BI 199 APWT Discussion 2

I. **Announcements**  Attendance. Q last time?
Next Thursday 1\textsuperscript{st} Anatomy Lab Trip? Hopeful, but still waiting for final word. Where to go? How to get there? Review of General Anatomy Lab Guidelines.

II. **Accurate, Reliable, Readable Resources for Your Project?**

III. **Connections: Superficial vs. Deep +...**

IV. **Body Builder’s Syndrome?**

V. **Superior-Inferior & Anterior-Posterior Balances**
Up-Down & Front-Back, Squat-Push-Pull!

VI. **Anatomy of Squat-Push-Pull Exercises**
A. Squat/Front squat
B. Bench press
C. Bent-over row, inverse or complement to bench press!

VII. **Create-A-Joint!** Anatomy lab bones + tape group work.

*Sources*: Modified from Diann N. Laing, VPL, Francis & Martin, McMinn & Hutchings,+...
http://map.uoregon.edu/

63 SRC to B63B KLA
Anatomy Lab General Rules

1. **Demonstrate respect** for all specimens (cadavers, skeletons, organ & tissue samples...).

2. The right of **privacy & confidentiality** due all medical patients is **extended to all anatomical donors**.

3. **Electronic devices** (cell phones, cameras, video equipment, Ipods,...) or recordings are **not permitted**.

4. **Food, drink, and gum** are **not permitted**.

5. **Wear gloves** provided, if you're approved to touch specific specimens. Please only **dispose of gloves in the marked red container. Questions? Please ask**.

6. **Long pants**, long-sleeve shirts & **closed shoes** (rather than sandals) **are best**.

7. Cadavers should be appropriately draped/covered at all times. **All regions not being studied should be covered to help with preservation.**
March is National Nutrition Month

Bite into a Healthy Lifestyle!

GET YOUR PLATE IN SHAPE

http://www.eatright.org
Fabulous US Government Websites Thanks to Michelle Obama & Regina Benjamin!

SuperTracker
Get on Track!

https://www.supertracker.usda.gov/default.aspx

http://www.choosemyplate.gov/

Choose My Plate.gov
Q from last time? Action Terms?

- Circumduction
- Abduction
- Adduction
- Flexion
- Extension
- Supination
- Pronation
- Rotation (about long axis)
Superficial vs. Deep?
Body Builder’s Syndrome!
Anterior - Posterior Balance

Leg extension

Leg curl

Superior - Inferior Balance

Bench press

Squat
**Balance e.g.: Push-Pull-Squat**

Q? Which are most likely **accurate** & **reliable** internet sources & best resources for your project?

A. Most trustworthy? [.edu, .org, or .gov] extensions or peer-reviewed websites.

**Photo Sources:** [http://news.xinhuanet.com](http://news.xinhuanet.com), [http://caveman2point0.blogspot.com](http://caveman2point0.blogspot.com), [http://pcconditioning.blogspot.com](http://pcconditioning.blogspot.com)
Weight **Training** is **Non-competitive**

**Goal: Improve Life Time Fitness!**

- ✅ Cardiorespiratory Endurance
- ✅ Muscular Strength/Endurance
- ✅ Flexibility
- ✅ Neuromuscular Relaxation
- 🔻 % Fat

Diagram shows a person running, lifting weights, stretching, and resting, with a circle labeled "Health-Related Fitness."
Weight Lifting is Competitive
Goal: Improve Strength for 1-RM!

Olympic Lifting

Power Lifting
Body Building is Competitive
Bridges Gap? Wt Lifting vs Wt Training
Goal: M. Hypertrophy, Balance, Delineation!
Front Squat

- Hip
- Thigh front
- Thigh back
- Thigh inside
- Lower back
- Gluteal group
- Quadriceps
- Hamstrings
- Adductors
- Erector spinae
Great Extensors of Lower Extremities

A

B

C
R lower back & hip quadrant
R lower back & hip quadrant

Erector spinae beneath fascia

Latissimus dorsi

External oblique

Gluteus maximus
R hip

- Short posterior sacroiliac ligaments
- Origin of gluteus maximus
- Superior gluteal artery and veins
- Long posterior sacroiliac ligament
- Inferior gluteal artery and veins
- Pudendal nerve
- Sacrospinous ligament
- Sacrotuberous ligament (cut)
- Internal pudendal artery and veins
- Sacrotuberous ligament (cut)
- Origin of hamstrings
- Adductor magnus
- Gluteus medius
- Piriformis
- Sciatic nerve
- Superior gemellus
- Obturator internus
- Inferior gemellus
- Obturator externus
- Quadratus femoris
- Vastus lateralis
- Insertion of gluteus maximus (cut)
L thigh anterior

- Inguinal ligament
- Iliopsoas
- Femoral nerve
- Tensor fasciae latae
- Femoral vein
- Femoral artery
- Pectineus
- Adductor brevis
- Adductor longus
- Sartorius
- Rectus femoris
- Gracilis
- Vastus medialis
- Vastus lateralis
L thigh anterior & medial

- Rectus femoris
- Adductor Gracilis
- Vastus medialis
- Patella/kneecap
L thigh posterior

- Quadratus femoris
- Gluteus maximus
- Sciatic nerve
- Adductor magnus
- Tensor fasciae latae
- Gracilis
- Vastus lateralis
- Semimembranosus
- Biceps—long head
- Semitendinosus
- Biceps—short head
- Tibial nerve
- Gastrocnemius
L thigh posterior

Gluteus maximus

Vastus lateralis

Biceps femoris

Hamstrings

Adductor magnus
Bench Press
Chest
Shoulder front
Arm back

Pectoral group
Anterior deltoid
Triceps brachii
Chest anterior

Q. Wide grip vs. elbows near side?
R chest anterior
R chest anterior
Acromion

Deltoid

Triceps long head

Triceps lateral head

Tendon of triceps

Triceps medial head

Lateral epicondyle of humerus

Anconeus

Brachialis

Biceps

Lateral intermuscular septum

Brachioradialis

Extensor carpi radialis longus
L arm lateral

Pectoralis major

Deltoid

Triceps brachii

Biceps brachii

Brachialis
Bent-over Row

**NB**: Engages muscles exactly inverse to bench press. Upper back, back of shoulder, front of arm, back of forearm. Great for supersetting!
Create-a-Joint: Anatomy Lab Bones + Tape!

- Muscle
- Tendon
- Ligament
- Cartilage
Cards
+
Discussion?