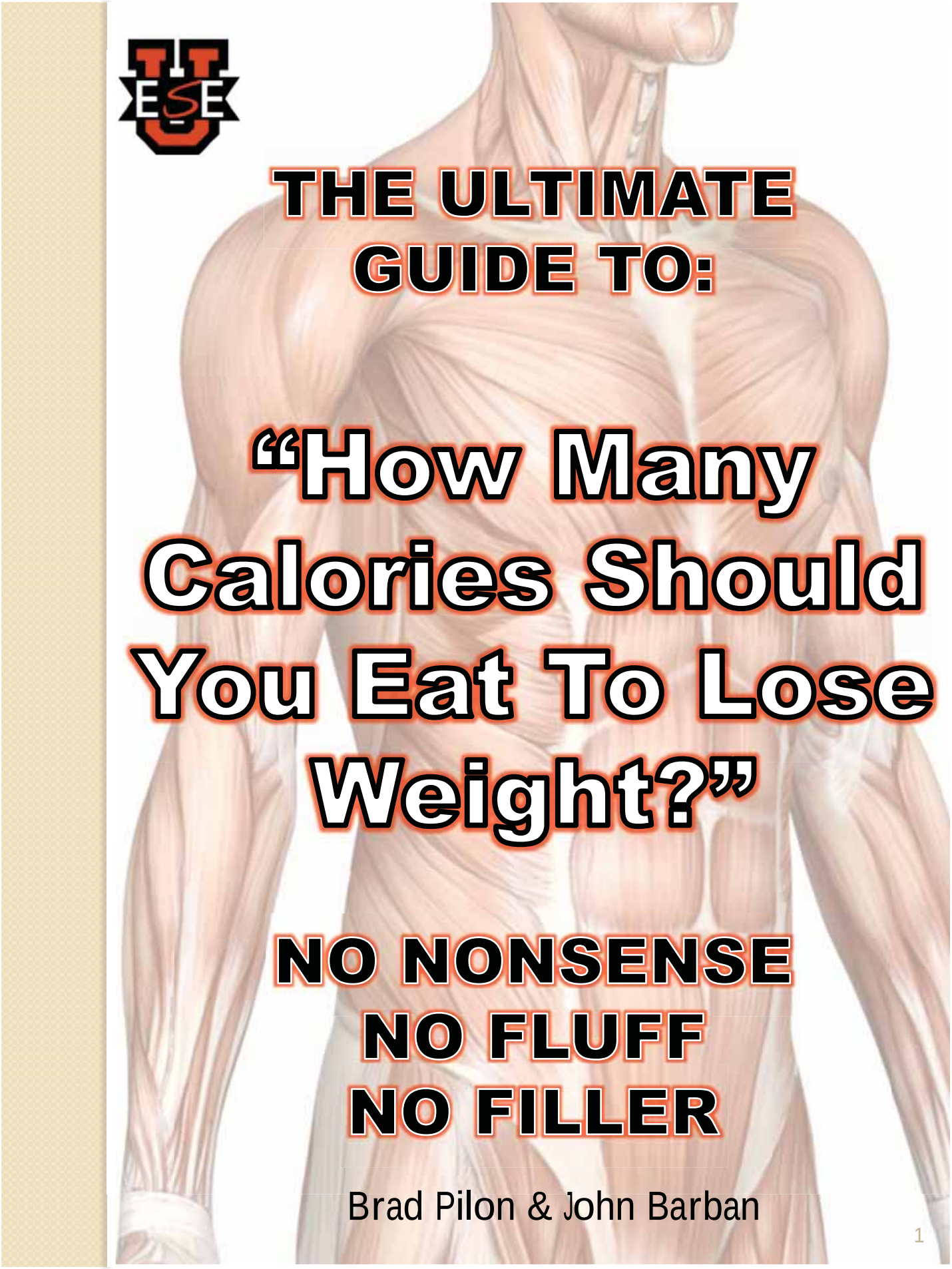

THE ULTIMATE GUIDE TO:

"How Many Calories Should You Eat To Lose Weight?"

NO NONSENSE
NO FLUFF
NO FILLER

Brad Pilon & John Barban

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INTRODUCTION

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THE RIGHT AMOUNT OF CALORIES

CHAPTER ONE –

INTRODUCTION

How Many Calories Do I need to Eat to Lose Weight?

- To figure out how many calorie you need to eat to lose weight, you first need to understand what makes up your **Metabolic rate.**

- Your metabolic rate determines how many calories you need to eat in a day.

- To understand your Metabolic Rate you need to understand it's relationship with your **Lean Body Mass.**

Calculating Your Metabolic Rate

- It is true that your **LEAN BODY MASS** is the main determinant of your **resting metabolic rate (RMR).**

- Simple and often used equation:

$$RMR = (21.6 \times LBM[kg]) + 370^*$$

- This illustrated the importance of Lean Body Mass to your Metabolic Rate.

*Katch-McArdle formula

What is 'Lean Body Mass'?

- Basically 'Lean Body Mass' is everything in your body that is **NOT fat.**

- Scientifically, Lean body mass is made up of structural and functional elements of your body, including:
  - cells,
  - body water,
  - muscle,
  - bones,
  - and other body organs such as the heart, liver and kidneys.

... basically the sum of everything other than fat in your body.

What is a 'Normal' amount of Lean Body Mass?

