

Yes! Presentations again!
Hooray for the presenters!!



BI 199 Discussion 10

I. Announcements Presentations tonight here & Wednesday pm in McKenzie 125. Arrive at 4 pm. <http://map.uoregon.edu/>
<http://library.uoregon.edu/tools/classrooms/125MCK>

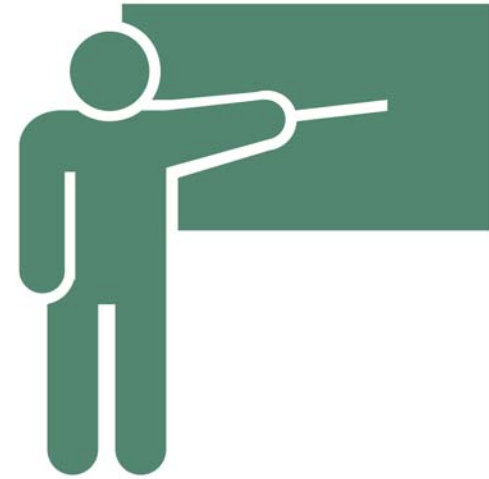
If you have not gotten feedback on your paper, you have until next Monday to turn in your final paper. Double-sided hardcopy due in Pat's box in 77 Klamath < 5 pm, F or M. Q?

II. Presentations

III. Overview of Minerals & Water Sizer & Whitney ch 8

IV. First Year Programs Course Evaluations

(unique compared to standard U of O evaluations)



Monday, December 1, 2014

Diets & Special Populations

Maggie Scott, Vegetarianism for female athletes

Phillene Newman, Vegan lifestyle: the way to go?

Sienna Allen, Paleo diet & cardiovascular risk

Haley Younger, Living the Paleo diet

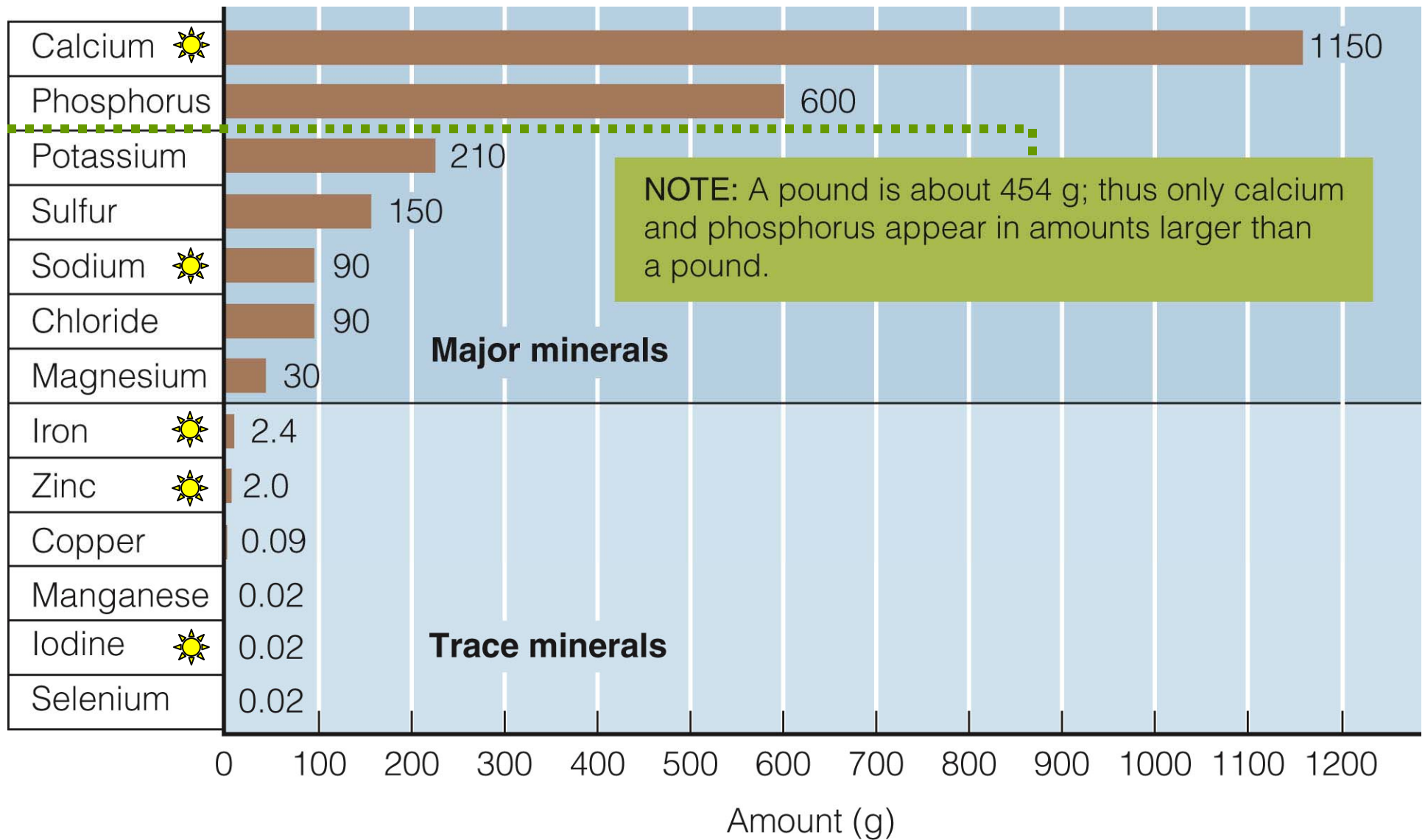
Mykaela Brock, Atkins diet

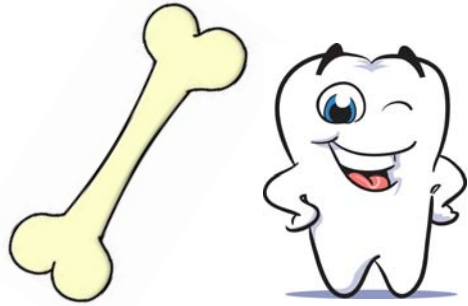
Catie Parker, Gluten-free diet

Mariah Victor, Sensa additive for weight loss

Max Worthington, Acai berries & weight loss

Major vs Minor/Trace Minerals





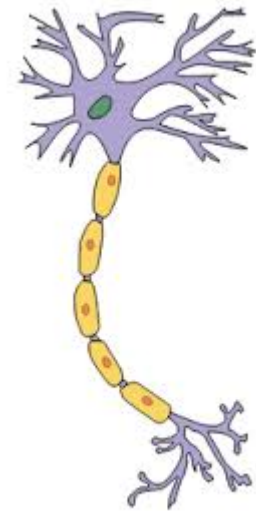
Bones & Teeth



**Muscle
Contraction &...**



Relaxation!!



**&
Neurotransmission!!**

**Calcium is
crucial!!**

Calcium Sources in the US Diet

Key:

