

MASTER STRATEGIES FOR WEIGHT LOSS &

# MUSCLE GAIN





# MASTER STRATEGIES FOR WEIGHT LOSS & MUSCLE GAIN

## BODY COMPOSITION

- Describes the amount of fat, bone, water and muscle in our bodies
- Measurements such as BMI, waist to hip ratio and general weight are inexpensive ways to determine appropriate weight and health risk status
- However, they do not provide specific info

## BODY COMPOSITION DEFINITIONS

- **Fat Mass:** the portion of your body that is fat. Fat mass includes both fat stored in the fat cells and essential body fat
- **Essential body fat:** fats found within the body that are essential to the normal structure and optimal function of the body
- **Nonessential body fat:** fat found in adipose tissue. Also, called 'storage fat'
- **Fat-free mass:** the total weight of the body except for its fat. This is mainly made up of skeletal muscle and bone, also includes protein, water, fat free organ weight
- **Lean body mass:** portion of the body that consists of fat free mass and the essential fats that include those tissues
- **Percent body fat (%BF):** The amount of fat mass found on the body expressed as a percentage of total body weight



## % WEIGHT CHANGE

- A single body weight measurement is not very useful
- Recording weight at regular intervals-beneficial
- Does not differentiate between lean tissue, fat and fluid
- Good for setting goals- losing 5-10% body weight is beneficial to health

$$\text{Weight Change (\%)} = \frac{(\text{Usual Weight} - \text{Actual Weight})}{\text{Usual Weight}} \times 100$$

## WAIST CIRCUMFERENCE

- Measure at halfway point between lowest rib and hip bone (if you can not find this point measure at the “fattest” part of your tummy)
- Use a tape measure and measure against skin
- Breathe out and relax
- Don't hold the tape tightly around tummy. It should be snug but not tight
- Record measurements particularly as you lose weight- Motivation!!

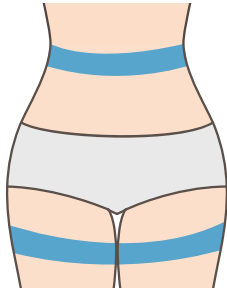
## WAIST GIRTH AND HEALTH RISK

	Men	Women
Normal	78-94 cm	64-80 cm
Overweight (Elevated Risk)	94-102 cm	80-88 cm
Obese (High Risk)	>102 cm	>88 cm



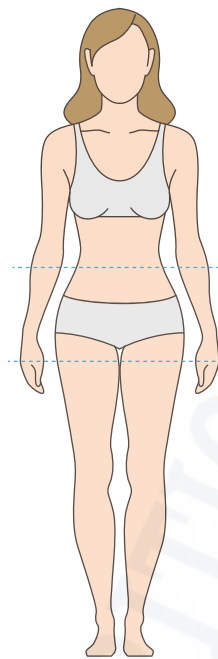
## WAIST TO HIP RATIO

Waist Measurements



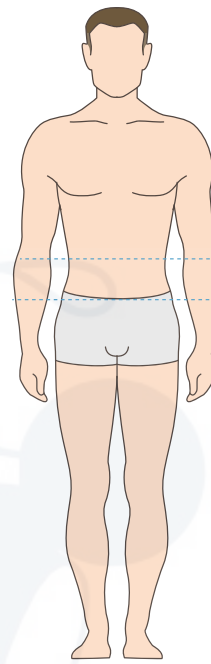
Hips Measurements

$$\frac{\text{Waist}}{\text{Hips}} = \text{Ratio}$$



Waist - Measure at Narrowest place

Hips- Measure at widest part of the body



Waist - Measure at navel

Hips- Measure at hip bones

### Waist-to-hip-Ratio (WHR) Norms

Gender	Excellent	Good	Average	At Risk
Males	<0.85	0.85 - 0.89	0.90 - 0.95	≥0.95
Females	<0.75	0.75 - 0.79	0.80 - 0.86	≥0.86





