alcohol?**

Alcohol is linked with weight gain.

It provides fewer calories per gram than fat -- fat provides 9 -- alcohol is your body's preferred fuel source, which means you must burn off all your alcohol calories before you start burning calories from the food you eat, thus inhibiting your fat burn. Excessive intake has been linked to an increased risk of cancer, heart disease, mental illness, and dementia, according to the CDC.

Difference Heavy Drinkers (alcoholics) and Social Drinkers

For moderate social drinker who has a cocktail before dinner or an occasional glass of wine or a beer alcohol calories can indeed add up.

But chronic, excessive heavy drinking can prime certain metabolic processes and, in effect, train the body to waste the seven calories a gram that alcohol ordinarily provides.

Alcohol isn't treated like other nutrients in food;

in fact, the digestive system works extra hard to eliminate it from the body, prioritizing the elimination of alcohol ahead of all other nutrients. If you were to have a meal with your alcoholic beverage, the nutrient uptake from the meal would be greatly decreased due to the body working so hard to eliminate the alcohol from the body. The body recognizes alcohol as toxic and shuts down its ability to access all other stored macronutrients—carbs, proteins, and fat—in order to utilize and burn off the alcohol first. The main effect of alcohol is to reduce the amount of fat your body can burn for energy. You are basically shutting down your metabolism, which then leads to weight gain. Drinking alcohol can impair the functions of the glands that release hormones and the functions of the tissues targeted by those hormones, which can result in a range of health issues. excessive alcohol intake can cause hormone changes that disrupt thyroid function, immunity, and bone health to name a few. **Alcohol impacts sleep.** Many people find their sleep is quite disrupted after drinking alcohol, and sleep deprivation is strongly linked to weight gain over time. According to a small 2016 study published in Sleep, during the sleep-deprived phase of the study, participants consumed more food and found it harder to resist tempting snacks. **Alcohol can make you feel hungry.** It does so by causing blood sugar levels to dip. This can trigger hunger cues and sometimes cravings for carbohydrate-rich foods. Researchers have found that alcohol affects an area of the brain that controls appetite and this can cause intense hunger, especially the day after drinking. here's also evidence that alcohol can influence hormones linked to feeling full, such as leptin, a hormone that suppresses appetite, and glucagon-like peptide-1 (GLP-1), which inhibits food intake.

What about Alcohol; is it healthy?

A "drink" is 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of liquor.

These all contain the same amount of alcohol--your brain can't tell the difference between a beer and a shot.

Calories

Beer, 12 fl. oz. 145

Beer, light, 12 fl. oz. 100

Liquor, 100 proof, 1 fl. oz. 83

Liquor, 80 proof, 1 fl. oz. 65

Liquor, 86 proof, 1 fl. oz. 70

Liquor, 90 proof, 1 fl. oz. 74

Wine, 4 fl. oz. 100

Resveratrol found in wine is also found in the skin of red grapes and in other fruits.

Some studies show a benefit (heart disease, stroke, increase HDL) but, if you don't drink, there's no need to start. Similar benefits with exercise (beginning to exercise if you don't already or boosting the intensity and duration of your activity) or healthier eating.

- If you are a man with no history of alcoholism who is at moderate to high risk for heart disease, a daily alcoholic drink could reduce that risk. Moderate drinking might be especially beneficial if you have low HDL that just won't budge upward with diet and exercise.
- If you are a woman with no history of alcoholism who is at moderate to high risk for heart disease, the possible benefits of a daily drink must be balanced against the small increase in risk of breast cancer.

Amount

Keep it moderate—no more than two drinks a day for men or one drink a day for women.

Bigger Nutritional Principle- MODERATION, exercise and eat healthy.

Alcohol use is a slippery slope. Moderate drinking can offer some health benefits. But it's easy to drink too heavily, leading to serious health consequences.

Health benefits of moderate alcohol use

- Reduce your risk of developing heart disease
- Reduce your risk of dying of a heart attack
- Possibly reduce your risk of strokes, particularly ischemic strokes
- Lower your risk of gallstones
- Possibly reduce your risk of diabetes

**How about
breakfast?**

Tip

Eating a big breakfast fights obesity and disease

Scientists have found that people who eat their largest daily meal at breakfast are far more likely to lose weight and waist line circumference than those who eat a large dinner. They also had significantly lower levels of insulin, glucose, and triglycerides throughout the day, translating into a lower risk of cardiovascular disease, diabetes, hypertension, and high cholesterol.

**How about Fat
Shift in Women?**

The “Fat Shift” in women

As you age and your metabolism slows down, women experience an even greater fat percentage increase than men do. Then after menopause, your body fat distribution tends to shift — less in your arms, legs and hips, and more in your abdomen.