 Milk

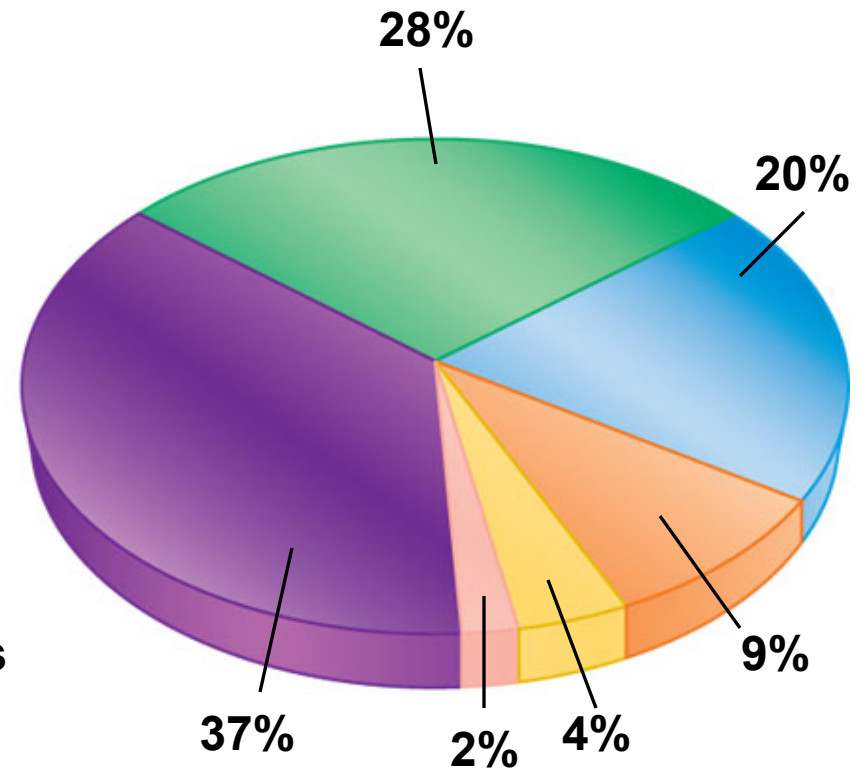
 Cheese

 Yeast bread

 Ice cream, sherbert, frozen yogurt

 Cakes, cookies, quick breads, doughnuts

 Other sources



© 2006 Wadsworth - Thomson

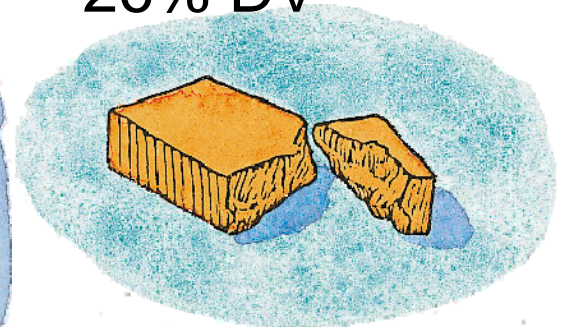
Fig. 8-12, p. 299

Calcium

25% DV

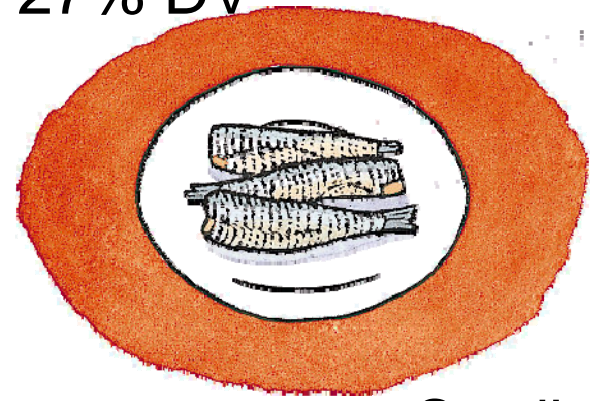


26% DV

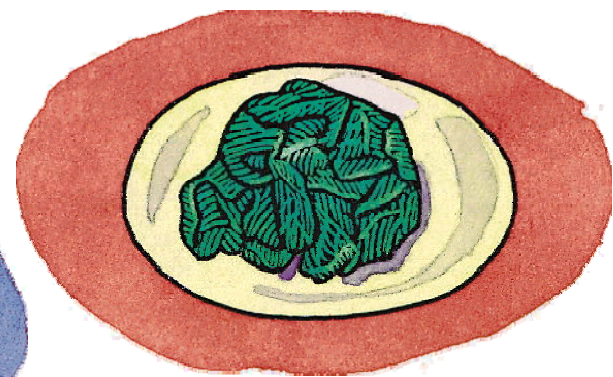
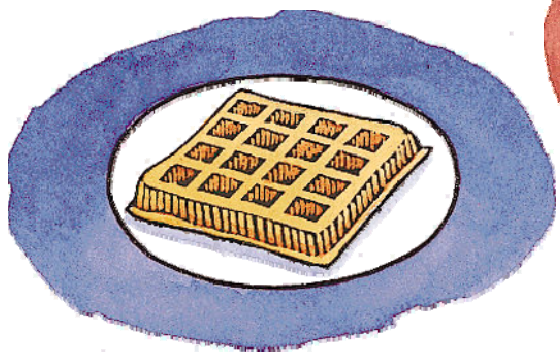


Dairy products

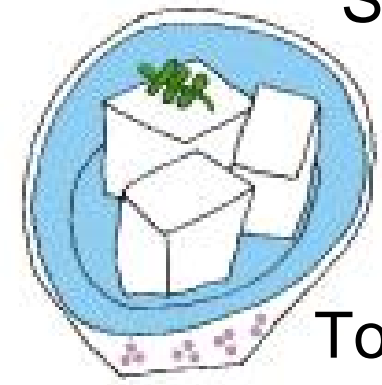
27% DV



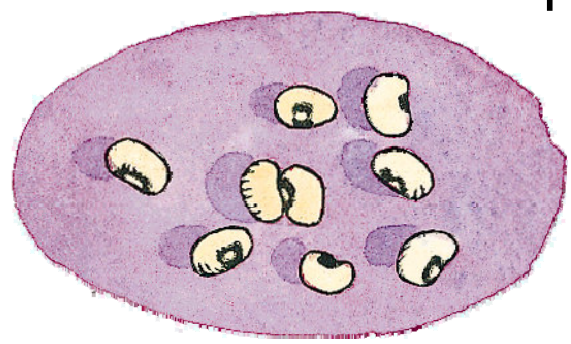
Sardines



Turnip Greens



Tofu
(calcium-set)



**≥ 50%
absorbed**

**cauliflower, watercress, Chinese cabbage,
head cabbage, brussels sprouts, rutabaga,
kolhrabi, kale, mustard greens, bok choy,
broccoli, turnip greens**

**30%
absorbed**

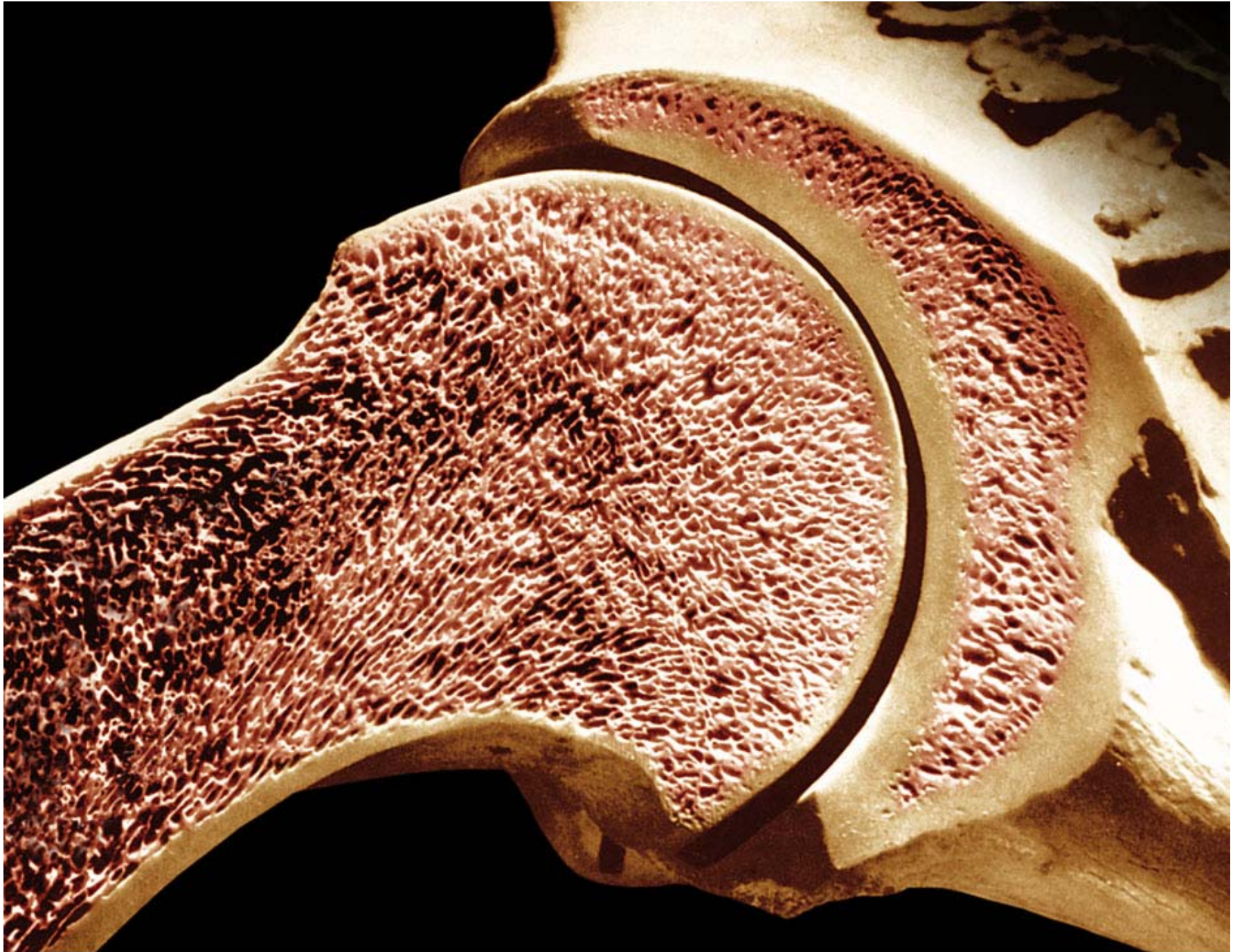
**milk, yogurt, cheese,
calcium-fortified soy milk, calcium-
set tofu, calcium-fortified juices &
drinks.**