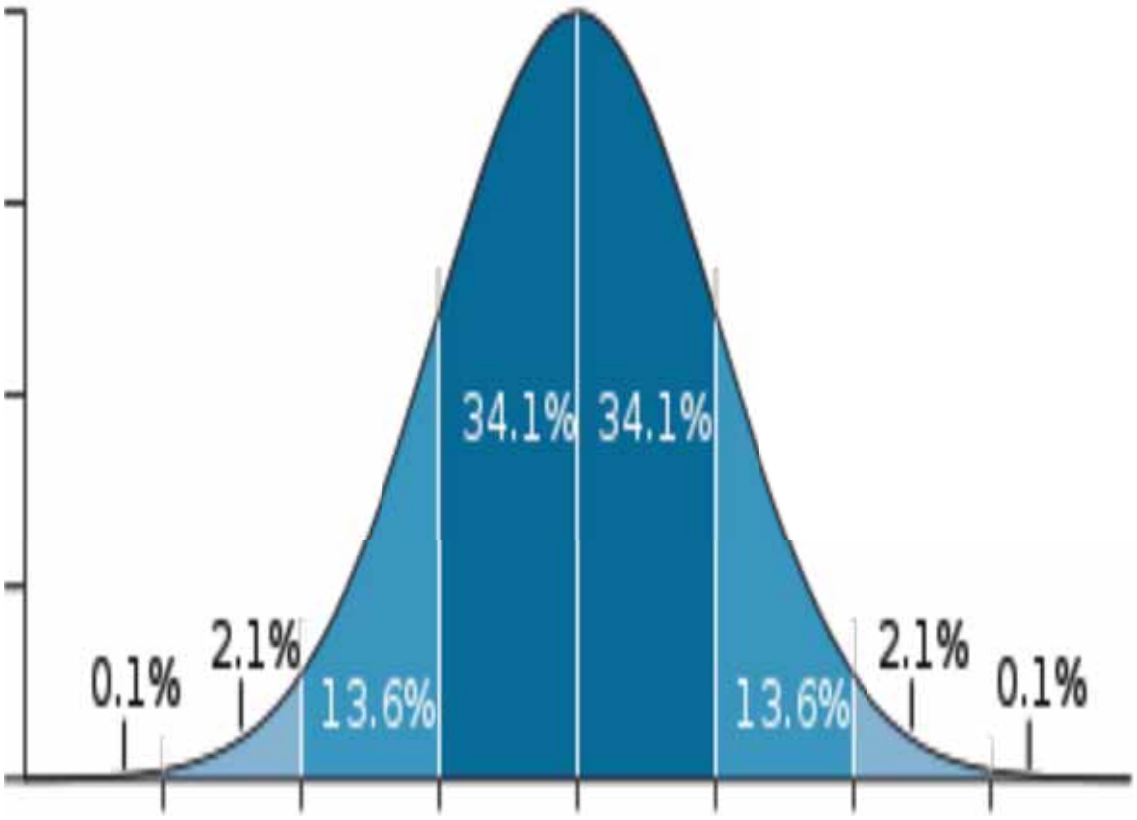
- Despite the fact that the human body can vary in weight by a massive amount, your lean body mass is relatively fixed at a given height.
- By studying large groups of people we can figure out the normal range of lean body mass that a person can expect to carry.
- When we graph this data, we get something that is called a **'normal distribution'**.
- This is a way of looking at averages, and how far a group of people can move away from that average.

Normal Distribution

- A normal distribution can be used to describe any **variable** that clusters around a **mean**.
- For example, the heights of adult males in the U.S. are roughly normally distributed, with a mean of about 70 inches.
- Most men have a height close to the mean, though a small number of **outliers** have a height significantly above or below the mean

Normal Distribution

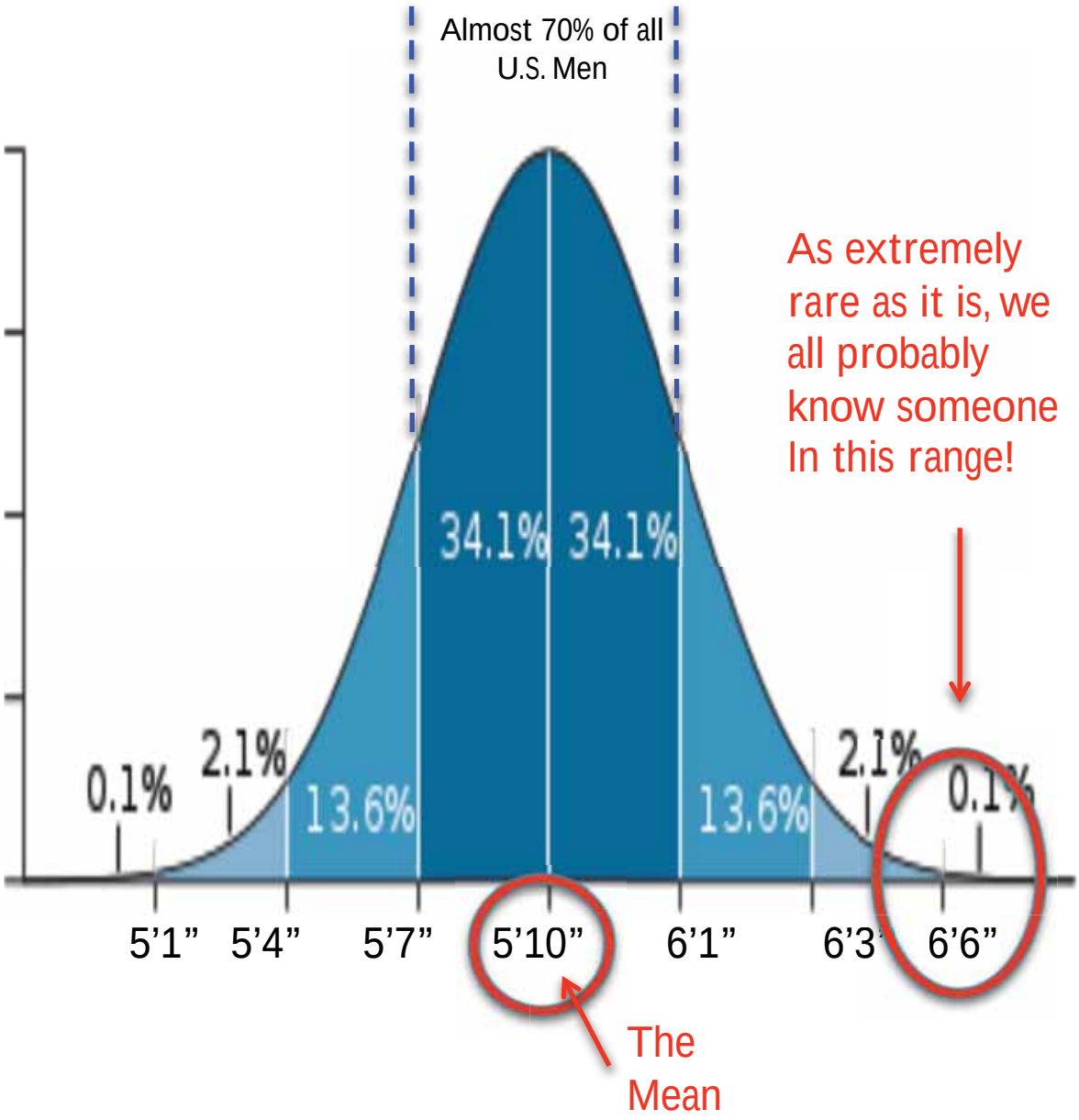
- It looks like a Bell…



Keeping with the Height Example…

- The **average height** for adult men in the U.S. is about 70 inches (For women it is 64 inches), We call this the **Mean.**
- The **standard deviation** (SD) is around 3 inches for men, and 2.5 inches for women.
- This means that most men (about 68 percent), fall within one Standard Deviation of the mean (67–73 inches), as do most women (61.5-65.5 inches).
- Whereas almost all men and women (about 95%) fall within two Standard deviations of the mean (64–76 inches for men and 59-68 inches for women).
- If the standard deviation were zero, then all men would be exactly 70 inches tall and all women would be exactly 64 inches tall.