How risky is weight gain after menopause?

Weight gain after menopause can have serious implications for your health. Excess weight increases the risk of high cholesterol, high blood pressure and type 2 diabetes. In turn, these conditions increase the risk of heart disease and stroke. Excess weight also increases the risk of various types of cancer, including colorectal cancer and breast cancer. In fact, **some research suggests that gaining as little as 4.4 pounds (2 kilograms) at age 50 or later could increase the risk of breast cancer by 30 percent.**

Why?

Exercise Less

Menopausal women tend to exercise less than other women, which can lead to weight gain. In addition, muscle mass naturally diminishes with age.

Less muscle

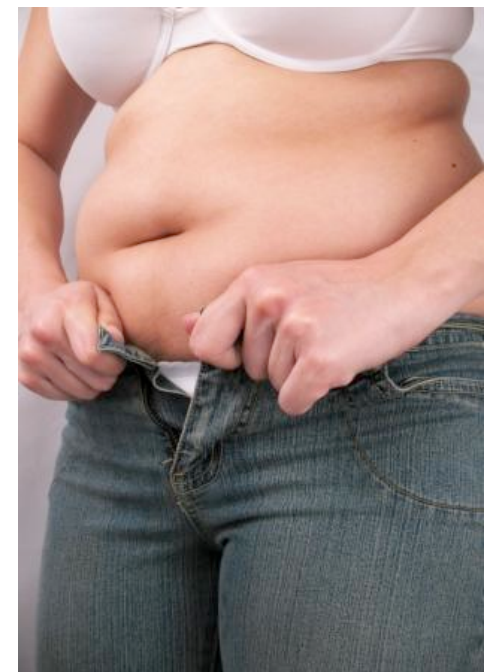
If you don't do anything to replace the lean muscle you lose, your body composition will shift to more fat and less muscle — which slows down the rate at which you burn calories.

Genetics

For many women, genetic factors play a role in weight gain after menopause. If your parents or other close relatives carry extra weight around the abdomen, you're likely to do the same.

Stress

Sometimes, factors such as children leaving — or returning — home, divorce, the death of a spouse or other life changes may contribute to weight gain after menopause. For others, a sense of contentment or simply letting go leads to weight gain.



Female hormones and weight gain

You can be doing everything right and you still gain weight.

Scientific researches have established the relation between the various hormones and weight gain. In cases where a person follows a low-fat diet, exercises regularly and still is growing in size; hormones are the reason behind the gradual weight gain.

Menopause

Estrogen decreases

Decline in estrogen in the body directly results in gain in the body weight.

Body needs estrogen.

Fat cells produce estrogen.

Therefore, the conversion of calories into body fat increases in order to raise the estrogen level.

Progesterone decreases

Decline in progesterone in the body indirectly results in gain in body weight through water retention.

This phenomenon is known as bloating.

Testosterone decreases

Human body needs the hormone testosterone for muscle building and maintenance and it keeps metabolism high. Any fall in the level of testosterone results in the loss of the body's muscle mass.

This further leads to slowing down of the metabolic rate. The final result is the gain in the body weight. The level of testosterone declines during menopause.

Androgen increases

Increased levels directs the deposition of fat around the abdomen. Depicts the onset of the so called "middle age spread". It increases during menopause.

Cortisol increases

Cortisol plays many important roles in the body. Under physiological-stress conditions, secretion of cortisone increases. It results in the body gaining weight. The body deposits excess fat around the abdomen, making you look bulky. The fat in the abdominal area is often called the **"toxic fat"** as it is strongly correlated with cardiovascular disease like heart attack and strokes. Cortisol is often referred to as the stress hormone and explicates the relation between the stress hormones and weight gain.

A Chris Morin Adage.

Every Meal
should not be a
Party.

A Chris Morin Adage.

**Food is not
Amusement.**

**Food is
Nourishment.**

A Chris Morin Adage.

**Health First.
Taste Second.**

Not a Chris Morin Adage, but I like it.

Don't eat every
meal like it is your
last.

A Chris Morin Adage.

Eat to Live.

Don't Live to Eat.

A Chris Morin Adage.

If you can find
time to eat
you can find
time to move.

Your body will get use to eating fewer calories and healthier foods. It takes awhile, but if you are consistent it will happen.

Weight loss is about
effort, practice,
replacing bad habits
with good ones,
and being consistent
with a plan.