**20%
absorbed**

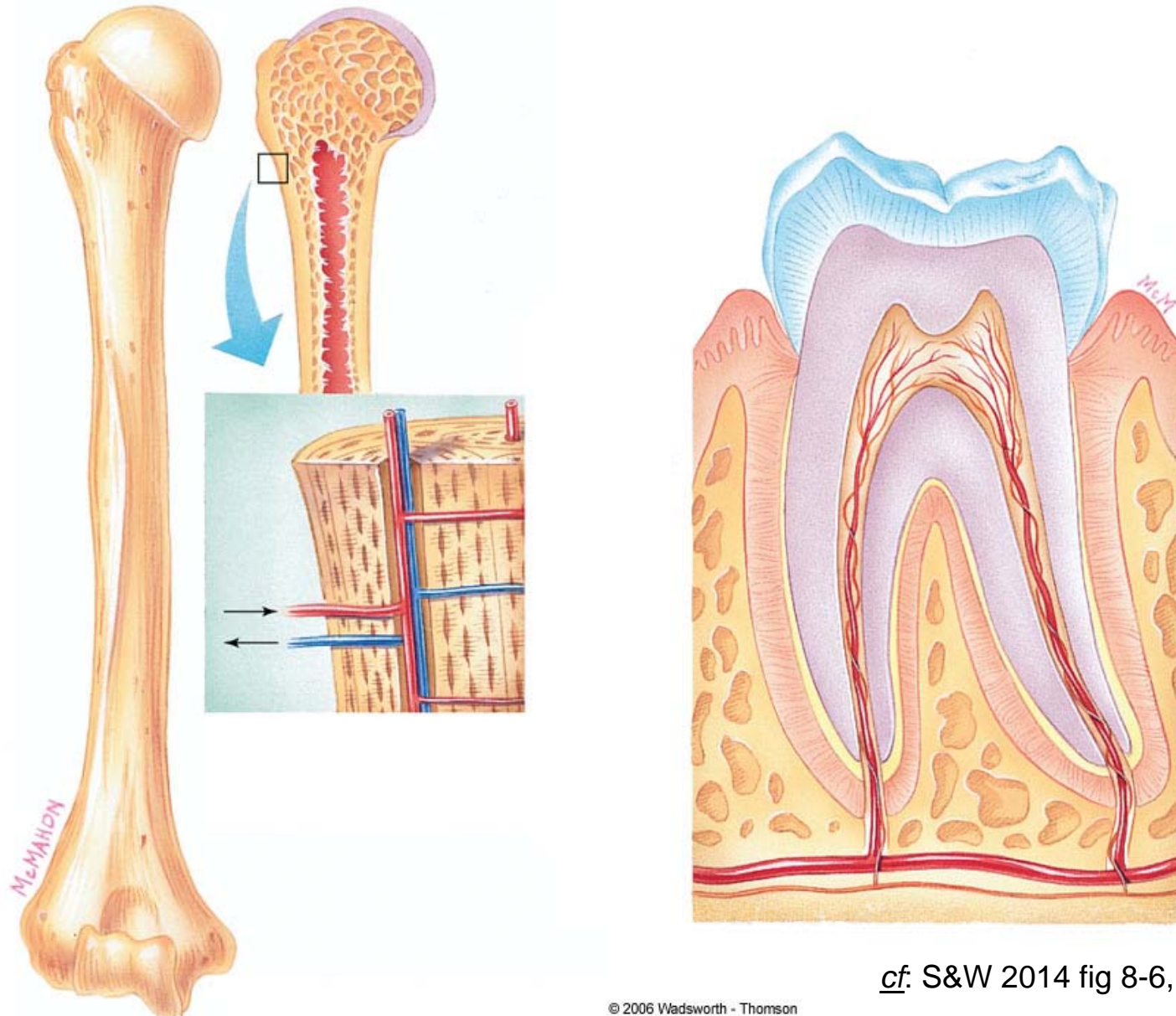
**almonds, sesame seeds,
beans (pinto, red, & white)**

**≤ 5%
Absorbed**

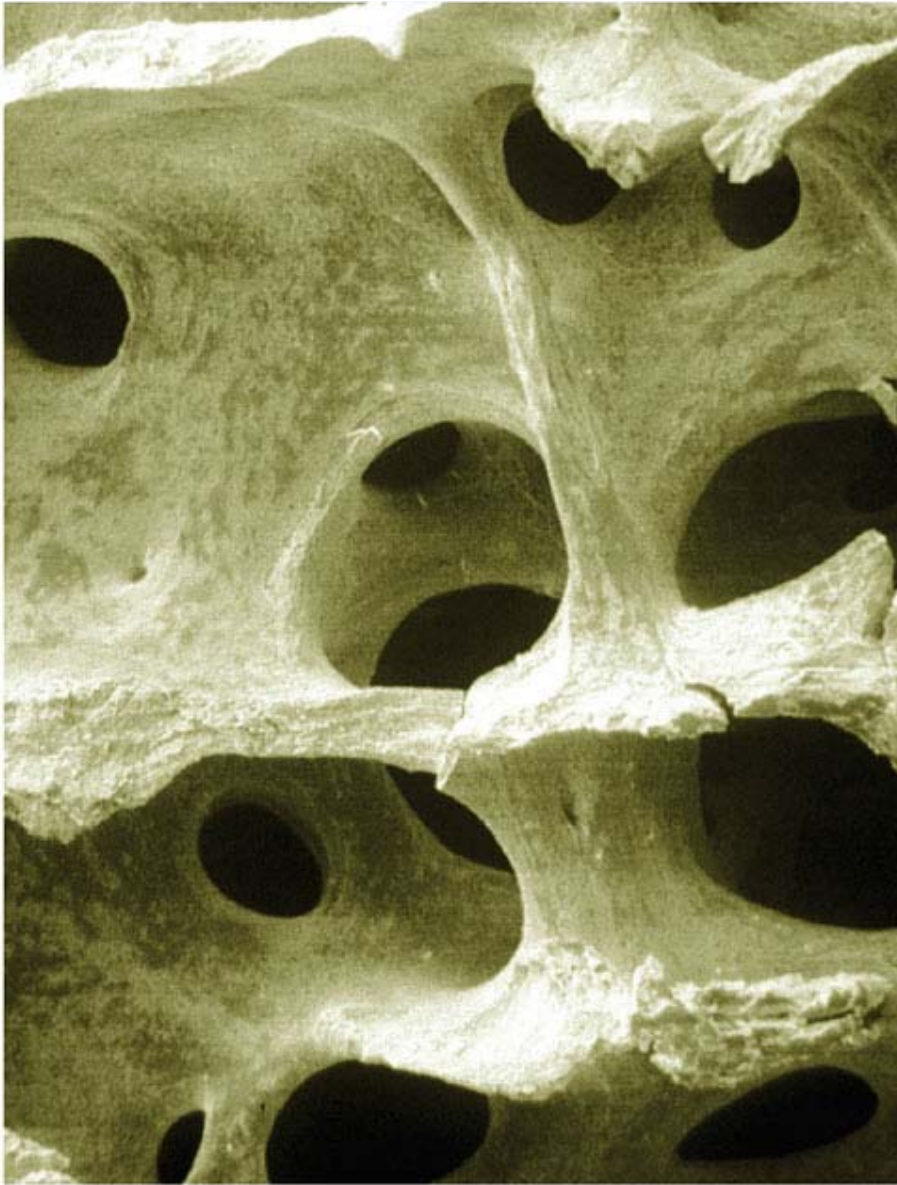
spinach, rhubarb, Swiss chard



Bone is active, dynamic living tissue!!