Average Height of U.S. Male Population



Most of the population falls somewhere along this continuum.

Height and The Amount of Calories you need to eat to lose weight

So what do:

- Normal Distributions,
- Means
- Standard Deviations and
- Height
- Lean Body Mass

Have to do with how many calories you need to eat to lose weight?

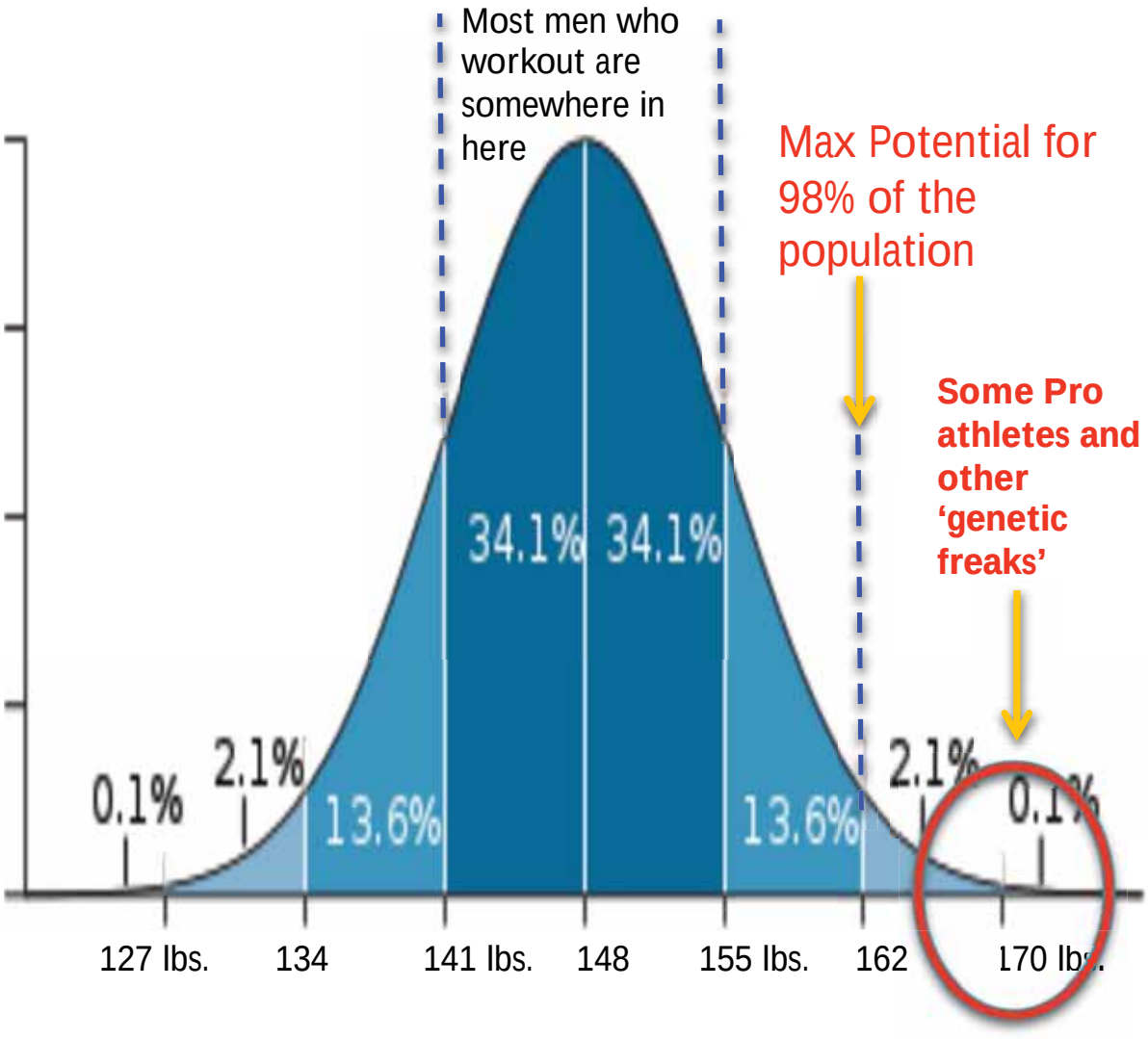
The Answer?

Almost EVERYTHING

The Height - Lean Body Mass Connection

- For a fixed height, Lean Mass is Normally Distributed
- Meaning most people are in the middle, with outliers to the far left and far right of the curve.
- With a Standard Deviation of Approx 7 pounds for men within two Standard Deviations of Average height and a standard deviation of Approx 3 pounds for women.
- This means that if you are a man between 5’4” and 6’3” or a woman between 4’11” and 5’9” you will fall into these rules.