Appendix

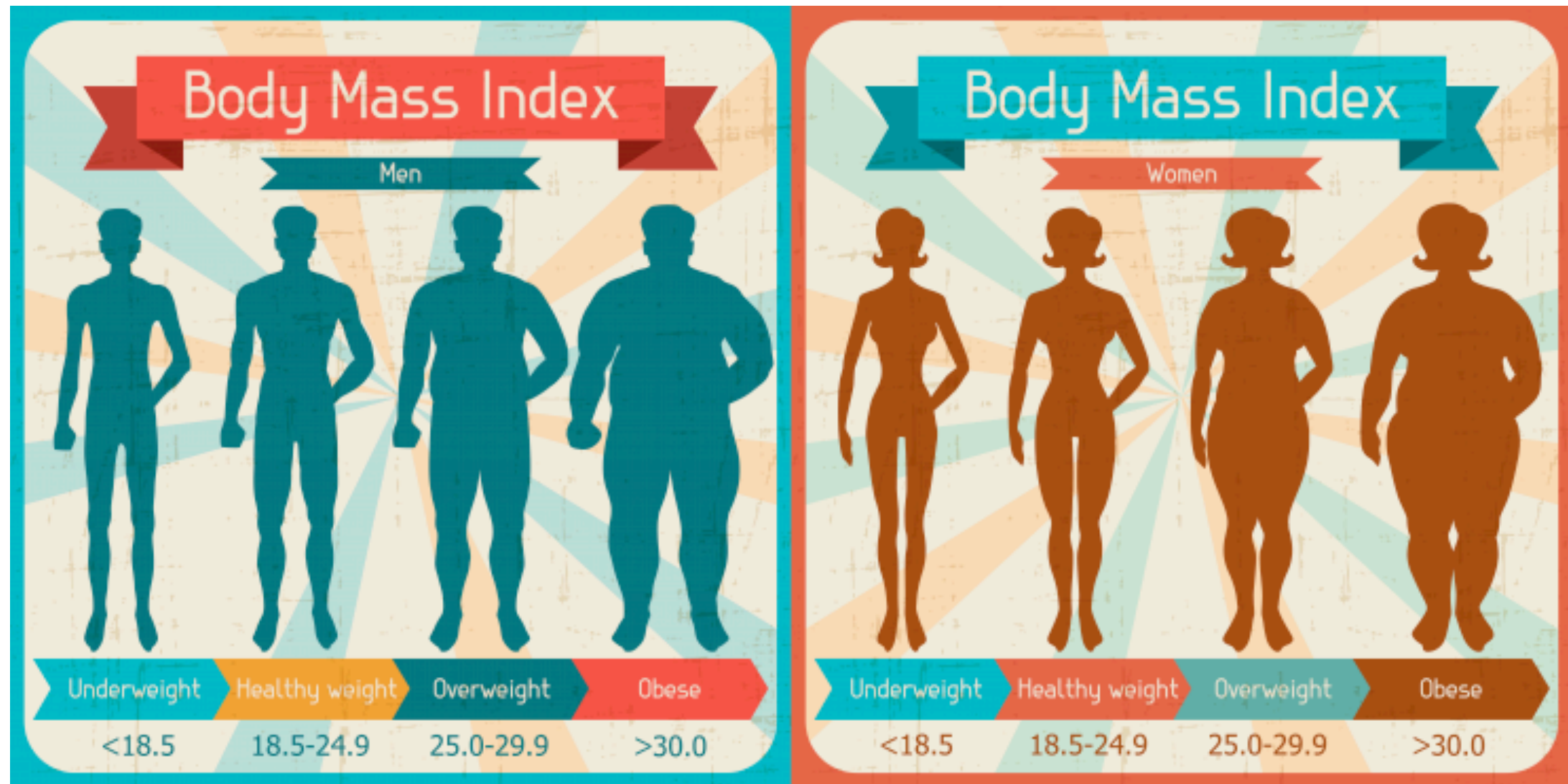
Your Health Beliefs determine your actions

- Know your Measures -

**If you feel your at risk you'll
make a change.**

Are you Obese or Overweight?

You just might be.



BMS = Body Mass Index a crude classification test
The World Health Organization (WHO) classifies a
person with a BMI of >30 as obese.

Waist and Body Fat Measures more Important than BMI and Body Weight

Abdominal fat is the worst place to have excess body fat.

Waist circumference in inches and skinfold thickness at your abdomen (a skinfold is a double layer of skin and fat) will give you a good understanding of your fatness around your waist.

A recommended skinfold thickness in the upper and lower torso is less than 21 mm and 30 mm, respectively.