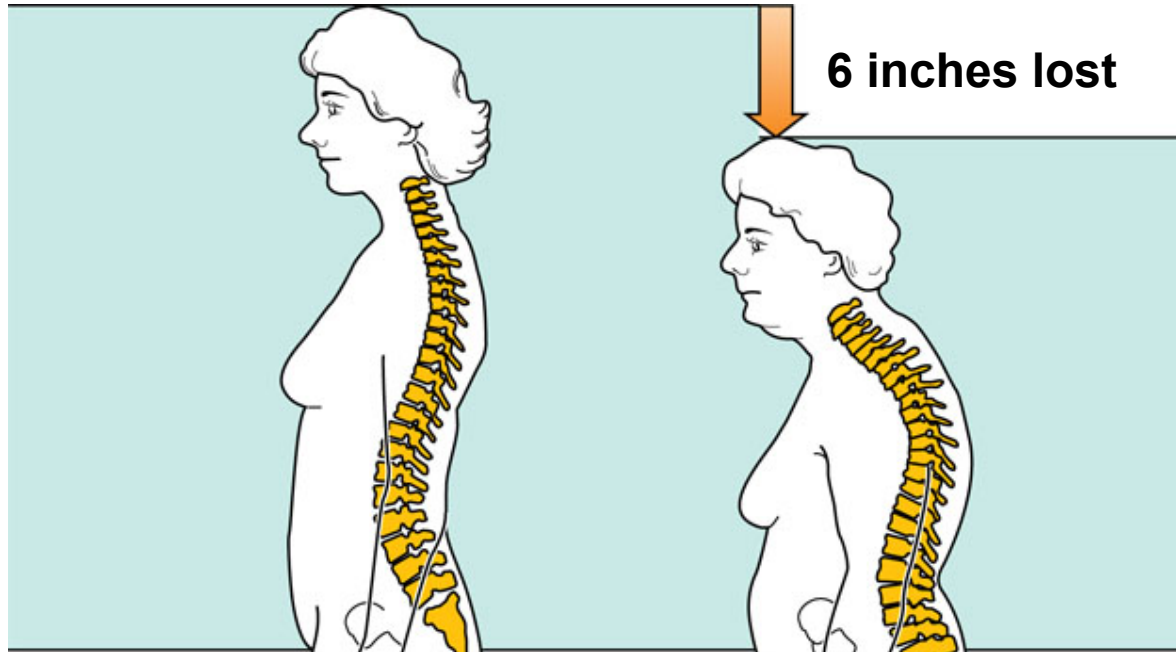
cf. S&W 2014 fig 8-6, 8-7 p 300



Electron micrograph of healthy trabecular bone.



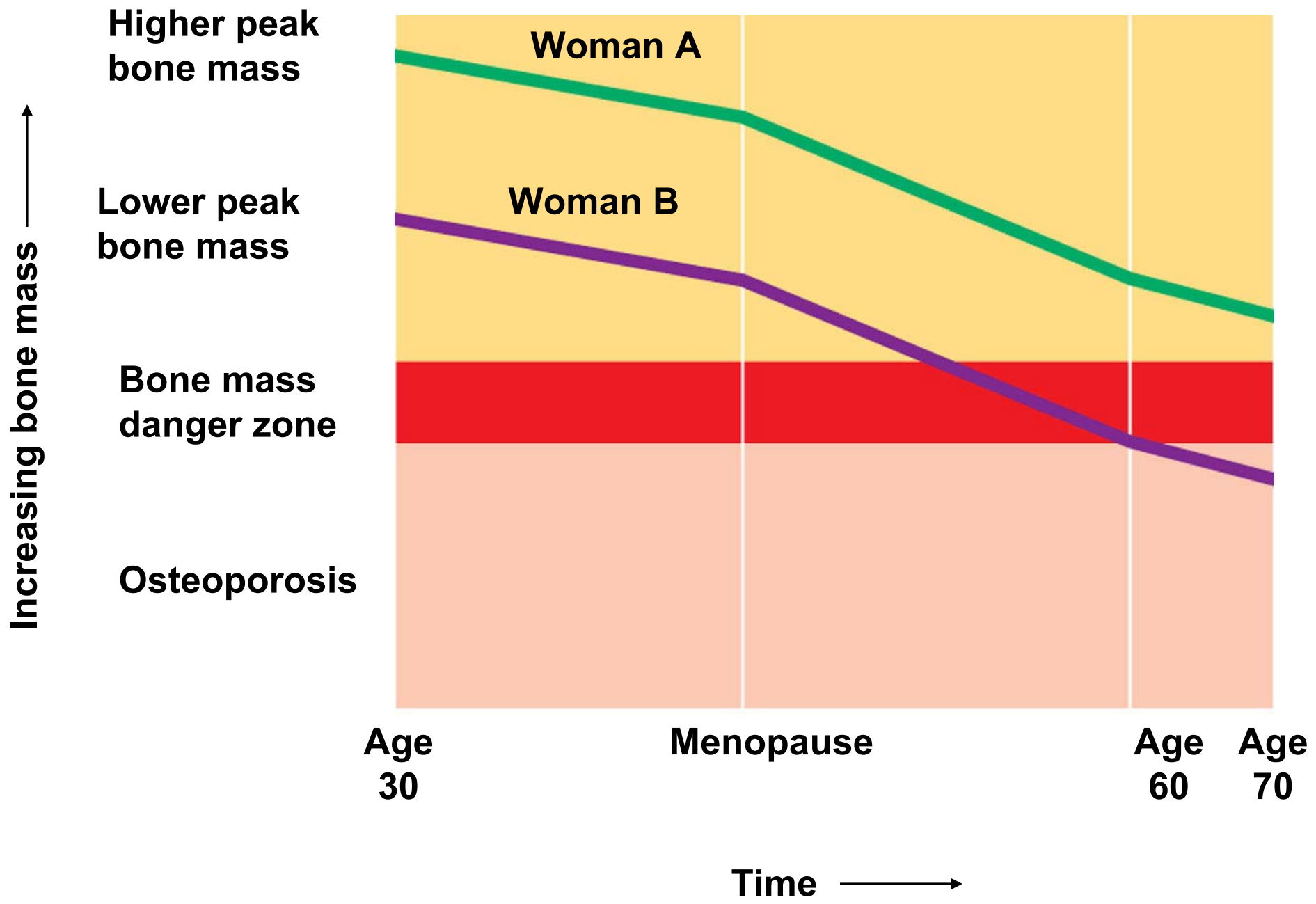
Electron micrograph of trabecular bone affected by osteoporosis.