Lean Mass on a 5'10" Male

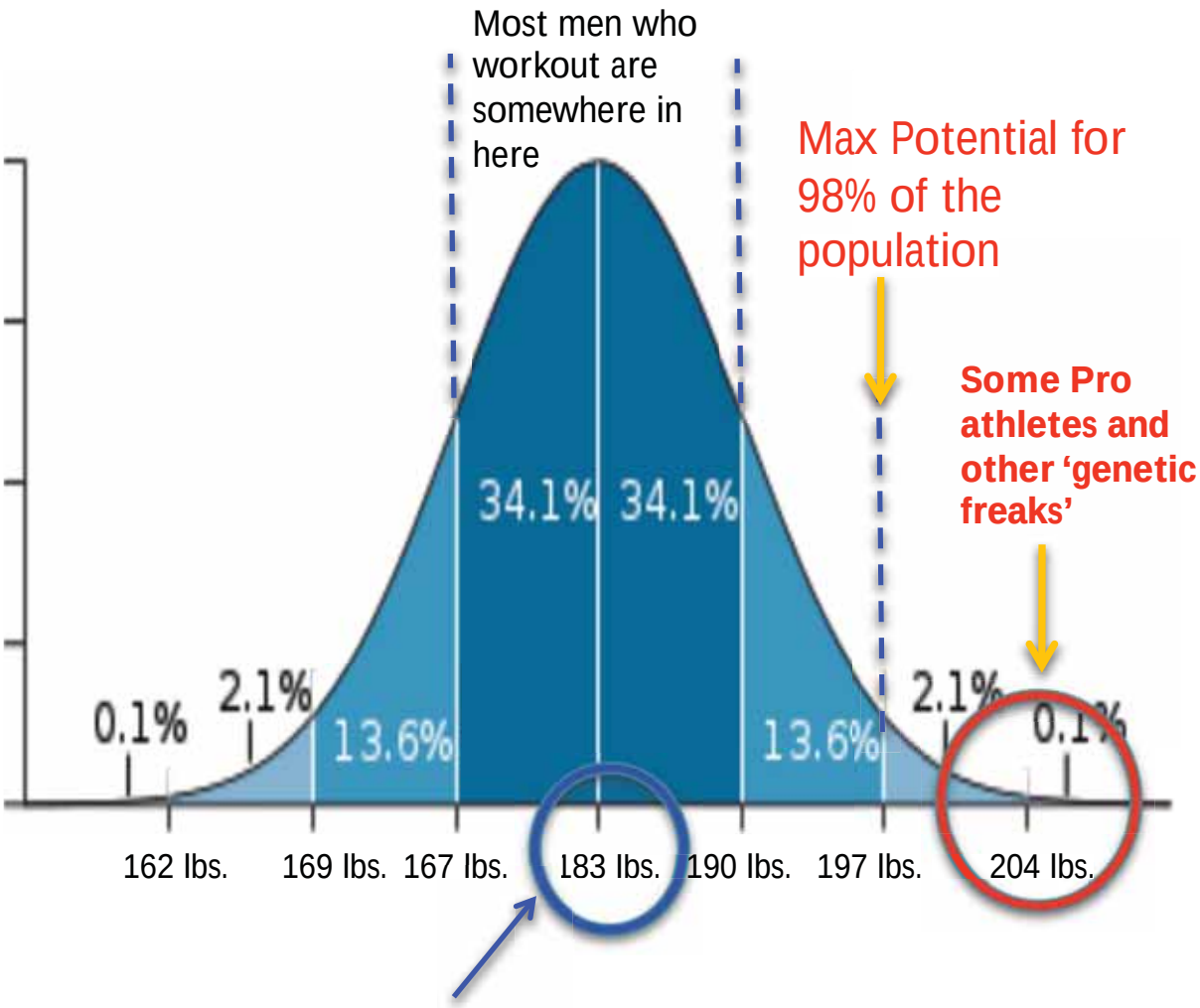


The Pilon-Barban Equation

AKA – The rule of Threes and Sevens:

- For MEN: For every inch in height, add 7 pound to the mean.
- The Standard Deviation remains as 7 pounds for the heights between 5'4" and 6'3"
- **Think 7 up and 7 over.**
- For WOMEN: For every inch in height, add 3 pounds to the mean.
- The Standard Deviation remains as 3 pounds for the heights between 4'11" and 5'9"
- **Think 3 up and 3 over.**

Lean Mass on a 6’3” Male



148 lbs. + 25 lbs. (7 lbs for each inch above 5’10”)

The rule of Sevens illustrates why a 6’3” man will almost always carry more lean mass than a 5’10” man

What does this have to do with Diet?

- According to the Katch-McArdle formula :

RMR = (LBM x 21.6) + 370

And,

- LBM only varies by about 40 pounds in a 6'3" man…
- And EVEN if we assume it's all highly metabolic lean mass like organs (instead of just being extra muscle)
- Then for a 6'3" man:

RMR would range from about 2,000 to about 2,400.

Caloric needs only vary by about 400 Calories at a given height!

- It doesn't matter if you are skinny or extremely muscular!
- AND, since fat has almost no metabolic cost, it also doesn't matter if you are overweight!
- Bottom line, a skinny person, a lean person, a muscular person and obese person all have roughly the same resting metabolic rate **if they are the same height.**

Bottom Line

- At a given weight, the average Caloric needs of men of the same height will vary by a MAXIMUM of about 400 Calories.
- AND, since fat mass has almost no caloric need, this leads to the conclusion that…
- It doesn't matter how much you weigh, the amount you need to eat to lose weight is relatively fixed based on your height!

CHAPTER TWO –

THE 500 CALORIE MYTH

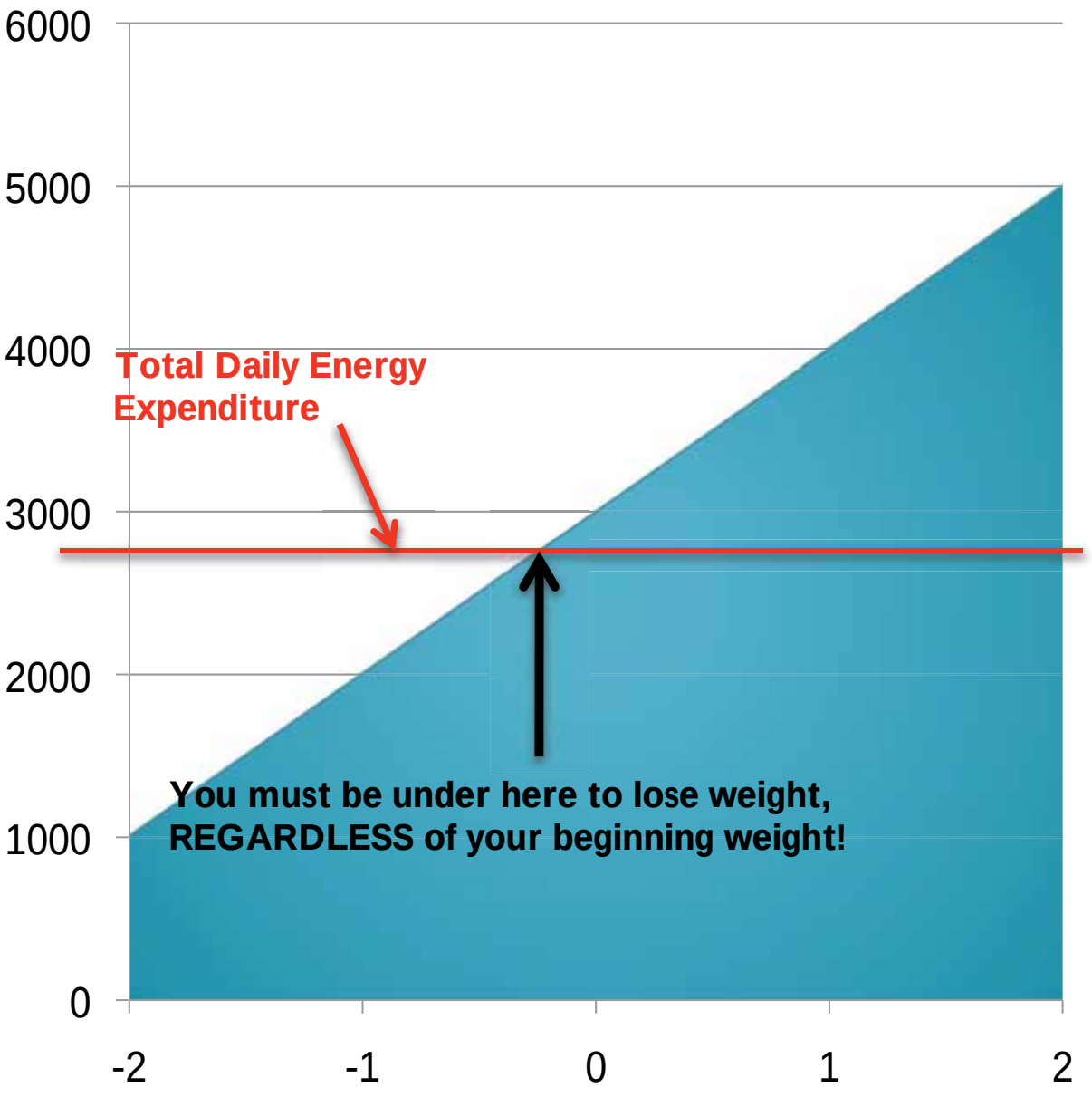
There is only under-eating or over-eating, there is no in-between.

