

HEA 151 SUMMER 2010
STUDY GUIDE FOR EXAM #3
Chapter 7, 8 & 9 plus handouts
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WE WILL BE WATCHING THE MOVIE FOOD, INC (OPTIONAL FOR 10 POINTS EXTRA CREDIT) AFTER THE EXAM STARTING AT 10:15 (AM SESSION) AND 2:15 (PM SESSION). IF YOU AREN'T DONE WITH YOUR EXAM YOU CAN FINISH IT WHILE THE MOVIE STARTS

The following are items to study from lecture notes, including handouts and items in the book. This isn't an all inclusive list but at least gives you some topics to focus on. The exam will be just like the last two. No need to bring a scan tron. BRING YOUR CALCULATOR!

Good luck ☺ lisa

CHAPTER 7 (Metabolism/biochem stuff)

Definitions- photosynthesis, anabolism, catabolism, metabolism

Glucose breaks down into pyruvate- from there it goes to

.....anaerobic pathway yielding lactate/lactic acid (burn in muscles from sprinting)

....aerobic pathway yielding Acetyl CoA (slower run)

Carbs, fats, and proteins all break down into Acetyl CoA which goes into the electron transport chain or TCA cycle creating energy (ATP)

What is ATP?

CHAPTER 7 highlight (alcohol)

Glycerol (OH) vs ethanol (ETOH)

What is considered ONE drink?

Alcohol is ½ the proof. 100 proof = 50% alcohol

Know some of the basic ETOH contents of beverages...beer, wine

Some of the basic calories in these beverages (I will use ranges on the exam)

Digestion- STOMACH first, NOT the small intestine like everything else, though it can be absorbed there too.

Why do people get buzzed on an empty stomach?

The liver can handle about 1 drink per hour....what happens when someone exceeds that?

How does the liver get fatty, fibrosis, cirrhosis?

Potentially fatal effects when alcohol is mixed with medicines, why?

How the body reacts to specific blood alcohol levels (table H7-2)

What is the range for a lethal dose? (same table)

Too much alcohol causes overstimulation of gastric acid- ulcers

Cultural effects – what % of ER visits, suicides

Cultural effect- what % of fatal traffic accidents/homicides/domestic/fatal fires (this group all has the same %)

EXCESSIVE ETOH CONSUMPTION IS THE THIRD LEADING CAUSE OF PREVENTABLE DEATH IN THE US.

CHAPTER 8 (Energy balance and body comp)

Hunger signal comes from hypothalamus
Definitions Neuropeptide Y, Thermogenesis
The difference between BMR and RMR
Thermic effect of food/specific dynamic effect
Adaptive thermogenesis
What is BMI?
Healthy range 18.5 to 24.9, obese over 30
What are the shortcomings of using BMI?
Apple shaped body vs pear...health risks
Methods to determine body FAT

HIGHLIGHT 8 (Eating Disorders)

Lots of definitions (matching) – anorexia, bulimia, binge eating disorder (BED),
Orthorexia is when someone MUST eat everything super healthy or they totally freak out (I forgot to mention this in class)
cathartic, emetic
Amenorrhea, female athlete triad
What is the #1 eating disorder?
Treatment best when they've been in recovery for 4 seasons
Reasons they get this- psychological, sociocultural, biological....examples of each (ex. Average Hollywood star has decreased a size per decade since the 1970's) or (the graphic altering of images like the photo of Aisha Tyler)
Percentage of MEN with ED's... the book says 5% but it is outdated, the actual number is now 10% and going up

CHAPTER 9 (Weight management)

We can increase THE NUMBER OF FAT CELLS 1000-fold but certain times of our life span we are more predisposed..age 2-3, puberty and pregnancy. They can fill in volume 20X.
US obesity epidemic- reasons why (soccer myth)
Leptin-ghrelin definition
Healthy risks of obesity
Gastric bypass surgery is NOT a sure all fix. People can gain it back
Lap band surgery is reversible if needed
People who keep food journals eat 25% less
Ways to gain weight when underweight (not from an eating disorder). Which foods would you recommend

EXERCISE PHYSIOLOGY (Handouts)

What happens if someone releases a lot of weight and does NOT do weight training?

How much weight training does a woman have to do per week to preserve muscle mass if they are trying to lose weight? (one day a week maintains muscle, 2 days builds)

How much does a male? (one day for men usually builds muscle, even when trying to lose weight)

What are the American College of sports medicines recommendations for weight training?

2000 exercise cal's burned per week from ALL activity is the cardio goal for American College of sports Medicine.

How many calories does a 150# person burn per mile walked or ran? (it's the same)

How many more cal's (what percentage of increase in cal's) does someone burn for every 1% incline on a treadmill?

What are METS? How do we use the list? (Weight in Kilos not pounds for the calculation)

$\text{KILO} \times \text{METS} = \text{calories burned per hour.}$

What is the benefit of getting your heart rate to 70% and 85%?

LAB REPORT- (handout)

What is the goal for fasting blood sugar?

What is diagnosis of diabetes from blood work?

15 grams carb increase blood sugar 30-45 points

What is HbA1c?

Triglycerides- alcohol increases them, soluble fiber decreases them

Cholesterol = HDL + LDL + VLDL

CRP is inflammation in the artery...high fat animal products increase it, omega 3 foods decrease it.

I realize there is a TON of stuff here. I will definitely have a lot of bonus questions because there is more than 70 right here alone! Good luck! 😊