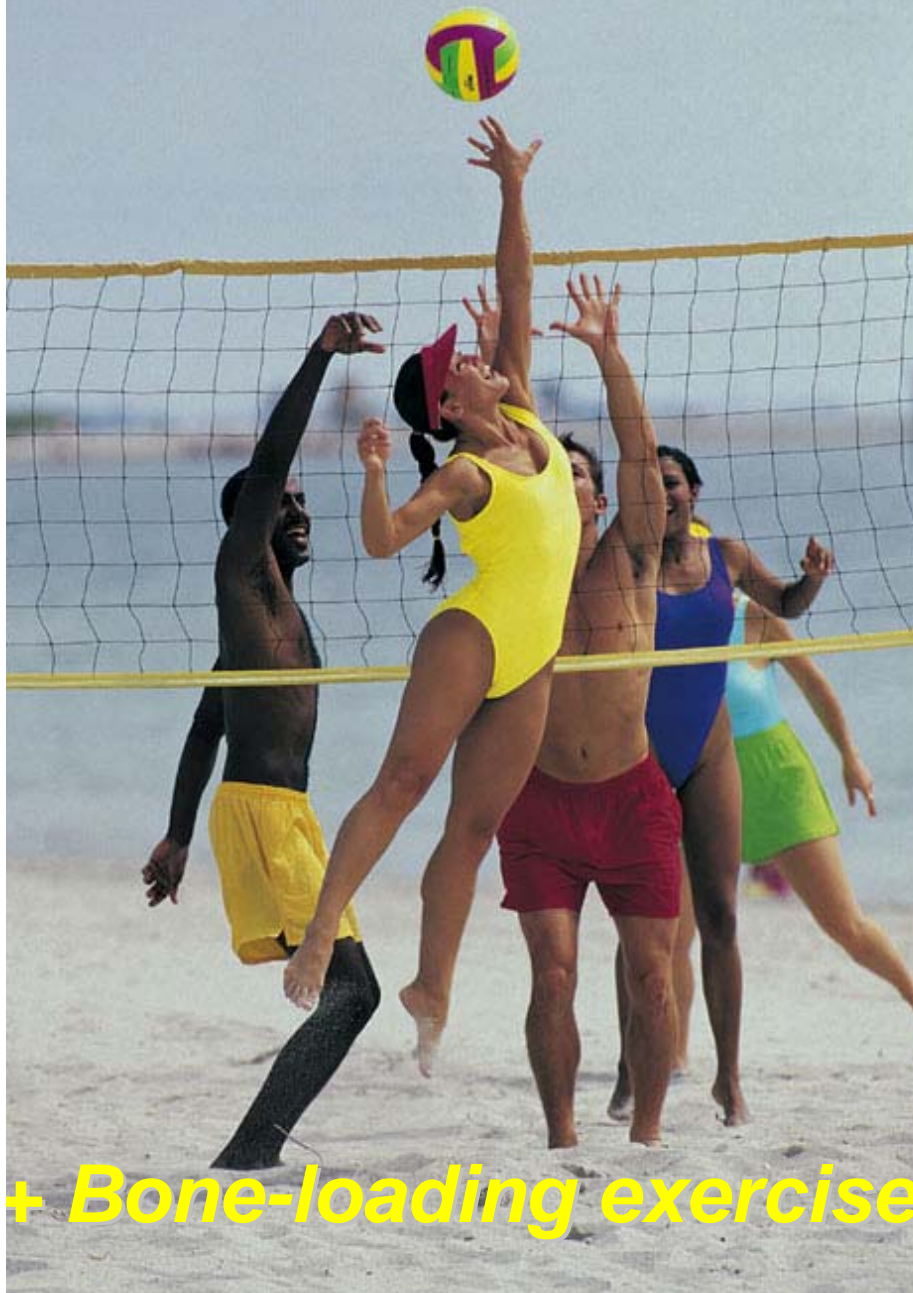
50 years old

80 years old

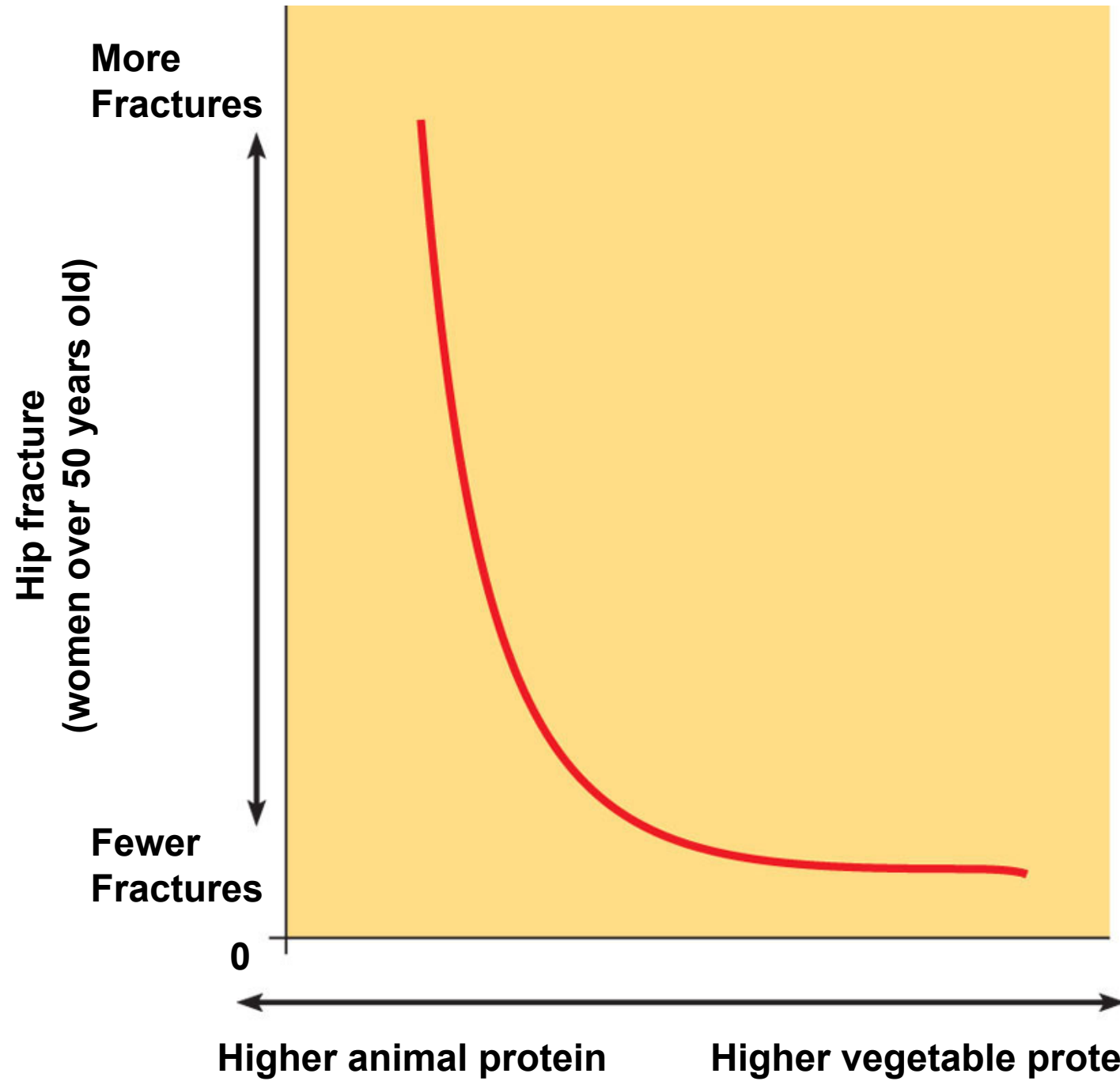
S&W 2014 C8 fig C8-2 p 329

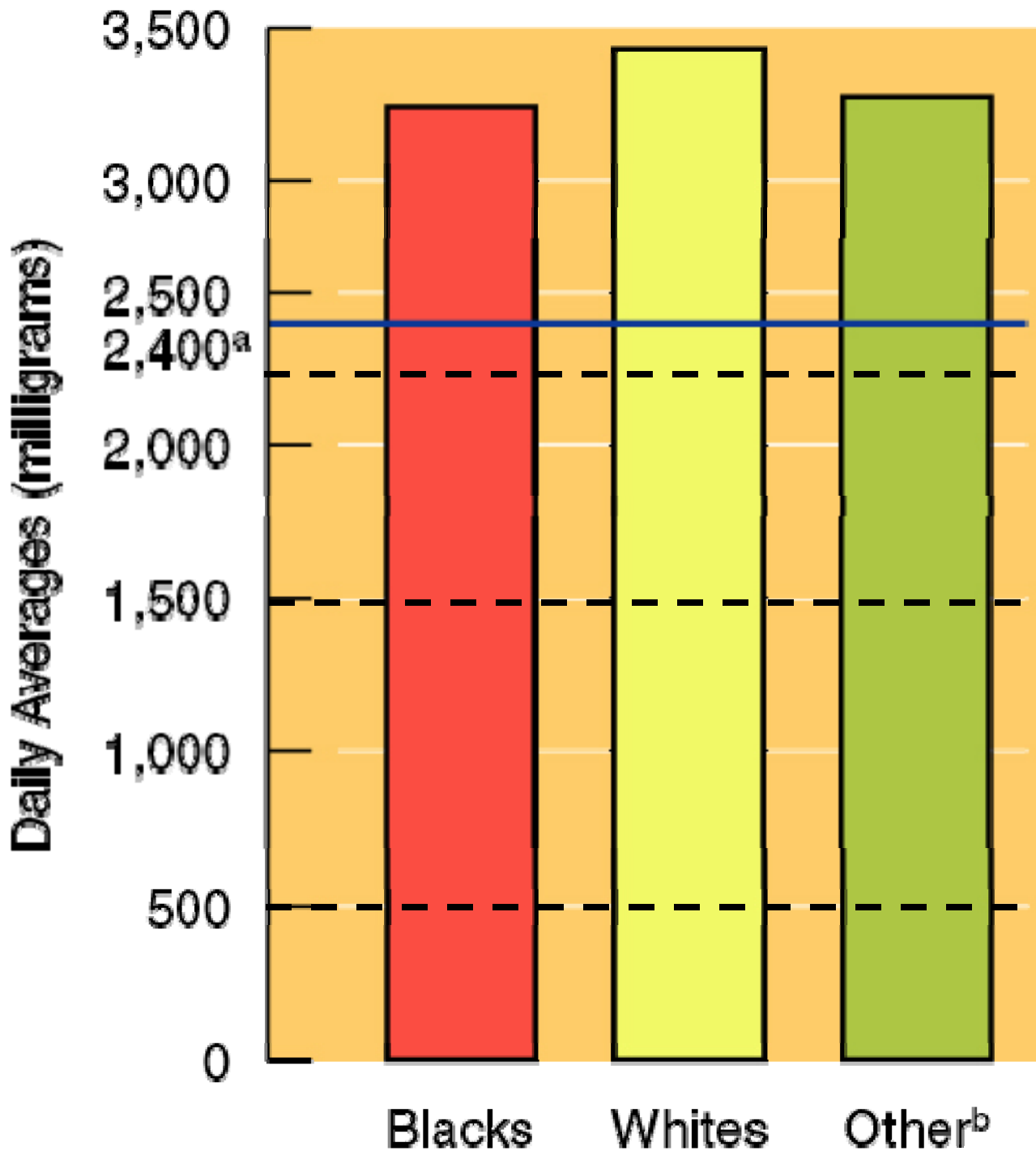


Calcium + Estrogen ...