- A 5’10” 200 pound male and a 5’10” 400 pound male have to eat about the same amount of calories in order to lose weight.
- The same is true for women of the same height.
- It doesn’t matter how much you weigh, the amount you need to eat to lose weight is relatively fixed based on your height!

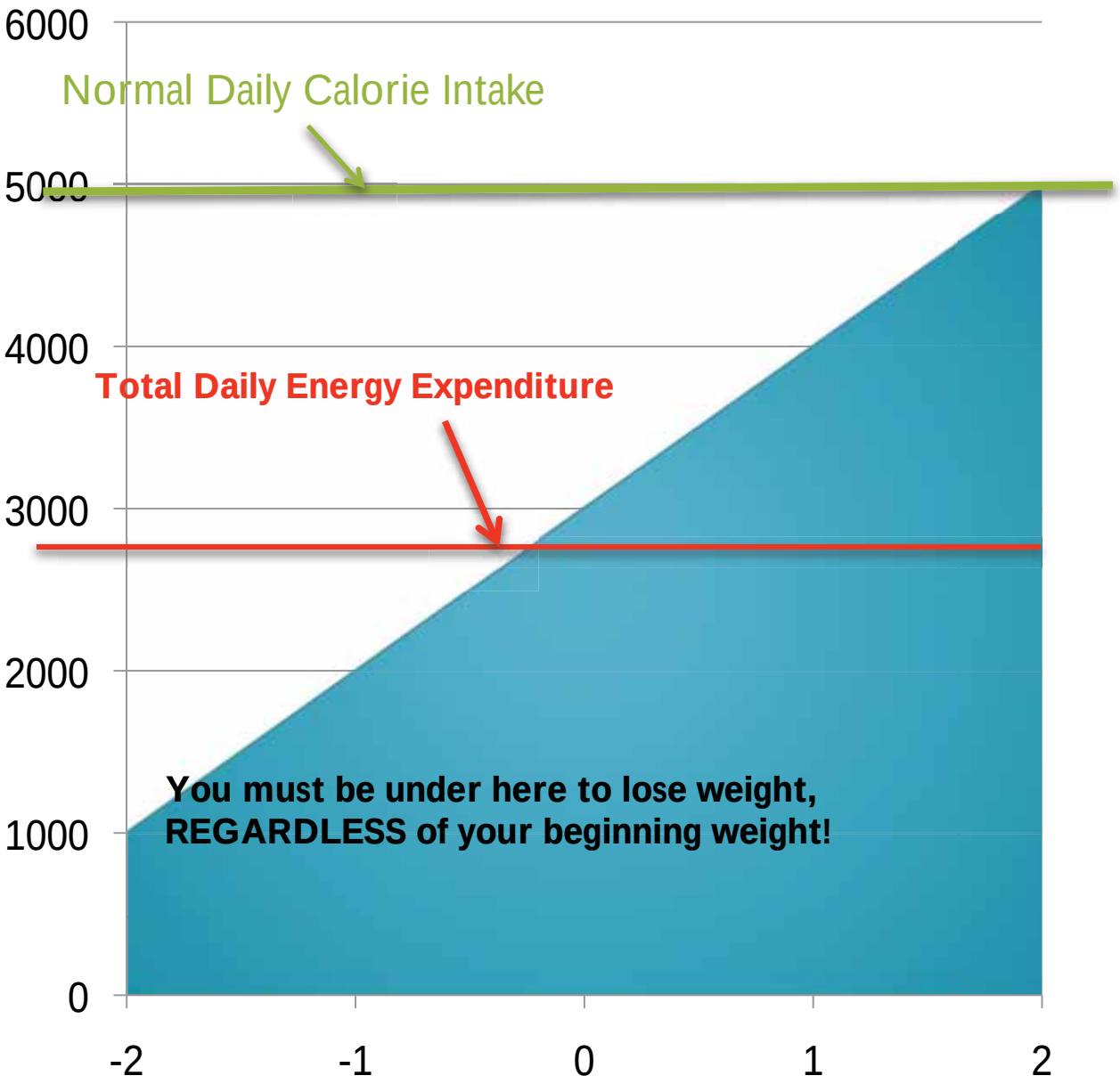
Wait….What?

- The idea of eating **500 less calories per day to lose weight is a myth…**
- Given your own unique body composition and height there is an amount of calories that will cause you to lose weight, an amount to stay the same.
- Anything above these two numbers **will cause you to GAIN weight!**