Waist Recommendation

< 40" Men
< 35" Women
Ideally
< 35" Men
< 30" Women



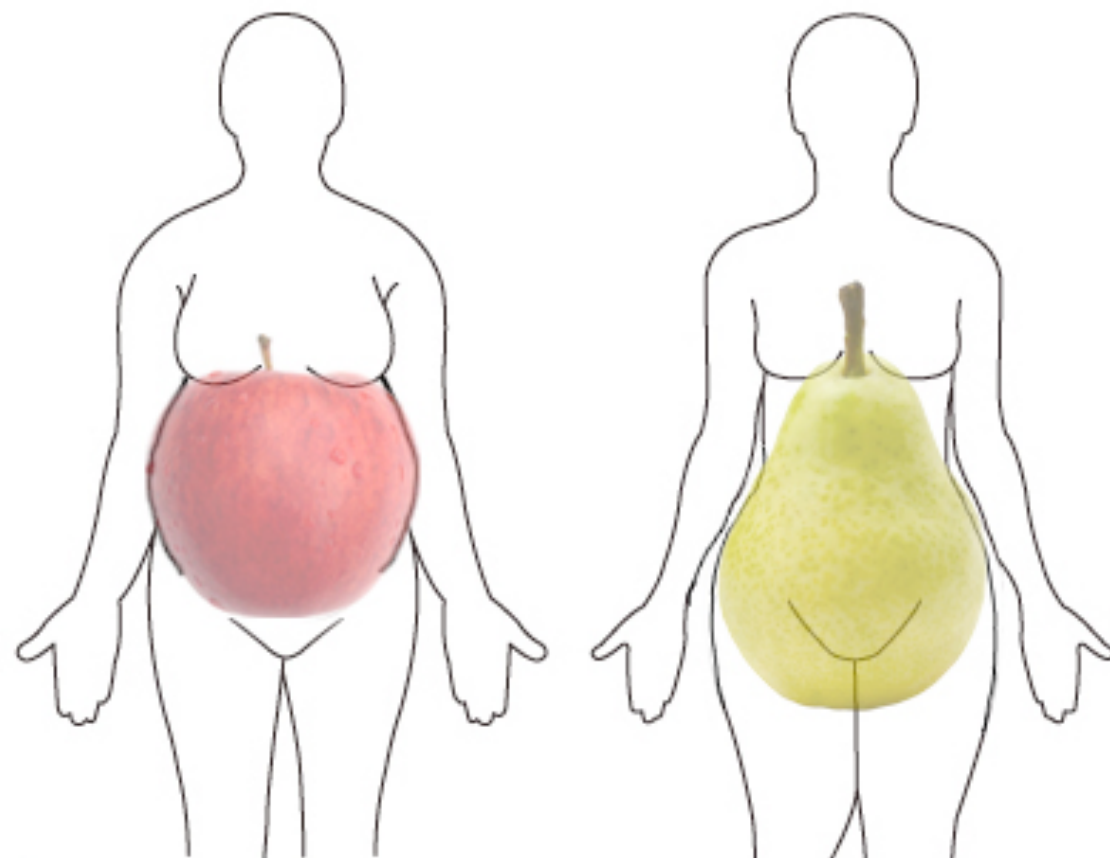
Skinfold thickness
< 25 is recommended
The Lower the Better

You can have these measures taken at the Fitness Room.

What kind of shape are you?

Fatness is generally described as “**pear shape**” (refers to deposits of fat centralized in the hips, thighs, and buttocks areas), “**apple shape**” (refers to a fat distribution centralized on the abdomen), or “**stick**” (refers to lack of body fat).

Abdominal obesity represent the deposit of fat under the skin (subcutaneous) and within and among the organs of the abdomen (intra-abdominal also known as visceral) is **associated with greater health risks**. Generally, men are more apple shape while women have a pear shape.



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Waist to Hip Ratio Recommendation

< .90 Men

< .85 Women

Ideally

< .85 Men

< .80 Women

Pinch and Inch

If you can pinch an inch at your abdomen you have an increased risk for Metabolic Syndrome and Heart Disease



