

Define or answer the following.

1. What does Body Mass Index (BMI) represent?
The ratio of a person's body weight to their height squared.
2. Use one of the two formulas to calculate yours.
 $BMI = \text{Weight (kilograms)} / \text{height (m)}^2$ or $BMI = (\text{weight (pounds)}/\text{height (inches)}^2) \times 703$
3. Why is BMI important? Look at the BMI ranges on the bottom of page 390 to determine where you fall.
It provides an important CLUE about one's overall health.
4. Why is using BMI alone to assess fitness and health NOT a good idea?
BMI does NOT tell us how much of a person's body mass is fat nor where on the body their fat is stored.
5. What does body composition mean?
The ratio of a person's body fat to lean body mass (muscle).
6. Read over both the methods and limitations on Figure 11.2 page 393. List the 5 current ways a person can have their body composition tested.
underwater weighing
skinfolds
Bioelectrical Impedance Analysis
Dual-energy x-ray absorptiometry
Bod Pod
7. Which body shape (apple or pear) tends to be more associated with chronic diseases such as heart disease, diabetes and high blood pressure? Apple
8. What is the difference between energy intake and energy expenditure (often called TDEE - total daily energy expense).
Intake is the amount of food or calories one eats, expenditure is the energy the body expends to maintain itself and perform movement and activity.
9. Read over Figure 11.5 on page 396. Fill in the chart.

Energy Balance	What does it Mean	Result
Energy Deficit	Consume FEWER cal than you expend	Lose Weight
Energy Balance	Consume EQUAL cal than you expend	Weight Remains the Same
Energy Excess (Surplus)	Consume MORE cal than you expend	Weight Gain

10. What is BMR (basal metabolic rate) refer to?
The energy the body expends to maintain its fundamental physiological functions.

11. List 8 factors that might increase your BMR and therefore increase your calorie burning capability.
 - Higher lean mass
 - Greater height
 - Younger
 - Elevated thyroid hormone
 - stress, fever, illness
 - Male
 - Pregnancy
 - Stimulants such as caffeine or tobacco
12. List 4 Metabolic Factors that might put a person at risk for weight gain and cause resistance to weight loss.
 - Low metabolic rate.
 - Low physical activity
 - Low sympathetic nervous system
 - Low fat oxidation
13. Explain how Leptin and Ghrelin are opposite energy relating hormones.

Leptin is a hormone that reduces food intake (you might want to keep leptin high) whereas ghrelin is also a hormone but it stimulates appetite (you might want to keep ghrelin low).
14. What three strategies should you look for in a weight-loss plan?
 - Gradual Reduction in Food/Energy intake
 - Increased Physical activity
 - A strategy to modify eating and lifestyle behaviors.
15. What are 5 “indicators” for fad diets?
 - “new and improved” programs
 - promote RAPID weight loss
 - Require special foods and supps
 - Must follow a rigid menu (cabbage soup)
 - promotes “supp foods” (protein meals, shakes, bars)
16. What are the three basic “styles of Diets”? According to research, which seem to be effective for weight loss?
 - High Carb
 - Low Carb
 - Low Fat
17. What 3 key strategies should be included in designing your own weight loss plan?
 - Modest reduction in energy (food) intake.
 - Incorporating physical activity into every day
 - Changing behaviour (lifestyle) to help reduce intake and increase activity.
18. What are 4 recommendations for healthy weight gain?
 - Be in calorie surplus by 500-1000 cals
 - Eat frequently (be a grazer – of healthy well balanced foods)
 - Avoid tobacco and stimulants
 - Weight train (resistance train)
19. What does research tell us about the need for amino acid and protein supplements for weight gain?

Not needed.
20. A person with Metabolic Syndrome is at risk for heart disease, type 2 diabetes, and stroke. What are the risk factors you need to have 3 or more of to have Metabolic Syndrome?
 - Abdominal obesity
 - High triglyceride levels
 - Low HDL (healthy cholesterol)
 - High blood pressure
 - High fasting blood sugar

21. What are the main health concerns for weight loss supps like Caffeine, PPA and Ephedra?
increased heart rate, increased blood pressure, death

22. What are the drawbacks to liposuction?

blood clots, skin and nerve damage, adverse drug reactions, deformations AND if you continue to be in calorie surplus, the remaining fat cells in your body will enlarge.

23. Discuss these phrases/statements with a friend. Write down what you think each means.

Feed Muscle Burn Fat – To get rid of excess body fat you should burn it off by training hard and regularly...

if you try to starve it off muscle will waste away – so you have to eat healthy to support your muscle growth.

You can't outrun your fork – you can out eat any amount of physical training

Show me your friends and I'll show you your fitness level – one of the greatest determiners of a person's fitness level is the closest friends they keep. We often share the same lifestyles, eating patterns, physical activity levels.

95% of weight-loss efforts fail – only 5% of people who drop a significant amount of weight KEEP IT OFF LONG TERM.

Metabolic Damage is often a result of the bodies Starvation Response – if you cut cal's by a large amount and rapidly your body will start to adapt, your metabolism will go down...your BMR will go down...this is called metabolic damage...and it sets a person up for the yoyo effect where the weight often comes right back on in the months or years to come.

Yoyo Dieting – after dieting and weight loss, putting all the weight (and often more) back on soon after the dieting ends.