+ Bone-loading exercise





**Sodium (Na)
Intakes of
U.S. Adults**

**< 2400 mg ↓ BP
= 1 tsp of Salt
(NaCl ≅ 40% Na)**

< 1500 mg ↓ BP

**< 500 mg/d =
1/4 tsp Salt/d!**

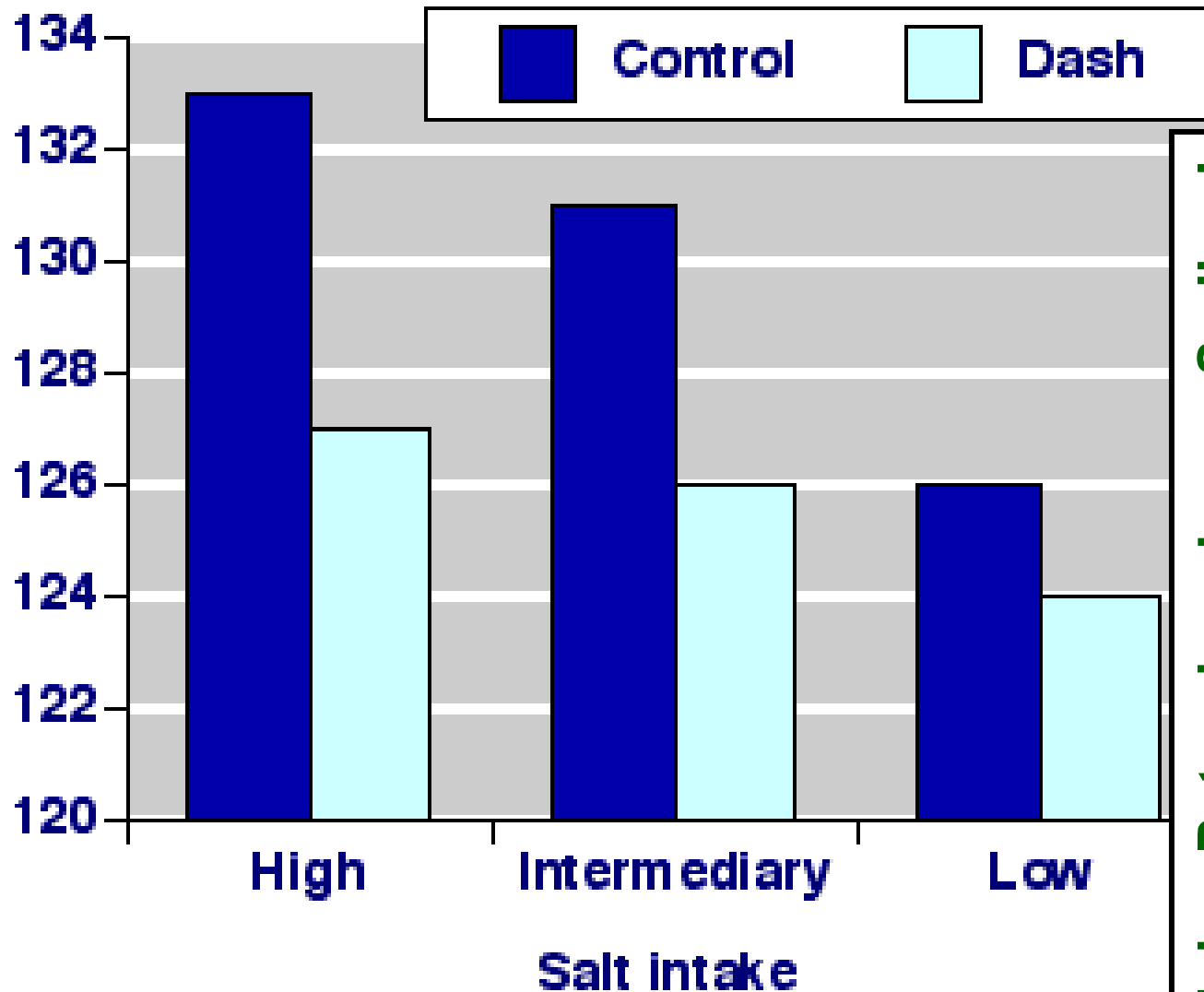
Body requirement



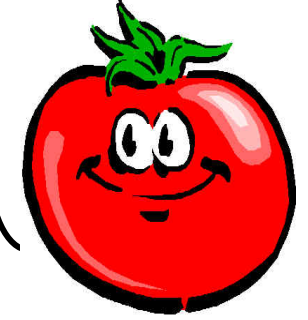
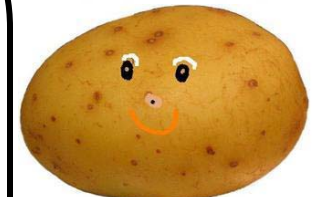
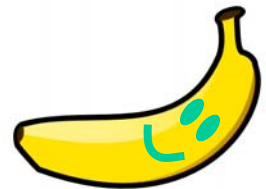
Salt (NaCl) & Sodium (Na) Sources in US Diet



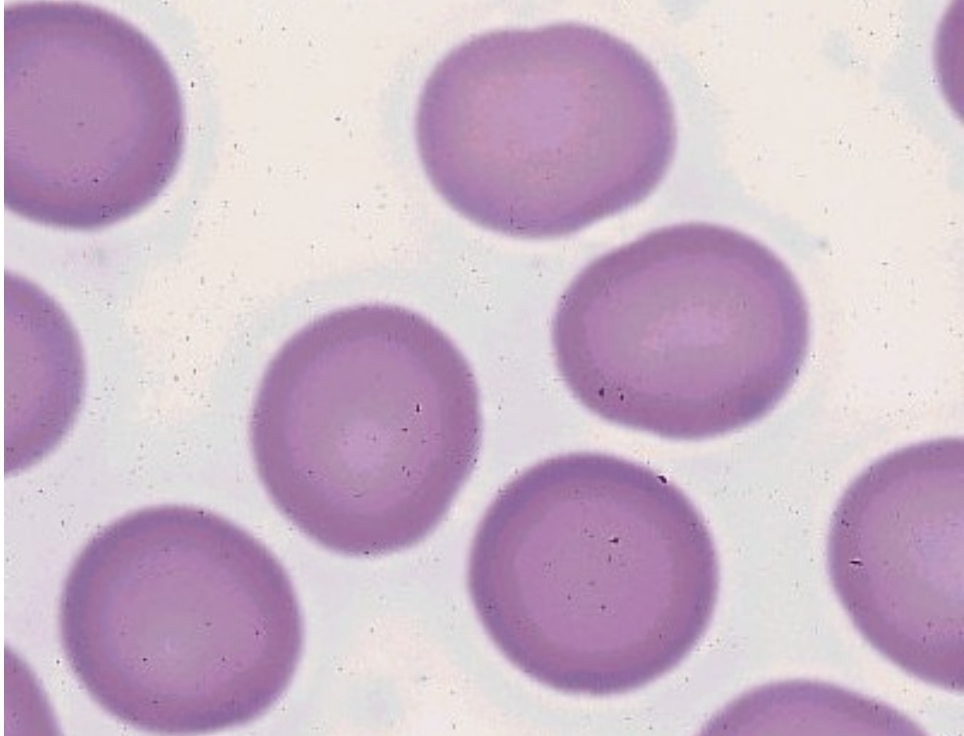
Systolic blood pressure (mmHg)



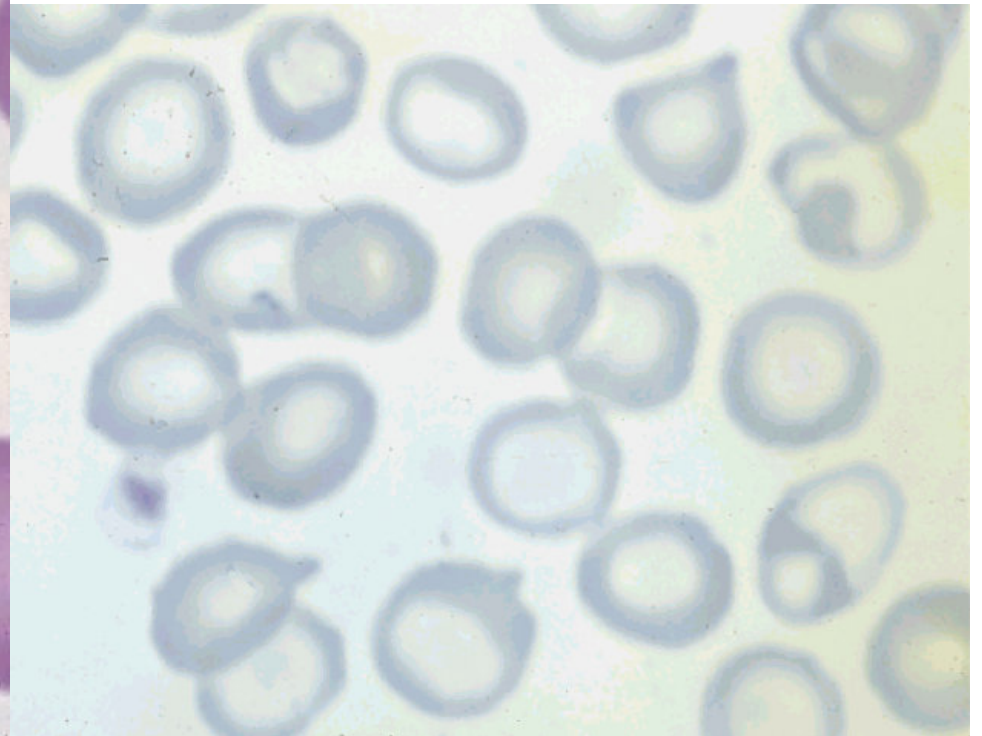
Higher Potassium, Lower Sodium!