Belly Fat is Inflammatory

Inflammation associated with so many health problems

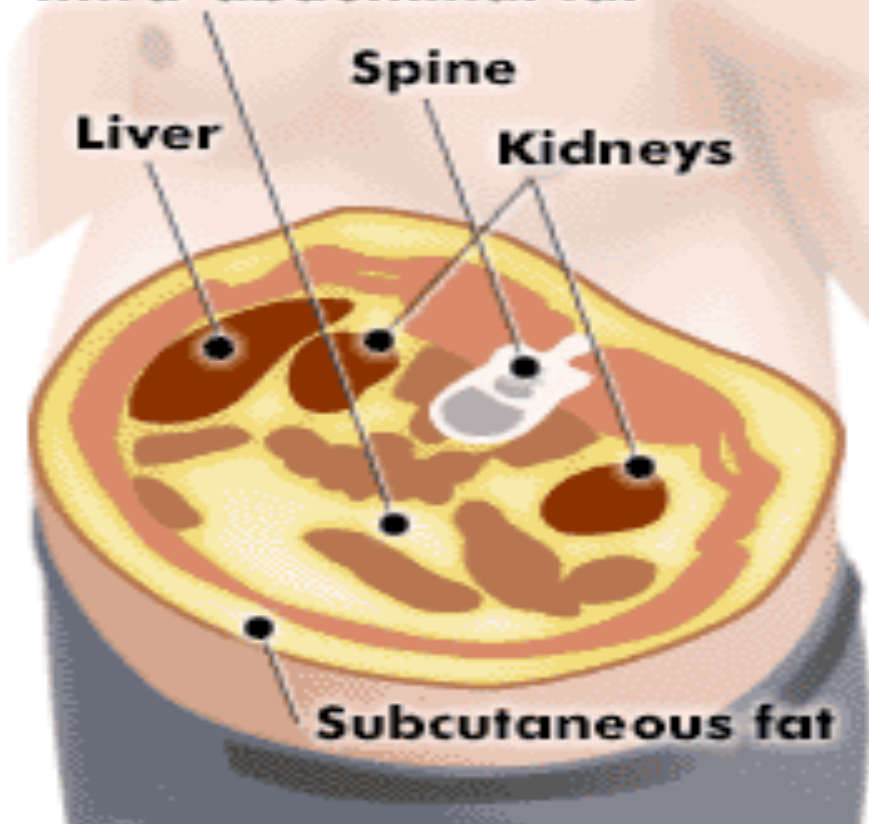
Visceral and subcutaneous fats act differently in the body. If you put visceral fat and subcutaneous fat in a petri dishes and stimulate them, the visceral fat produces much more **inflammatory molecules**, which raises a person's risk of heart disease and diabetes.

Abdominal fat exerts excessive forces on the organs it surrounds and increases blood pressure due to the pressure the fat places on the arteries going through it.

A hidden, dangerous fat

This is a cross-sectional view of the abdomen. The intra-abdominal or visceral fat surrounds internal organs.

Intra-abdominal fat



KEY :

"Know your numbers"

Cholesterol

LDL and HDL

hemoglobin A1C

Body Composition-Waist
Circumference, BMI, Waist to Hip
Ratio, & % Body Fat

Putting It all Together to Achieve Fat/Weight Loss

Fat and Weight Loss is actually very simple understand.

When caloric food intake exceeds calories expended fat is gained. When the opposite occurs, fat is lost and when they are equal fat and body weight stays the same.

$$\text{Calories ingested} < \text{calories expended} = \text{fat loss}$$

Resting Metabolic Rate (RMR) - **Strength training increases muscle mass which increases resting metabolic rate** (a 1 pound muscle gain can increase RMR by 25 to 100 calories a day). **The body burns additional calories after exercise (some call it after glow). To increase after glow perform different exercises and work at a somewhat hard intensity.** The body has to expend more calories after exercise when the sessions are hard and novel. That is why it is a good idea to cross train.

Daily Activities - **Move around extra during the day.** Park further from the building you work at. Always try to use the stairs. Do not use the television remote control. Pace around rather than sitting while at work. Extra jitters and movements in the day adds to calories expended. **Try standing more.**

Exercise - In addition to doing more daily activities, follow a **formal aerobic exercise program 4 to 6 times a week for 20 to 60 minutes.** A formal exercise program such as this will allow you to expend up to 3,000 calories a week.

Calories Ingested - **Take in fewer calories than what you are normally use to. To understand this number record 3 to 5 days of what you normally consume.** Calculate how many calories that you take in daily. **Five hundred calories less this value is what you should consume to achieve a 1 pound fat loss per week.**

Thermic Effect of Food - The body **expends a great deal of calories** in just **digesting foods**, especially when the foods are high in fiber and are different than what you are normally use to consuming. Eat more fiber, it takes more energy to digest whole foods. **Eat a variety of foods.** Your body gets use to eating the same foods; variety will cause your body to adjust how it digests food. **Drink cool water**, it takes energy to warm the water to body temperature.

What's New in Research

Genes

Does genes make us fat. Look at populations and you will see a range of weight. Due to mostly genes.