## BODY FAT %

### Total fat Mass / Total Body Mass

Body fat has 2 components

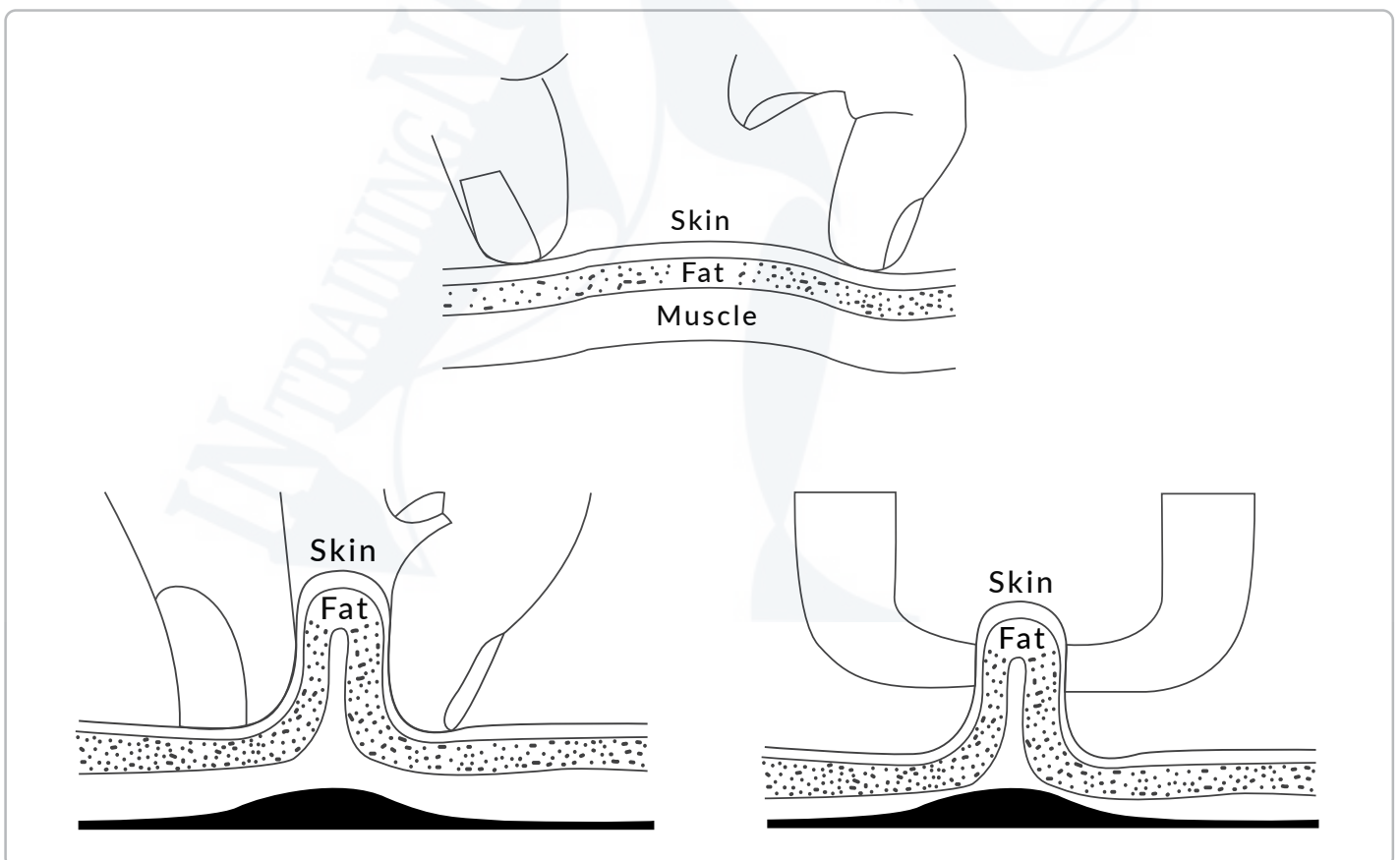
- Essential
- Stored

%Essential varies with gender

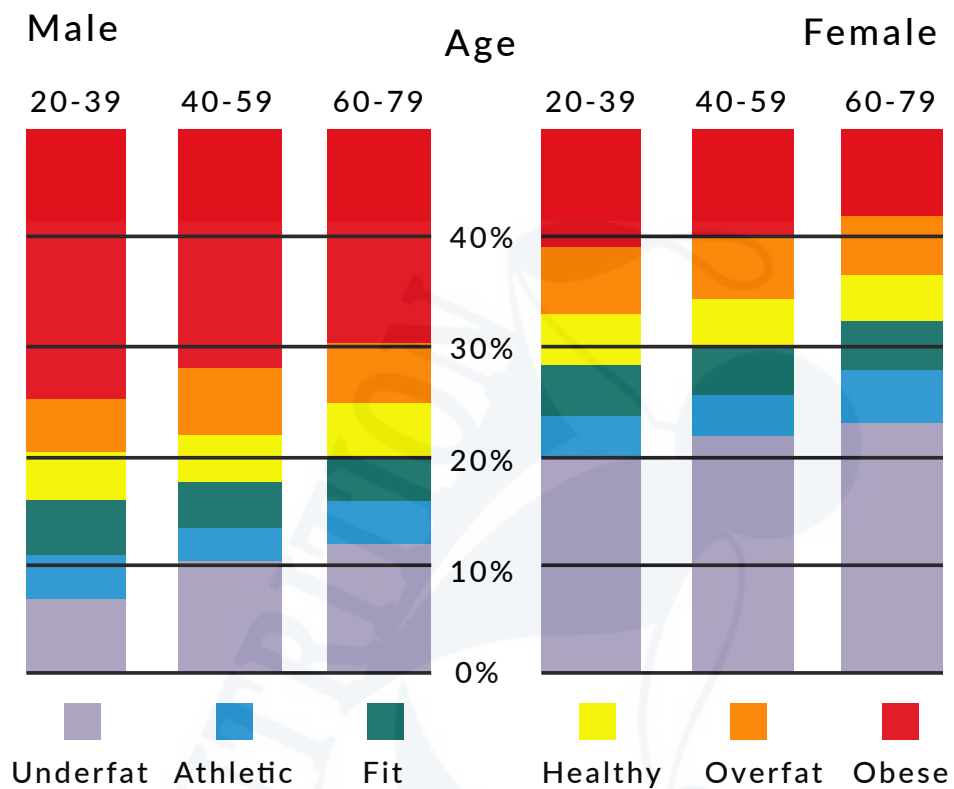
- Women 10-13%
- Men 2-5%

Stored Fat accumulates in adipose tissue  
Numerous methods to measure

## SKIN FOLD THICKNESS



## BODY FAT CHART

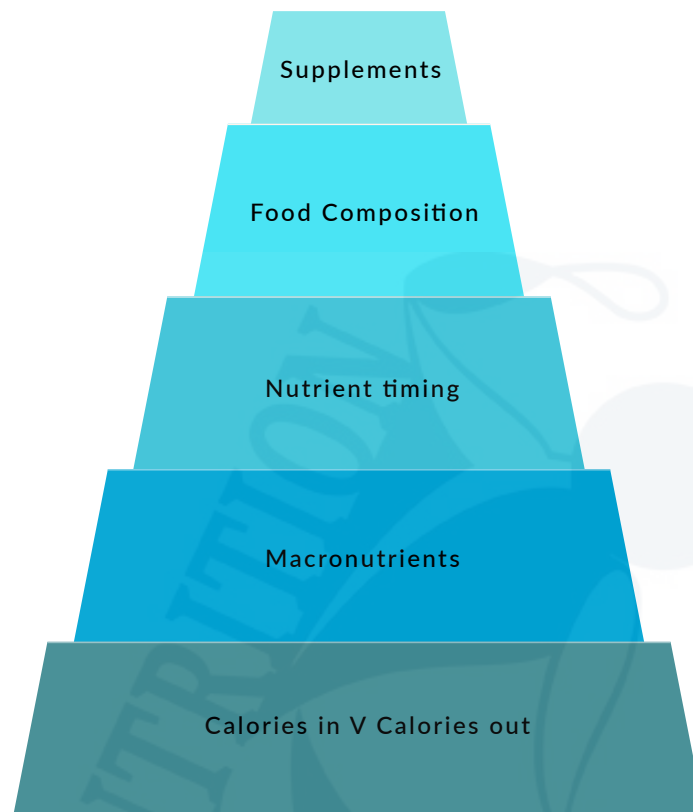


### General Body fat percentage categories

Classification	Women	Men
Essential Fat	10-12%	2-4%
Athletes	14-20%	6-13%
Fitness	21-24%	14-17%
Acceptable	25-31%	18-25%
At Risk	32% plus	25% plus



## CHANGING BODY COMPOSITION



## WEIGHT LOSS

- Common aim amongst athletes and exercise enthusiasts
- Rapid weight loss may have serious health consequences
- 'Weight cycling' associated with increases risk of
  - heart disease
  - secondary diabetes
  - premature death
- Need to create negative energy balance
- Combination of diet and activity better than one or the other



## OBJECTIVES OF HEALTHY WEIGHT LOSS

- Achieve negative energy balance
- Maintain/increase lean tissues
- Gradually reduce BF%
- Avoid major reduction in RMR
- Achieve micronutrient requirements

## HOW TO ACHIEVE NEGATIVE ENERGY BALANCE

- Calculate your RMR
- Calculate daily energy expenditure
- Reduce by 500-1000 kcal per day Should result in weight loss of 0.5-1kg (1-2lbs) per week

- Introduce dietary changes
- Cut out processed refined foods
- Control your portions
- Eat regularly
- Meal plan





## GUIDELINES

- Aim for protein intake of 1.6-2g/kg (0.8-0.9g/lb)
- Calculate CHO and fat requirement (lesson 9) – then cut them by 500-1000kcal to produce your energy deficient
- Do not skip meals
- Eat 3-6 times a day approx. every 3-4 hours
- Choose low calorie, nutrient dense foods
- Vegetables, fruit, wholegrains, lean meats
- Weight/measure food at least once