Iron Deficiency Anemia



Normal RBCs



**Iron-deficiency Anemia
(small, pale)**

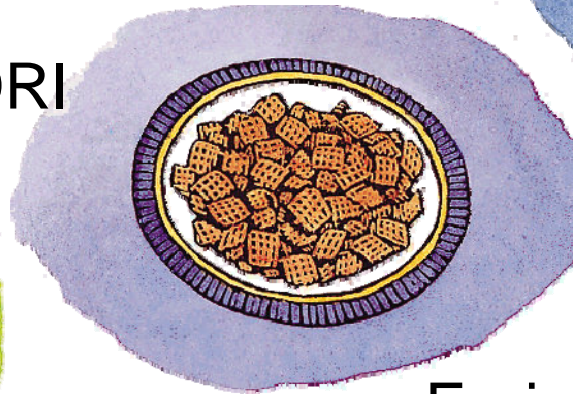
Iron

132% DRI



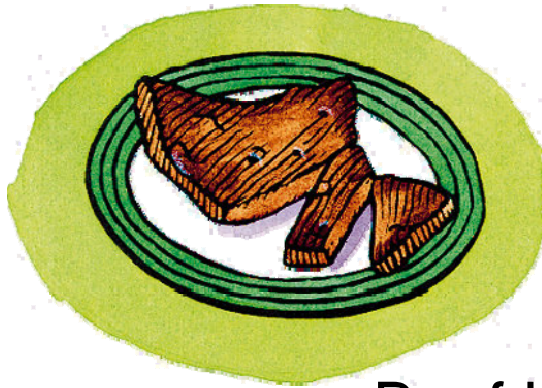
Steamed Clams

45% DRI

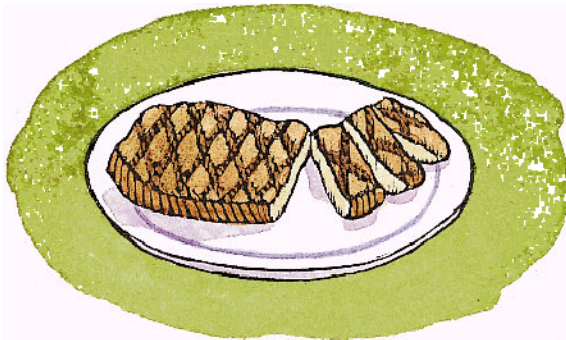


Enriched Cereal

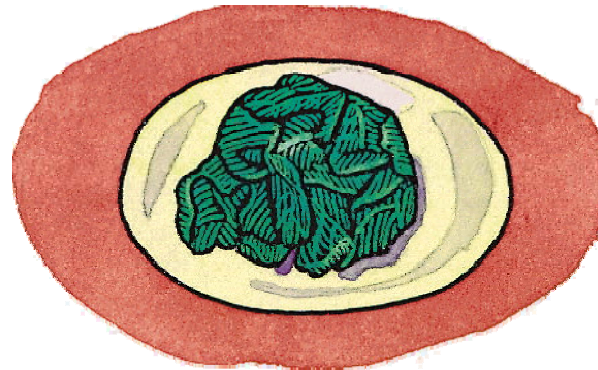
29% DRI



Beef Liver



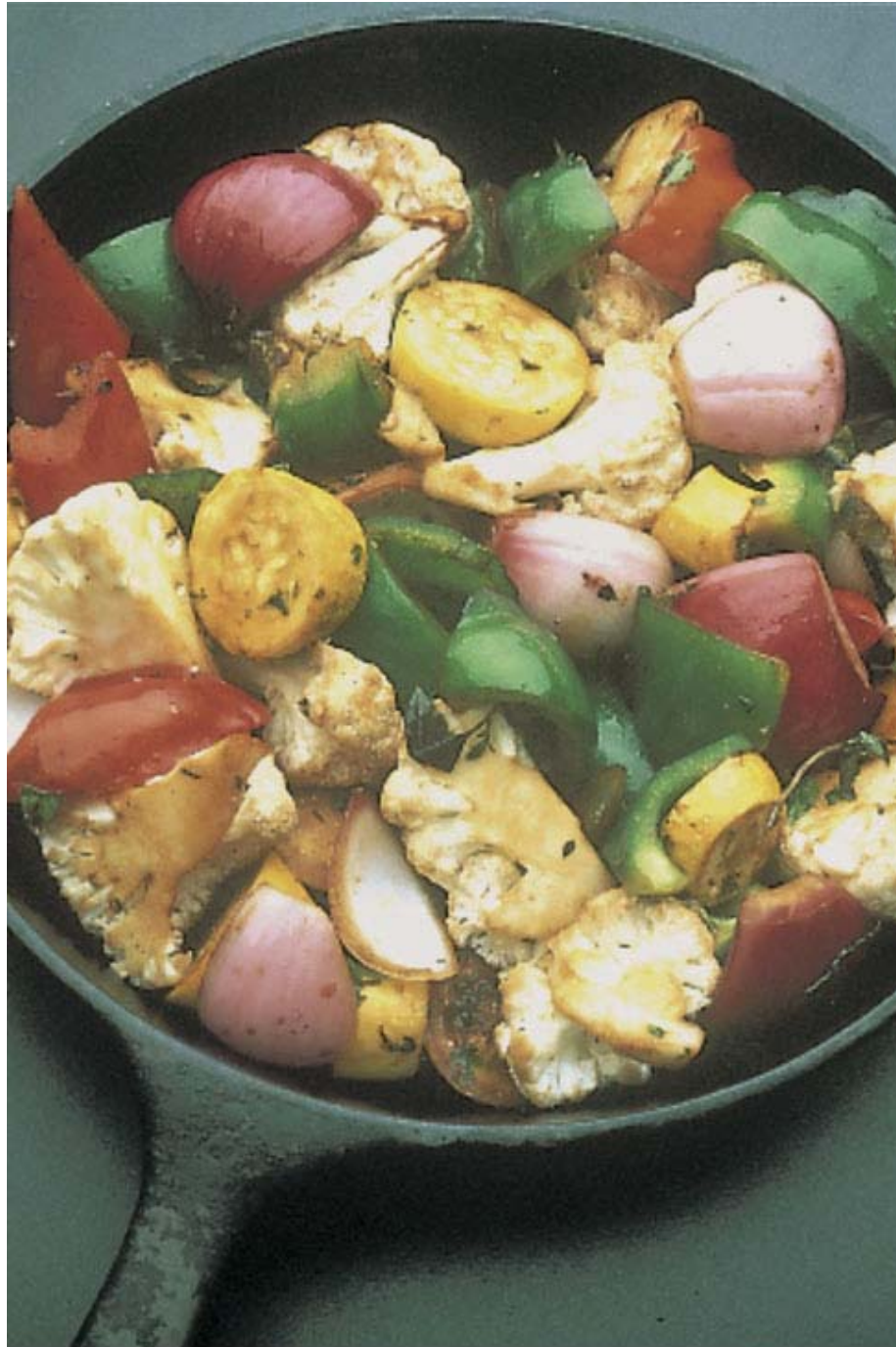
Beef Steak



Spinach



Swiss Chard





Zinc Deficiency

17 year old male



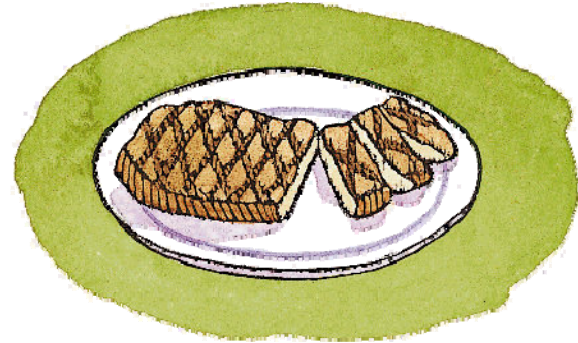
Zinc

655% DRI



Steamed Oysters

45% DRI

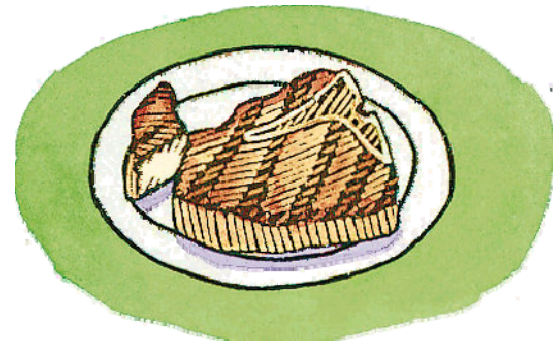


Beef Steak

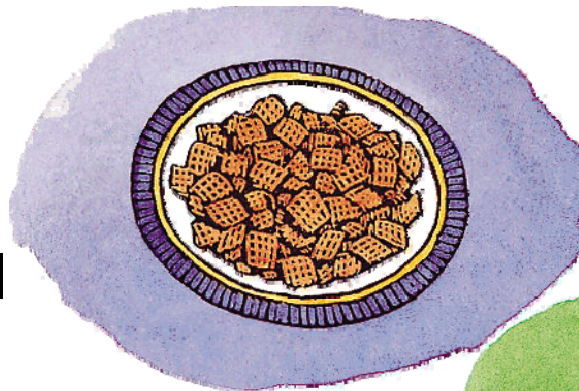
Yogurt