People same gender, age, and body size metabolic rate may vary by a few hundred calories. For millions of years evolution favored people with the thrifty gene type. Our genes haven't changed over the last 40 years but our environment has.

Example: Pima Indians in Arizona and Pima Indians in Mexico have the same genetic pool.

Mexico Pima's very few are overweight with only 6% being diabetic

US Pima's 75% are overweight with only 45% being diabetic

difference the Mexico Pimas eat more fiber (vegetables and fruit) and they move more.

Like many diseases Genetics Loads the Gun and Environment Pulls the Trigger.

Not all genetics-Look at mice that are almost Identical-if placed on a high fat diet not all gain weight and some exercise more than others. The same is true for people.

It is called **epigenetics**- Above Genes. Example babies with low birth weights have an increased risk for cardiovascular disease, diabetes, and obesity. Those babies who are breast feed typically have normal weight as children.

Leptin

Leptin the hormone produced by fats cells is being heavily study. It tells the brain when the body has too much fat. Injecting Leptin makes some people's metabolism go up, while some overweight people are resistant to leptin as they are for insulin. Looking into a drug, but to many redundant systems.

What's New in Research

Brown Fat

Brown fat is not just found in newborns. Finding it adults as well. People are being subjected to cold temperatures to increase their metabolism.

Viruses

Human adenovirus-36 increases fat storage in chickens, mice, and primates. One study of 500 people found that the antibodies to the virus was present in 30% of the Obese subjects and only 11 % of those with normal weight.

Gut bacteria

Transplanting bacteria from the feces of a lean animal to fat animal and vice versa could change the fat ones into lean and vice versa.

Looking into this with humans. Found it made some less insulin resistant.

Bypass Surgery

Not just about changing the volume of the gut. Seems that it cures people of Type 2 Diabetes not just by weight loss. Bypassing a section of the colon prevents insulin production which makes people less hungry.

What so bad about inflammation? Linked to high amounts of body fat (visceral esp.)

Everyone who has had a
sore throat, rash, hives, or a sprained ankle
This kind of inflammation is good. Your body's defense system -- to
injury and infection.

The trouble occurs when that defense system runs out of control.

allergies, rheumatoid arthritis, autoimmune disease, and asthma.

Hidden inflammation run amok is at the root of all chronic illness

heart disease,
obesity,
diabetes,
dementia,
depression,
cancer,
and even autism.

Triggers and causes of inflammation.

- Poor diet--mostly sugar, refined flours, processed foods (lunch meats), and inflammatory fats such as trans and saturated fats. Avoid junk and fast foods.
- Lack of exercise
- Stress -practice yoga or meditation, breathe deeply, or even take a hot bath.
- Hidden or chronic infections with viruses, bacteria, yeasts, or parasites
- Hidden allergens from food or the environment
- Toxins such as mercury and pesticides
- Lack of Vitamin D





Anti-inflammatory Foods

omega-3 fatty acids

cold-water oily fish, walnuts, flax seeds, canola oil and pumpkin seeds. Adding omega-3 fatty acid supplements from flax oil or fish oil may also help reduce inflammation; just be sure to speak with a doctor or nutritionist

olive oil has been shown to reduce the risk of cardiovascular disease and help to reduce pain. Other healthy oils include rice bran oil, grape seed oil, and walnut oil.



The pigments in **brightly colored fruits**, vegetables and berries contain many phytochemicals that have anti-inflammatory properties.

Choose **probiotic foods** like yogurt and pickled vegetables.

Choose **fresh foods** instead of heavily processed foods

Choose **whole grains**



Hard to fight evolution

Our biology has been designed to keep us fat for survival.

Set point theory

where the body adapts to maintain a certain body weight is a real **obstacle to weight management**.

The brain **continually gets reprogrammed** to an additional weight.

It is hard to go against evolution.

Evolution has made the body prepare itself in case of **famine**.

Yo-Yo dieting, which many people do, is another case of biology at work.

With Yo-Yo dieting the body keeps reprogramming upwards leaving one heavier than where they started.



Tufts University researchers suggests **food instincts** dictate **why, what, and how much we eat**. Being responsible for our survival throughout our evolution these instincts now **interfere with our health and well being**.

We can not change them, but we need to try to work with them.

Hunger-We all get hungry and since we were a baby we have been satisfied when we are full.

Availability-Study after study shows we will eat food if it is presented to us and will eat more of it when it is in **abundance, especially when it is free**.

Calorie density-**Across cultures we all love high calorie foods**. They satisfy and make us full.

Familiarity- Everyone has a particular food preference, especially those we grew up with. They **comfort** and in a certain way make us feel **safe**.