## GOAL SETTINGS

- Aim to lose 5-10% of current body weight over 3-6 months
- If you can then maintain this for 3-6 months, you can try to lose further weight
- Slow, gradual weight loss better for health and more likely to target fat instead of muscle mass
- Also, less likely to affect performance
- Better success rates long term

### EXAMPLE

- Simon
- 110kg (242lbs)
- Weight loss goal 5-10%
- 5.5kg-11kg in first 3-6 months

- Monitor weight every 2 weeks
- Monitor body composition every 4-6 weeks
- Never consume fewer calories than your RMR

## WEIGHT GAIN

- Lean weight gain can be achieved with a well-planned resistance training programme and a wellbalanced diet
- Both required to increase lean mass
- Not only gain weight but increase strength

## 3 MAIN REQUIREMENTS

- Resistance training
- Positive energy balance
- Positive nitrogen balance
- Calorie intake must exceed output
- Must be gradual or else it may result in fat gain
- Weight gain of 0.5 – 1kg (1-2lbs) considered appropriate
- Number of calories required to do this depends on
  - Goals for rate of weight gain
  - Intensity and volume of training
  - Ability to consume extra calories
  - Genetics

## HOW TO ACHIEVE POSITIVE ENERGY BALANCE

- Calculate your RMR
- Calculate daily energy expenditure
- Increase by 300-500 kcal per day Should result in weight gain of 0.5-1kg (1-2lbs) per week





- Majority of extra calories should come from CHO in order to keep body fuelled
- Aim for 1.8-2.0g/kg (0.81-0.9/lb) per day

### TIPS FOR HEALTHY WEIGHT GAIN

- Consume extra calories in fluids: smoothies, shakes etc
- Avoid carbonated drinks
- Don't wait for hunger to eat
- Eat small, eat frequent
- Eat variety of nutrient dense foods
- Consume sports drinks during training
- Always consume post workout snack

### WEIGHT GAIN SHAKES

- Classic calorie load

	CHO	PRO	FAT	Calories (kcal)
Full fat milk (100ml)	4.6	3.3	3.25	62
Greek style natural yoghurt (150ml)	5	11	8	130
Honey 2 tblsp	34	0.2	0	132
Peanut butter 4 tblsp	12	16	32	400
1 banana	27	1.3	0.4	105
Blueberries (30g)	10	0.5	0.2	38
Oats/porridge (40g)	26	4.5	2.6	148
<b>Total</b>	<b>119</b>	<b>37</b>	<b>46</b>	<b>1015</b>



- Classic calorie load

	<i>CHO</i>	<i>PRO</i>	<i>FAT</i>	<i>Calories (kcal)</i>
Coconut milk (100ml)	2.8	2	21	197
Banana	27	1.3	0.4	105
Raspberries (60g)	7.2	0.72	0.4	32
Almonds (50g)	11	10.5	24.5	288
Cashews (50g)	15	9	22	277
Pumpkin seeds (30g)	16.2	5.7	5.7	134
<b>Total</b>	<b>79.2</b>	<b>29</b>	<b>74</b>	<b>1033</b>

- Green gains

	<i>CHO</i>	<i>PRO</i>	<i>FAT</i>	<i>Calories (kcal)</i>
Greek style natural yoghurt (150ml)	2.8	2	21	197
Apple	27	1.3	0.4	105
Avocado (200g)	7.2	0.72	0.4	32
Spinach (100g)	11	10.5	24.5	288
Broccoli (100g)	15	9	22	277
Flaxseeds seeds (50g)	16.2	5.7	5.7	134
Sunflower seeds (30g)	5	5.6	15.8	171
<b>Total</b>	<b>79.2</b>	<b>29</b>	<b>74</b>	<b>1033</b>





## SLEEP

- Make sleep a priority
- Your body recovers when you are asleep
- You don't eat!
- Being overtired can increase hunger
- Lack of sleep sabotages your training sessions
- Repair muscle, tissues, and replaces damaged cells
- Recharges you brain
- Protein synthesis
- Aim for 8-10 hours a night
- Lack of sleep may increase cortisol production





## MAKING WEIGHT

### Weight cutting can involve unhealthy strategies

- Excessive exercise
- Exercising in sweat suits
- Fluid restriction
- Food restriction
- Fasting
- Self-induced vomiting
- Laxative & diuretic abuse
- Try to implement long term strategies
- Reduce body fat levels to maximise power safely

### IN THE 24 HOURS BEFORE A WEIGH IN:

- Consume low residue foods
- Consume low fibre foods