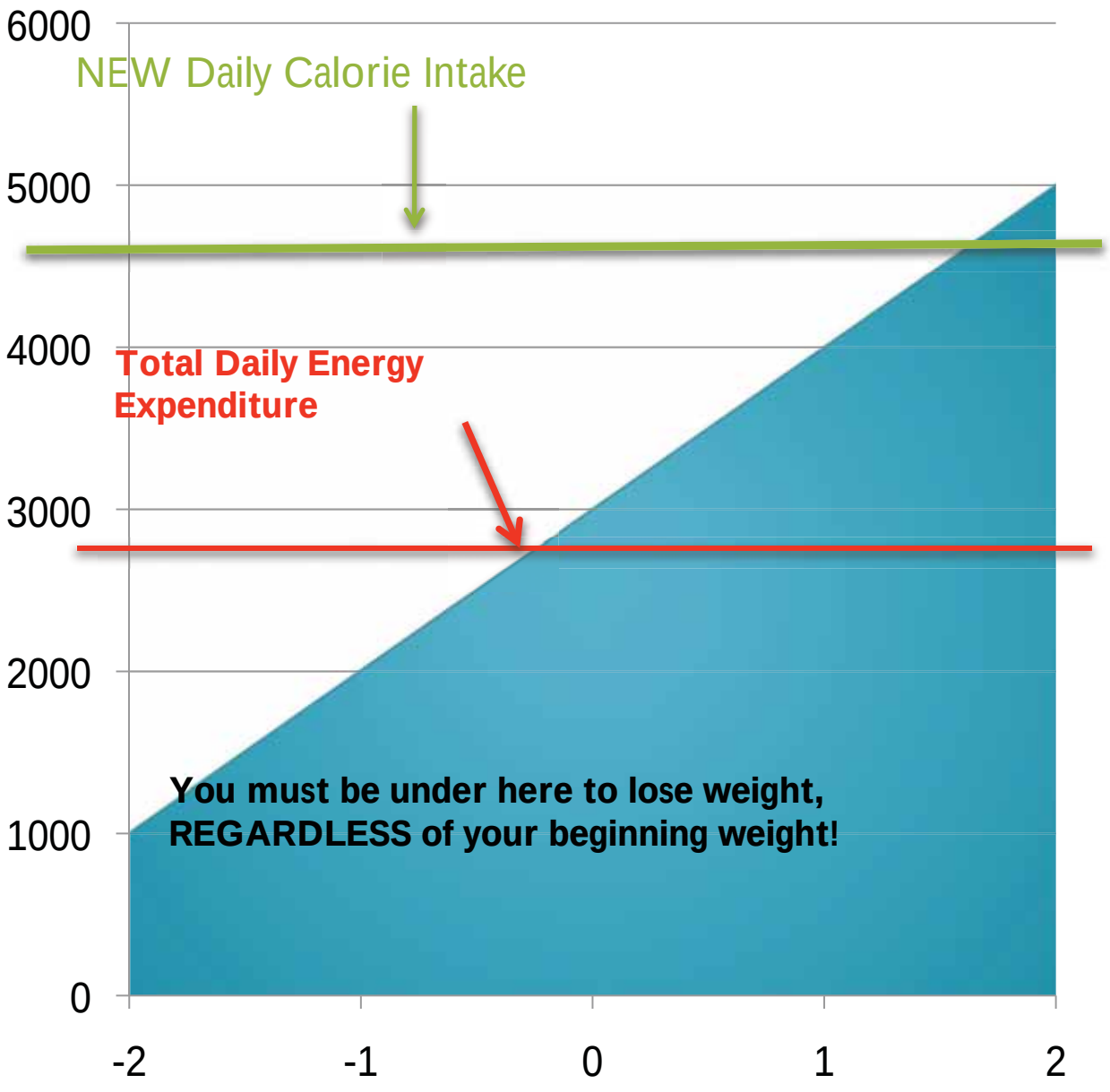
Imagine a person with a total daily Energy Expenditure of 2,700 Calories.



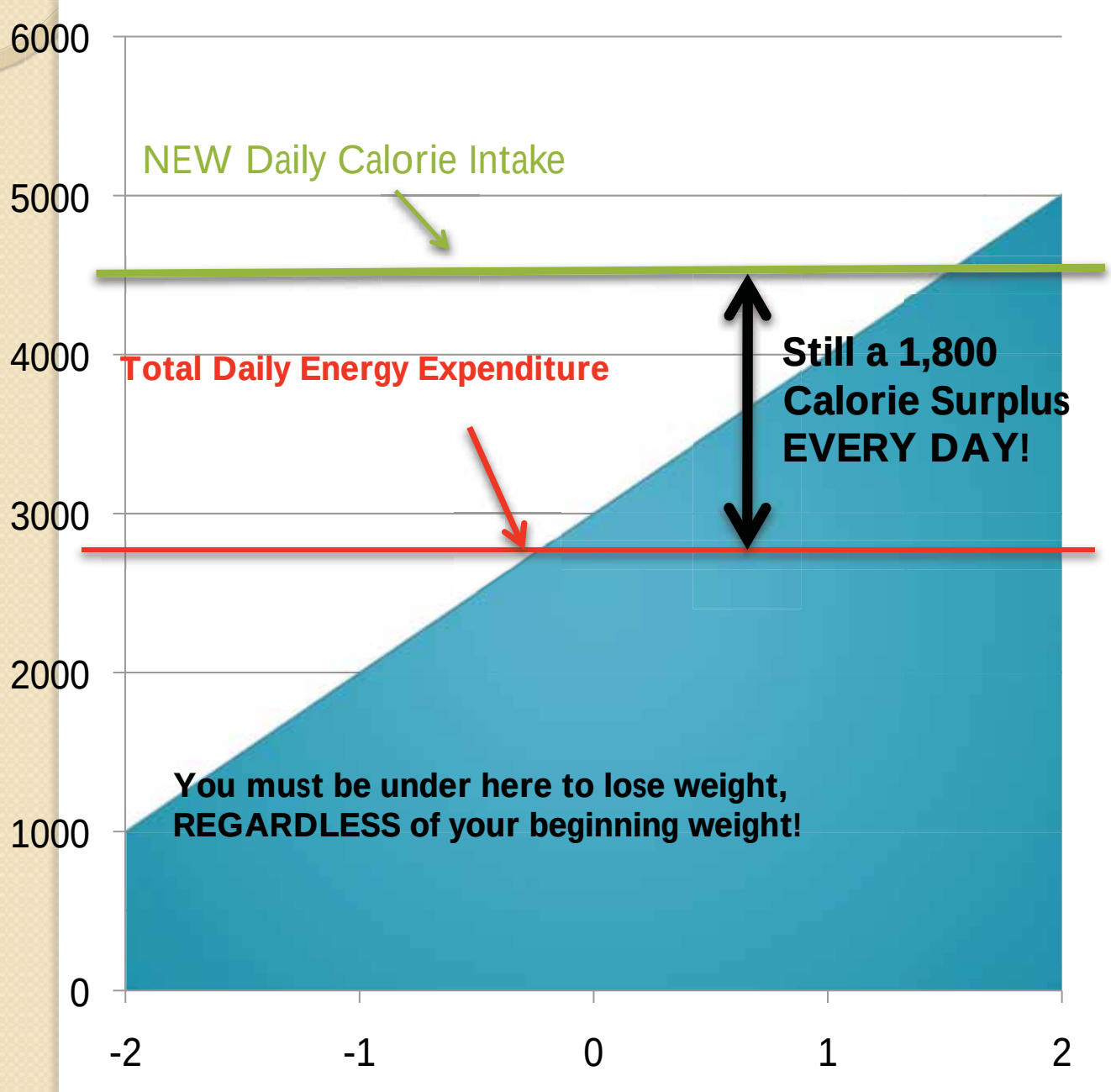
Now Imagine that person normally ate about 5,000 Calories per day



If that Person cut their Calorie Intake by 500 Calories….



They would still be gaining weight! (Just not as quickly)



Bottom line – the idea that:

"all you have to do is decrease your calorie intake by 500 Calories and lose a pound of fat in a week"

is a MYTH.

