

**HEA 151 SUMMER 2010
STUDY GUIDE FOR EXAM #4
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REMEMBER I WON'T BE THERE. MY STUDENT GINO WILL BE HANDING OUT THE EXAMS AND COLLECTING THEM. IF YOU HAVE ANY QUESTIONS JUST WRITE THEM OUT ON THE EXAM SHEET. I'M OK IF THE PM SESSION WANTS TO COME IN THE AM OR AM PERSON COMES TO THE AFTERNOON SESSION. OK TO START 15 MINUTES EARLY TOO. SHOULD BE SET UP BY THEN.

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. No need to bring a scan tron.

Good luck! ☺ Lisa

Chapter 10 Water Soluble Vitamins

1 gram = 1000 mg 1 MICROgram = 1000 mg microgram looks like this " μ "

What does bioavailability mean?

Water soluble need replenishment every 1-3 days

When all else fails vitamins are coenzymes/precursors that assist in energy metabolism (all those biological chains)

KNOW THE OTHER NAMES FOR VITAMINS FOR MATCHING. (10 questions here!!!!)

Example B1 = thiamin B2 = riboflavin B3 = niacin

Which are the cereals that have 100% fortification of vitamins? (3 of them). these are a guarantee of achieving the RDA's.

Which B vitamins does alcohol decrease? (2 of them)

B2- dairy products/need translucent packaging to preserve- yellow urine when high doses

B3 -Dr's prescribe high doses for blood pressure and heart reasons. It's a VASODILATOR (opens up blood vessels)

Biotin- supplementation does NOT help hair growth.

B6 where is it stored?....helps make SEROTONINmedia hype- does not increase muscle endurance

Folate RDA 0.4 mg or 400 micrograms

Helps synthesize DNA required for rapidly growing cells

Pregnant people need it to prevent spina bifida in their newborn babies

B12 - Found in animal products (concerns for vegans)

Also made in GI tract. What is INTRINSIC FACTOR? How can we become deficient? What happens? Sources of B12 for vegans....

VIT C...

What is scurvy....what happens to the body with Vit C deficiency?

Cofactor in collagen synthesis...matrix of bones, teeth, ligaments, connective tissues etc

RDA's for this one. And how much more does a smoker need?

Vit C deactivates HISTAMINE..what does that mean?

Sources.....

Vit C helps iron absorption

CHAPTER 11- Fat soluble vitamins

Vit A (retinols.....think EYES!)

Roles-

Deficiencies- night blindness.....what is KERATINIZATION?

TOXIC...major birth defects if it happens when <7 weeks pregnant

What is TERATOGENIC Accutane medicine, what is it used for?

RetinA –is ok

Beta carotene...can NOT get toxic...will get orange first

Sources.....

Vit D.....sunlight

From food/supplement

Who needs more sun exposure to get the recommended Vit D? African Americans or Caucasian?

Ca you overdose on it from a day at the beach (or just get a sunburn)?

Vit D roles

Deficiency- RICKETS...what is it?

Why do elderly have more risk of deficiency?

I am seeing more links with low Vit D and depression.

Sources besides the sun?

VIT E

Antioxidant

Does NOT cure Muscular dystrophy- media hype

I have seen it help with muscle repair

VIT K Body makes it too...stored in liver

Roles- blood clotting...

What drugs interact with vit k? what kinds of patients are on these drugs?

sources

CHAPTER 12 WATER AND MAJOR MINERALS

Water- most important nutrient. 60% of our weight

Roles-

INTRACELLULAR and EXTRACELLULAR/INTERSTITIAL fluid

HOMEOSTASIS

Dehydration 1-2%..thirst and fatigue.....7-10% pass out , very dangerous

How much does the body HAVE to get rid of to excrete waste?

(Remember 250 ml = 1 cup)

What is the average fluid loss per day?

What are the recommendations?

Don't worry about the calorie/fluid calculations....hospitals usually use weights anyways.

Electrolytes....have currents..the charge helps things move into their proper compartment in cells

Fluid and electrolyte imbalance.

Which ones are the electrolytes. What are their chemistry names? Ie. K⁺ = potassium

SODIUM-

Most people get a lot more than the recommended need

1 tsp salt contains **2300** mg of sodium..... (will see 2000 mg for an easy number for the media)
ways to decrease salt intake

POTASSIUM- fluid electrolyte balance

Heart rate, muscle contraction

Deficiency- increased Blood pressure

DASH DIET....DIETARY APPROACHES TO STOPPING HYPERTENSION Very popular government program and you will see this term a lot.

CALCIUM- most abundant mineral

1000 mg (19-51) 1200 mg (51+) upper level 2500 mg

Roles- HYDROXYAPATITE

How much increased absorption when pregnant?

Sources.....

Supplements...what is the maximum that a body can absorb at one time?

When is peak bone mass?

After menopause how much bone does the body lose?...CRITICAL time to replace

What in soda pop changes calcium/vit D balance?

CHAPTER 13

Iron- men and womens needs

How much do we lose via RBC productions and menstruation?

Other ways we lose iron....GI bleeds and runners pounding pavement

What enhances absorption?

What is hemochromatosis?

What is pica?

Flouride- what is flourosis

Bottled water or well water has no flouride

Low zinc alters taste perception

Bonus.....the usual plus a couple extras