I. **Announcements** HR & BP Lab 4 tomorrow + Required Notebook Check. Turn in today or tomorrow? Q about LM? Please read Blood Chemistry Lab 5 twice < Thurs. Thanks!

II. **Cardiovascular System** LS 2012 ch 9, Torstar Books 1984, DC 2013 Module 4, Guyton & Hall (G&H) 2011 +...

A. Circulatory vs Cardiovascular (CV)? cf + parts LS pp 229, CV vs Lymphatic, DC pp 23, 31

B. CV Pulmonary & Systemic circuits DC fig 4-1 p 24, LS fig 9-2b p 231

C. Arteries, capillaries, veins G&H +Torstar

D. Varicose veins? Phlebitis? DC

E. ♥ layers, box, chambers, valves, inlets, outlets LS fig 9-4 p 233, fig 9-2a p 231; DC pp 23-6

F. Normal vs abnormal blood flow thru ♥ & CV system

Billy has a hole in his ♥ SI Fox 2009 fig 13.16, 13.17

III. **Comments on Midterm & Tests Returned**
BI 121 Lecture 12

Thanks for your help with the blood chemistry lab!😊

I. Announcements Optional notebook check + Lab 6 tomorrow. Pulmonary Function Testing. Final exam > your Q on Thurs. Q?

II. Endocrine Connections Peripheral endocrine organs
   A. Pancreas (insulin, glucagon, diabetes) B. Thyroid C. Adrenals
   DC Module 13 pp 109-13, LS pp 513-36

III. Nervous System & Excitable Cells DC Module 9, LS ch 5, 4, 7
   A. How is the nervous system organized? fig 5-1 p 108
   B. Neurons? What kind? fig 5-2 p 109
   C. Brain structure & function fig 5-7, 5-8 pp 116 – 7
   D. Protect your head with a helmet!
       Bicycle head injury statistics, NHTSA & BHSI

IV. Brain + Autonomic Nervous System Overview DC pp 71-77, LS pp 178 – 85, tab 7-1 p 183 + stories to remember fight-or-flight!

V. Neuromuscular Connections LS ch 7 pp 186-92, DC pp 69-71
   How does the signal cross the nerve-muscle gap? LS fig 7-5
   A. Normal function? Ca2+ for bones!...but what else? LS p 190
   B. What do black widow spider venom, botulism, curare & nerve gas have in common? Botox? LS p 189-91

VI. Muscle Structure, Function & Adaptation LS ch 8, DC Module 12
   A. Muscle types: cardiac, smooth, skeletal LS fig 8-1 p 194-6
   B. How is skeletal muscle organized? LS fig 8-2, DC fig 12-2

Me, too!

O2
Me, too!

CO2

...Life = Balance!

Exercise! Exercise!!

BI 121 Lecture 13

I. Announcements Optional notebook check + Lab 6 today. Pulmonary Function Testing. Final exam > your Q on Wed. Q?

II. Pulmonary Function Lab Overview

III. Muscle Structure, Function & Adaptation LS ch 8, DC Module 12
   A. Muscle types: cardiac, smooth, skeletal LS fig 8-1 p 194-6
   B. How is skeletal muscle organized? LS fig 8-2, DC fig 12-2
   C. What do thick filaments look like? LS fig 8-4, DC fig 12-4
   D. How about thin filaments? LS fig 8-5
   E. Bunding pattern? LS fig 8-3, fig 8-7
   F. How do muscles contract? LS fig 8-6, 8-10
   G. What's a cross-bridge cycle? LS fig 8-11 +...?
   H. Summary of skeletal muscle contraction

I. Exercise adaptation variables: mode, intensity, duration, frequency, distribution, individual & environmental char...?

J. Endurance vs. strength training continuum? fiber types...

BI 121 Lecture 14

I. Announcements Optional notebook check today. Discussion-Review followed by final exam tomorrow. Q?

II. Respiratory System LS ch 12, DC Module 7, SL Fox +...
   A. Steps of respiration? External vs. cellular/internal?
      LS fig 12-1 pp 345-7
   B. Respiratory system anatomy LS fig 12-2 p347, DC, SL Fox +...
   C. Histology LS fig 12-4 pp 347-9, DC
   D. How do we breathe? LS fig12-12, fig12-25 pp 349-56, 373-8
   E. Gas exchange LS fig 12-19 pp 362-5
   F. Gas transport LS tab 12-3 pp 365-70

III. Physiology of Cigarette Smoking
   A. ANS, autonomic nerves & nicotine? Route of chemicals,...
   B. Emphysema? 2nd-hand smoke?... p 356, 365
   C. UO Smoke-Free since Fall 2012! Help is available!

The final is coming! I'll be ready!!...