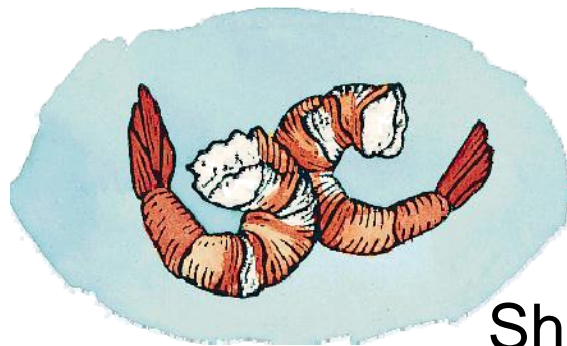
Pork Chop



35% DRI



Enriched Cereal



Shrimp

***What trace mineral
deficiency?***

Iodine!

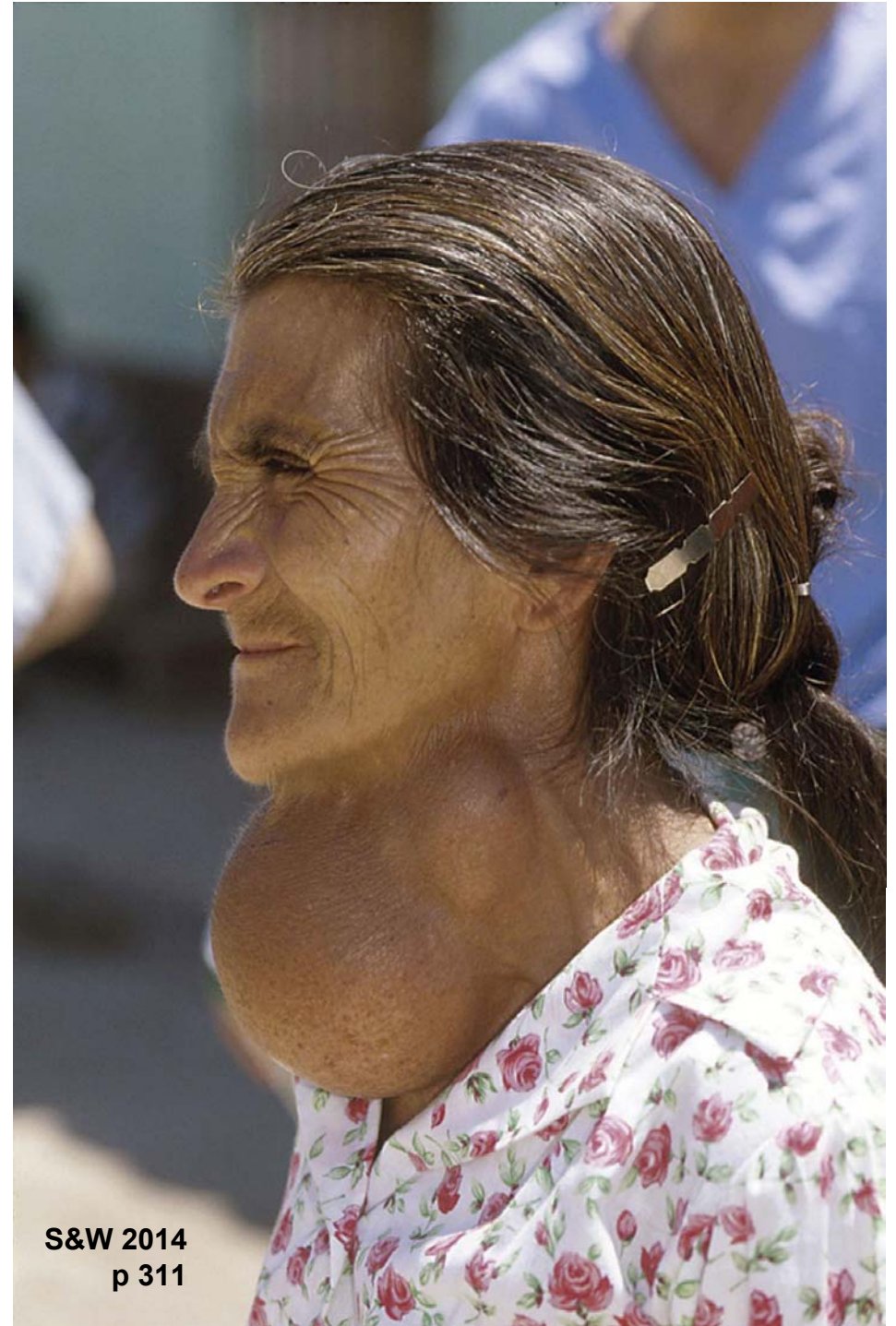
Entirely

Preventable!

Iodized Salt

Seafood

Supplements







Nope!!!
About 67%



because
you're **98%**
water.



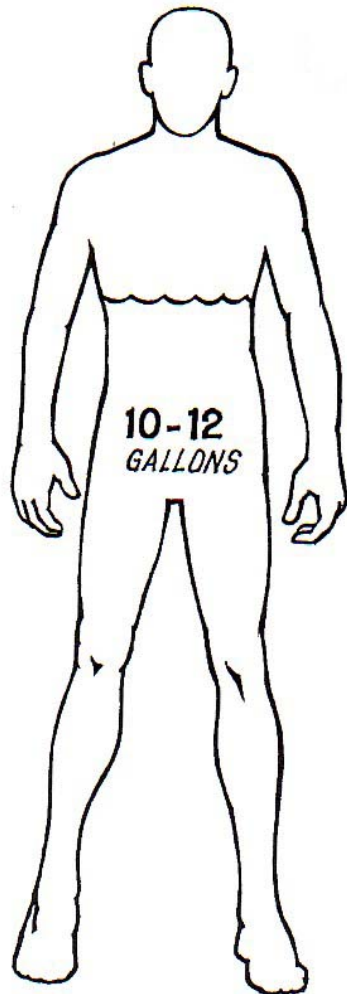
Bottled Water Facts:

- 1:15 Households in US
- 250-1000x \$ Cost of Tap!
- 1/3 Contaminated →
Bacteria
Arsenic
Synthetic Organic Chemicals



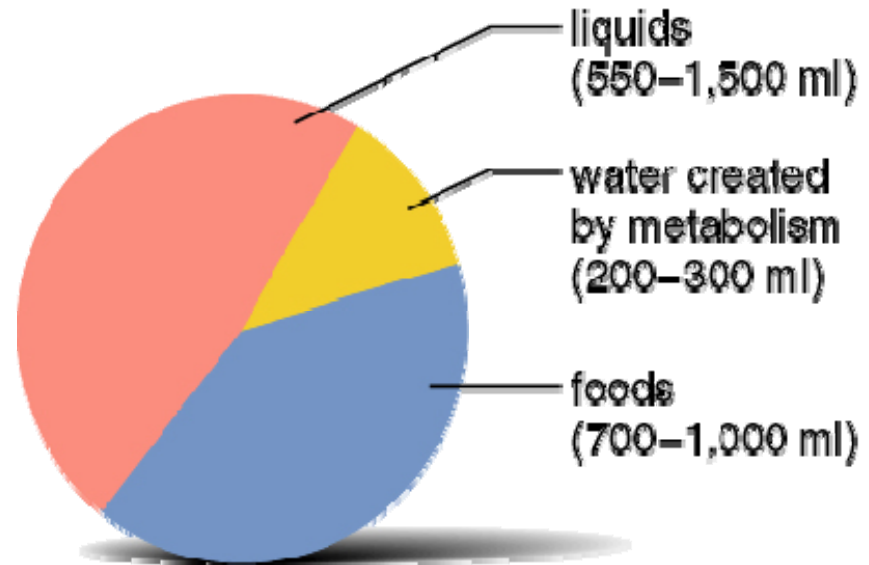
Water Balance

Water and You



Nancy Clark + S&W

Water input (Total = 1,450–2,800 ml)



Water output (Total = 1,450–2,800 ml)