CHAPTER THREE-

THE EFFECT OF BUILDING MUSCLE

Muscle mass and Your Calorie Needs

- What happens when you build muscle, Doesn't the amount of calories you need to eat increase?

- How many times have you heard that adding an extra pound of muscle of muscle burns 40-50 extra calories at rest?

Calculating Metabolic Rate

- It is true that **LEAN BODY MASS** is the main determinant of your resting metabolic rate.
- Simple and often used equation:

$$RMR = (21.6 \times LBM[kg]) + 370^*$$

- This illustrated the importance of Lean Body Mass to your Metabolic Rate.

*Katch-McArdle formula

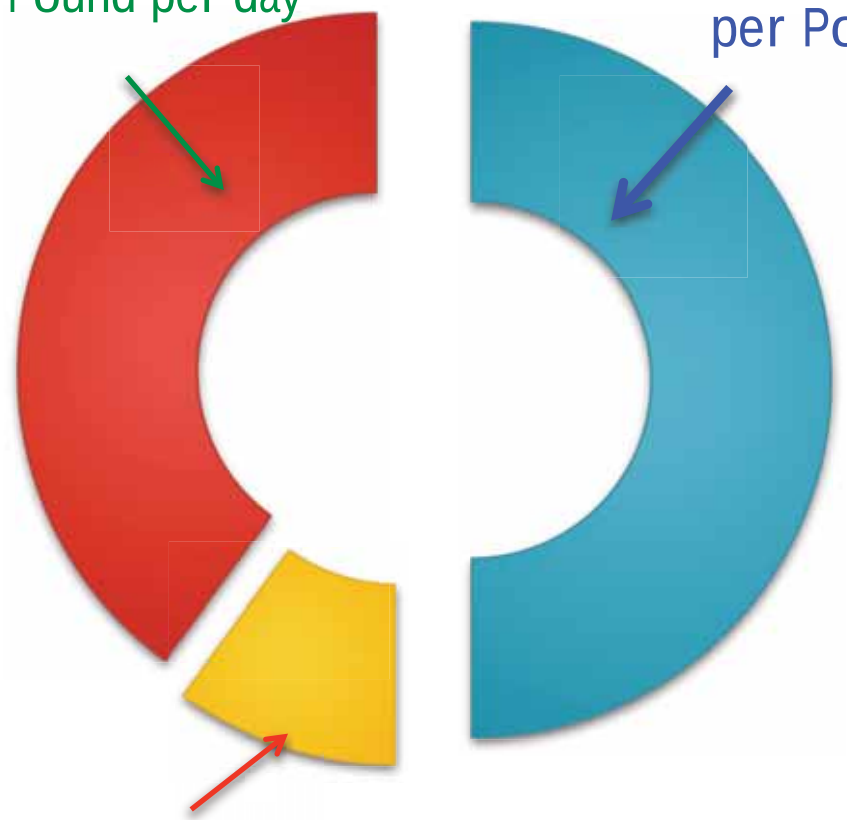
But that's ALL Lean Body Mass!

- Lean Body Mass is Made up of much more than just MUSCLE.
- It includes: Bones, Organs, Blood… basically everything that is **NOT** fat.
- Each part of Lean Body Mass has a different amount of Calories it burns per day as a fuel.

Lean Body Mass

Organs combined burn about 25 Calories per Pound per day

Muscle burns about 5 Calories per Pound per day



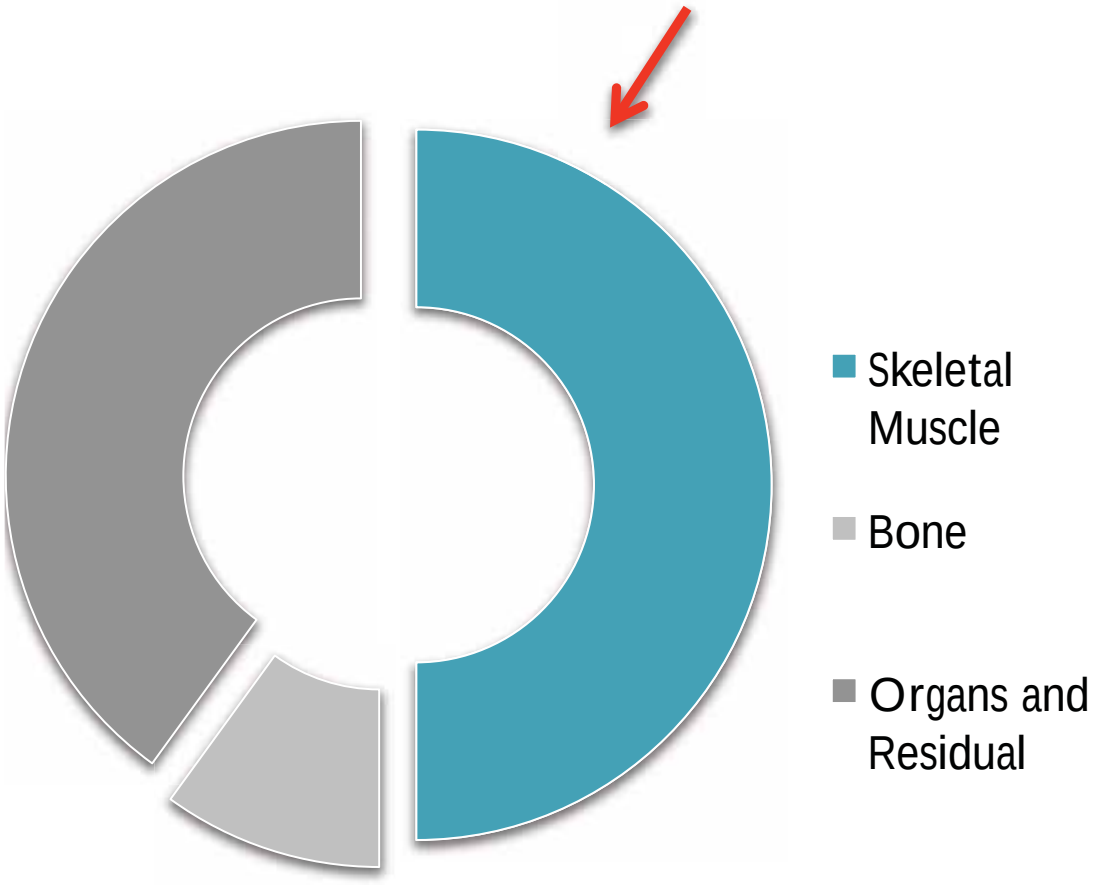
Bone burns about 1 calorie per pound

*Illner K, et al. Metabolically active components of fat free mass and resting energy expenditure in non-obese adults. American Journal of Physiology, Endocrinology and Metabolism. 278: E308-E315;2000.