Variety-We also enjoy variety and will eat more if there are many choices.

Instincts

Hunger

Availability

Calorie density

Familiarity

Variety

How to work with your food instincts.

Hunger

Simply don't let yourself feel hungry, as you heard over and over again **eat small frequent meals and snacks.**

Have 3 to 4 meals a day or 3 meals and a couple of snacks a day

Women meals should be about 300-350 calories per meal

men should be 400-600

Snacks should be about 100 calories.

***Practice the art of distraction.**

Distraction works well with weight loss.

Busy-If your busy you will be less likely to eat.

Water-When hungry drink water

Chew sugarless gum

Go for a walk

Brush your teeth

Have a fiber tablet with cold water

Distract yourself-tell yourself I'll eat in another 15 minutes, just try to distract yourself with something else.

Availability- Make available to you healthy, low fat, low calorie, high fiber foods. Try not to have high calorie, processed foods around.

Familiarity- Try to gain a relationship with healthier lower calorie foods.

Try to eat a **variety** of them not only to satisfy but for better nutrition. After awhile of practice new foods will become familiar and hopefully preferred.



Exercise goals

The goals of an exercise program for weight loss and long term management are to

- reduce body fat stores
- preserve muscle mass (linked to metabolic rate)
- improve overall health and body function.

Exercise can have a very powerful affect on a person's emotional health and well-being.

It is well accepted that habitual exercise can improve depression and other mental health conditions.

My Diet Tips for Fat Loss

Try to eat **small and frequent meals** or snacks every 2 to 4 hours.

- caloric distribution throughout the day allows less calories to be set up as fat
- less fluctuations in blood glucose and insulin levels
- clients feel sated (satisfied), not hungry all the time
- prevents bingeing or eating large meals at one time

Try not to eat the same foods each day, **vary your diet**.

- variety assures proper nutrient intakes
- prevents clients become bored with plan
- gives more options than a set meal plan

Try to have a **good breakfast**.

- after 6 or more hours of sleep liver stores of glycogen and amino acids have become somewhat depleted and should be restored.
- prevents early fatigue or possibly light headiness

Try not to eat a meal **1-2 hours before bed**, a snack is o.k.

- a heavy meal may interfere with sound sleep

Try to drink **6 to 8 - 8 oz.** servings of cold water daily

- water is the key nutrient, can't survive without it
- inadequate consumption can **increase blood viscosity** placing stress on the heart and other organs including the kidneys
- inadequate consumption may not allow carbs to be converted to **glycogen** for water needs to be present in its synthesis, these carbs may be converted to fat
- inadequate consumption may cause headaches
- **cold water is absorbed faster and expends additional calories**

No regular sodas, but occasional diet sodas/seltzer water is acceptable.

- soda contains empty calories
- liquid calories adds very little to satisfying ones hunger
- aspartame, the artificial sweetener, is not tolerated in some people

If you can no alcoholic drinks, but if you must don't exceed 3 drinks a week

- alcohol contains a high amount of calories, **Alcohol: 1 gram = 7 calories**, compared to carbs and protein at 4.
- **I like to call them fat beverages.**
- Alcohol has toxic effects and because of its structure the body can convert it into fat

My Diet Tips for Fat Loss

Try not to have high saturated fat and trans **fats foods**

Try not to have juices have fruit instead.

- juices are high caloric beverages
- juice processing robs fruit of many key nutrients
- liquid calories adds very little to satisfying ones hunger

No sweets or limit sweets

- sweets for the most part have very little nutritional value
- most sweets have a high caloric density where most don't sated ones hunger
- some sweets may stimulate appetite

Try to have 1 to 2 pieces of fruit a day.

- most fruits have high amount of fiber, vitamins, carotenoids, and flavonoids
- some, like apples, leaves people sated

Try to eat more vegetables, especially green 3 to 4 servings a day.

- most vegetables have very high amount of fiber, vitamins, carotenoids, and flavonoids
- most leaves people sated

Try not to have raisins or dried fruit, high caloric food items.

- it's amazing how many calories dried fruit has as well as nuts

Remember nuts are high in calories

Try to have only nonfat or low fat dairy products (skim-1% milk, nonfat yogurt, and nonfat cottage cheese), at least 1-2 a day.

- dairy is a great source of absorbable calcium
- its also a good quality protein source

If you want take a multi-vitamin.

- adds a degree of protection, especially for those on a low caloric plan

You can cheat/treat at 1-2 meals a week and have whatever you want within reason.

Eating at a slow to moderate pace allows your stomach and intestines time to send messages to the brain they are full.