Weight training only increases Skeletal Muscle

Lean Body Mass

This is the only part of Lean Mass that is affected by Resistance training…



Does Building Muscle Change your Metabolism?

- While every pound of **Lean Body Mass COMBINED** burns about 10-13 Calories, resistance training is only adding SKELETAL MUSCLE mass.
- So every extra pound **OF MUSCLE** is only causes **5** extra **Calories to be burned per day!**
- You can use typical equations like the Katch-McArdle formula to predict metabolic rate, but you can't use them to predict **CHANGE** in metabolic rate from muscle gains or losses.

Big MISTAKE a lot of people make!

The Bottom Line

- Even adding **30 pounds of SKELETAL MUSCLE** would only increase your RMR by **150 Calories per day!**
- Despite what supplement advertisements and bodybuilding websites tell you, very few adults will **EVER** gain 30 pounds of extra muscle mass in their **LIFE TIME!**
- Trying to add muscle is beneficial, but it is **NOT** the SUPER-EFFECTIVE strategy for losing weight and burning fat that it has been made out to be!

CHAPTER FOUR -

THE EFFECT OF EXERCISE

But what about factoring in Exercise?

Some people believe that you should multiply your resting metabolic rate by 1.2 or 1.5 to account for the calorie cost of your daily activity

The reality is this is a common mistake made by most people who are trying to figure out how many calories they should eat to lose weight!

Four Reasons NOT to factor in Exercise…

1. The reason you are exercising is to **burn** calories, so why would you factor them back in to your daily food intake?

2. The calorie cost of most exercise is minimal over the course of a week (unless you run 5 miles **EVERY DAY**)

3. Your TOTAL DAILY EXPENDITURE (even if you workout that day) is negligible thanks to cars, computers and desks. (2 hours of intense exercise just can not make up for 22 hours of non-exercise.)

4. Finally, your totally daily energy expenditure is variable. Just because you had a hard workout on Monday, doesn't mean you should eat extra on Wednesday!

Metabolic Cost of Movement

- To calculate the metabolic cost of movement we use the basic equation:
- 1 Calorie for every Kilogram of bodyweight moved a Kilometer.

or,

Calories Burned = Distance moved in Kilometers X Body weight in Kilograms.

(it doesn't matter if you run, jog or sprint this distance the calorie cost is the same)

The Effect of Adding 30 Pounds of Muscle to the Calorie Burning Effect of Exercise

- Assuming a man increases from 160 pounds to 175 pounds, the metabolic cost of running/walking 10 kilometers would increase by:

70 Calories!

- 160 pound man = 730 Calories
- 175 pound man = 800 Calories

AND, it doesn't matter if the extra 30 pounds are muscle or fat, It is STILL only 70 Calories!

The Bottom Line

- Even if you **added 30 pounds of mass**, AND **you ran 10 Kilometers** (over 6 miles) **EVERY SINGLE DAY**, that added muscle would cause you to burn a MAXIMUM of an extra 220 Calories per day.

- About the same calories as in a large coffee with two cream a
  sugar…

CHAPTER FIVE -

HOW MANY CALORIES

So How Many Calories?

- Find your height in the following Chart.
- The first column is the **MAXIMUM** lean mass you can naturally carry at your height.
- The second Column is your estimated Resting Metabolic Rate for your **MAXIMUM** lean body mass.
- The last column is your **MAXIMUM** daily calorie needs assuming your are sedentary with the exception of these two almost impossible scenarios:

    1. You have built **30 pounds of extra muscle mass** on top of your already maximum lean body mass.

    2. You are doing the equivalent of walking or **running 5.6 miles every single day**

- Based on this facts, this number is the **MAXIMUM** amount of calories you can eat in a day without putting on extra body fat.

MEN

HEIGHT	Maximum LBM	Maximum RMR	Estimated MAXIMUM Calorie Needs
5'4"	127	1617	**2170**
5'5'	134	1686	**2250**
5'6"	141	1754	**2330**
5'7"	148	1823	**2410**
5'8"	155	1892	**2500**
5'9"	162	1961	**2580**
5'10"	169	2029	**2660**
5'11"	176	2098	**2740**
6'	183	2167	**2830**
6'1"	190	2235	**2910**
6'2"	197	2304	**2990**
6'3"	204	2373	**3070**
6'4"	211	2442	**3150**
6'5"	218	2510	**3240**
6'6"	225	2579	**3320**

WOMEN

HEIGHT	Maximum LBM	Maximum RMR	Estimated MAXIMUM Calorie Needs
5'0"	93	1283	**1760**
5'1"	96	1313	**1800**
5'2"	99	1342	**1840**
5'3"	102	1371	**1870**
5'4"	105	1401	**1910**
5'5'	108	1430	**1940**
5'6"	111	1460	**1980**
5'7"	114	1489	**2010**
5'8"	117	1519	**2050**
5'9"	120	1548	**2080**
5'10"	123	1578	**2120**
5'11"	126	1607	**2150**
6'	129	1637	**2190**

To Lose Weight…

- Start at your MAXIMUM number and slowly decrease the amount of calories you consume until you start losing weight.
- Stay at this level until the desired amount of weight is lost.
- Once you find the level of intake that allows you to lose weight there is **NO REASON** to continue decreasing how many calories you eat! (This is a myth)

The Problem with this approach

- Research has shown that we are very poor at estimating calorie intake.
- Research has also shown that the calorie calculators and charts that tell you how many calories are in food are only **rough estimates at best**.
- Finally, research has also shown that our ability to estimate the size or weight of the food we eat is very poor.

The Bottom Line

- The amount of calories you need to eat to lose weight is **much less** than you probably thought.
- The idea that all you have to do is eat 500 less calories is a **complete myth.**
- Calorie counting may not be the answer as it is extremely difficult to do with any precision.

Enter Eat Stop Eat (The solution)

To Lose Weight:

- Do your best to **roughly** eat a little less than your maximum intake found on the chart on page 41.
- (Aim for between 250-500 Calories less)
- Add in two Eat Stop Eat style fasts per week.
- This should decrease your AVERAGE daily intake by between 15 and 20%
- Even at 15% decrease will get you very close to the fat burning zone
- This is the easiest (and therefore most effective way) to cut calories and lose weight without meticulously tracking your calorie intake every day.

Conclusions

- This approach will allow you to eat less, while still enjoying the foods you eat.
- It is not overly restrictive and therefore offers you a large amount of flexibility.
- Combined with responsible eating, and a conscious effort to eat a little less, this approach will guarantee weight loss results.

Final Thoughts

- How Many Calories Cheat Sheet:

Step 1: Find your Height on the Charts on page 44.

Step 2: Find your MAXIMUM daily intake.

Step 3: Do you best to eat less than this number every day.

Step 4: Add in Eat Stop Eat style fasting for weight loss results.