- The mechanism of satiety is a slow one taking 20 to 30 minutes after the stomach is full to get the message through.

Fat Cell #

versus

Fat Cell Size

Why do some people have a harder time losing weight?

Hyperplasia Fat Cells Increase Number

Hypertrophy Fat Cells Increase Size

- Hyperplasia- Early life, Adolescence 9-13 years, or when BMI > 40
- Hypertrophy - mostly mid-section
- Can't change fat cell number but can change size of cells
- That is why it is difficult for those with many fat cells to lose weight

ALARMING INFORMATION

- 65% of world's population lives in countries where overweight and obesity kills more than underweight
- Decreasing fatness is difficult in those with an increased number of fat cells
- Many obese people are prone to weight gain due to increased number of fat cells
- Once established a fat cell can not get rid of it only can decrease its size
- Harder to lose weight with an increased number of fat cells
- An obese person has a 86% greater risk of developing heart disease than a person with a normal weight
- Even a 4 to 10% increase in body weight creates greater than a 50% risk of coronary artery disease
- Obesity mortality rate twice that of a normal weight person
- Obese children most likely to be obese adults especially if parents are obese
- People eat more calories when food is presented to them.
- People eat by package versus by servings
- Restaurant and fast food meals typically provide 65% more calories with typically less nutrition
- Eating evolved from survival to a behavioral response
- Fasting and Detox Diets immediate weight loss but interferes with sustained loss. Could reduce metabolic rate making it hard to lose weight. Fad diets, like detox, are not recommended.
- For individuals who are obese, each pound of excess body weight translates to an additional 4 lbs. of stress on the knee.

3 Part Approach to Body Fat Reduction

Exercise Plan

- 1) Resistance train
- 2) Cardiovascular train
- 3) Follow a low saturated fat, high fiber, nutrient dense, and reduced caloric diet

Resistance train **boost ones metabolism** through building lean muscle mass (**A one pound muscle gain can increase RMR by 25 to 100 calories a day**). The other benefit is the increase tone of the muscle pulls excess body fat stores inward giving one the appearance that they are less fat. 2 days a week.

Walking is an essential part of everyday life and a preferred form of physical activity for many who are looking for weight loss. A general rule is that you should **walk (or perform any other aerobic activity)** with **a sense of determined purpose**. (Rooks 1997). 5 to 7 days a week 30-60 minutes.

Proper nutrition is essential to weight loss. Permanent weight loss is not achieved without exercise and proper diet.

Belly Fat is one of the primary risk factors for Metabolic Syndrome

What is the metabolic syndrome?

The metabolic syndrome is characterized by a group of metabolic risk factors in one person. They include:

- Abdominal obesity (excessive fat tissue in and around the abdomen)
- Atherogenic dyslipidemia (blood fat disorders — high triglycerides, low HDL cholesterol and high LDL cholesterol — that foster plaque buildups in artery walls)
- Elevated blood pressure
- Insulin resistance or glucose intolerance (the body can't properly use insulin or blood sugar)
- Prothrombotic state (e.g., high fibrinogen or plasminogen activator inhibitor-1 in the blood)
- Pro-inflammatory state (e.g., elevated C-reactive protein in the blood)

People with the metabolic syndrome are at increased risk of coronary heart disease and other diseases related to plaque buildups in artery walls (e.g., stroke and peripheral vascular disease) and type 2 diabetes.

50 million Americans have it.

Look at the research.

What is better?

Low-Fat versus Low-Carb Diet

On-Going Study of 600 People

So far No difference

but massive difference

between people - some loss 0,

some 20, some 60 lbs.

Might be a matter of one size
fits all does not work

Weight and Fat loss calorie calculations

- A accurate formula Basal Metaboic Rate equation is the **Mifflin-St Jeor Equation** (calories/day):

Male: $9.99 \times \text{weight} + 6.25 \times \text{height} - 4.92 \times \text{age} + 5$

Female: $9.99 \times \text{weight} + 6.25 \times \text{height} - 4.92 \times \text{age} - 161$

weight in kilograms, height in centimeters, age in years

Sample: $800 + 1125 - 236 + 5 = 1,694$

- First determine Basal Metabolic Rate (BMR) and then multiply that number by 1.7 for calories needed daily if moderately active (if low activity multiply by 1.2, if high, like an athlete, multiply by 1.9).

$1.7 \times 1,694 = 2885$ calories needed daily

decrease 500 to 1000 from this for weight loss

Go to these links to calculate metabolic rate

<https://www.supertracker.usda.gov/myplan.aspx>

<http://shapeup.org/resting-metabolic-rate-calculator/>