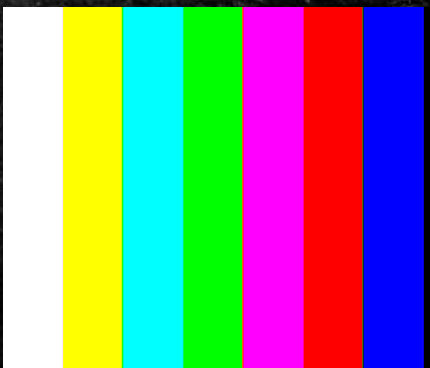
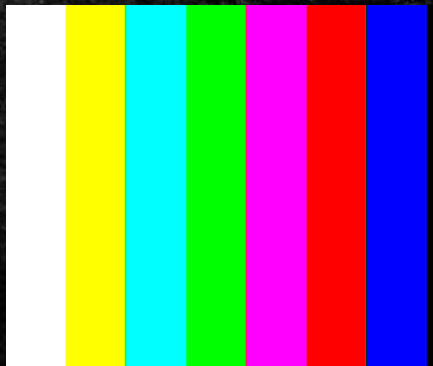
Clinical Ex Rx Week 8

AWeiler



Today

- Last Evaluation
- Final Exam Opens Tuesday, May 3rd at 8:30pm
  - The final is cumulative
  - Structured just like the midterm exam
  - Be prepared to sit for it.
    - GETP 11
    - Volume Spreadsheet or comfort calculating V in various forms
    - RMR and BMR spreadsheet or comfort calculating
  - You are responsible for the entire Quad and the GETP11
- Sheila Williams



Course evaluation – easiest 6.5 points in college history

- Only one more left.

Only one more evaluation left

I sincerely thank you all for taking the weekly evaluations it was very helpful to me. Thank you for taking the PLNU Evaluation as well.

Final Exam Review

Volume (V)

- Overload
- Product of F. I. & T.
- Very important for periodization
- Very important for body composition Rx
- Very important
- C.V.: p151
- R.T.:p157
- Flex.: p160

Volume (V)

- Time
  - 75 min Vig I – 150 min Mod I
- Dose response
- Energy Expenditure
- Met-min p152 Box 5.3
- R.T. = sets (or sets x reps x resistance)
- Flex - # of sets (discontinuous accumulation of stretch)
  - R.T. and Flex are too simple.
- Let's look at V Spreadsheet.

Could be tested on any measure of V

Progression (P):

- Know your patient – measure your patient (interindividual variability)
- In general: increase D, F, then I.
- Timetable – guideline protected, not professor recommended.
- Adaptation is where you want to be
  - Document benefits
  - Document safety
  - Learn, learn, learn by doing. (so much fun)
- R.T.: p157-8
- C.V.: p153
- Let's look at ExRx log (just a basic example).

What is?

1. RPP?
2. W:H? How is that different from Waist circ?
3. HRR and VO_2R?
4. Mod I vs. Vig I? (table 5.2, Figure 2.2, else)
5. Difference between push-up v YMCA BP for M.E.?
6. Diff using T 2.2 and T2.3 for evaluating BP (HTN)?

What is?

- Power v. Strength v. Muscular endurance?
  - Name a test for each
- What is RPE?
  - Relative
  - Standardized
- "Hypertension protocol?"
- "Special population?"
- HDL? + & - same or separate from RF for HLP/DLP?

ExRx: Progression

- Manipulate I & D for total work (kcals)
- Manipulate I for reduction in injuries
  - Often below recommendations for CV fitness
  - Mode: frequent manipulations, rotation of exercises, non-weight bearing

Older Adults

- Functional fitness tests
- Chronological vs. Functional Age
  - Index: kcal/lb. at bodyweight

Calculations

- BMI
- Use your energy expenditure formula: V Spreadsheet from
  - Estimation (METs x 3.5 x BW)/200= kcal/min
- PMHR 220-age and others
- Heart rate reserve
- THR
- TMETs
- BMR/RMR (spreadsheet) Week 6 page

Calculations

- Submaximal resistance when 1RM is available

Ms. Williams

- Very complex, realistic case study
- Foremost: Osteoporosis case study
  - A metabolic bone disease which can dramatically increase the risk of injury with exercise
  - Classic medication regimen: Fosamax, Ca, Vit D (sometimes Vit C)
  - s/p osteoporotic vertebral fracture at L4 with no trauma indicated
  - BEST Trials (and others) shows supervised, weight-bearing, controlled impact, high-intensity R.T can increase bone mineralization or slow/stop demineralization in patients just like Ms. Williams.
  - Caregiving techniques

FITT **FITT RECOMMENDATIONS FOR INDIVIDUALS WITH OSTEOPOROSIS (79,265,274)**

	Aerobic	Resistance	Flexibility
Frequency	4–5 d · wk^{-1}	Start with 1–2 non-consecutive d · wk^{-1}; may progress to 2–3 d · wk^{-1}	5–7 d · wk^{-1}
Intensity	Moderate intensity (40%–59% $\dot{V}O_2R$ or HRR). Use of the CR-10 scale with ratings of 3–4 might be a more appropriate method of establishing intensity.	Adjust resistance so that last 2 repetitions are challenging to perform. High intensity and high velocity training can be beneficial in those who can tolerate it.	Stretch to the point of tightness or slight discomfort.
Time	Begin with 20 min; gradually progress to a minimum of 30 min (with a maximum of 45–60 min).	Begin with 1 set of 8–12 repetitions; increase to 2 sets after ~2 wk; no more than 8–10 exercises per session	Hold static stretch for 10–30 s; 2–4 repetitions of each exercise
Type	Walking, cycling, or other individually appropriate aerobic activity (weight bearing preferred). Impact loading exercises such as jumping or bench stepping can be used in those with low or moderate risk for fracture.	Standard equipment can be used with adequate instruction and safety considerations. Compound movement exercises are best	Static stretching of all major joints

HRR, heart rate reserve; $\dot{V}O_2R$, oxygen uptake reserve.

Preventing Osteoporosis the Bone Estrogen Strength Training Way

by Linda B. Houtkooper, Ph.D., R.D., FACSM, Vanessa A. Stanford, M.S., R.D., CSCS, Lauve L. Metcalfe, M.S., FAWHP, Timothy G. Lohman, Ph.D., and Scott B. Going, Ph.D.

In the first year, the Bone Estrogen Strength Training study demonstrated that BMD, particularly at the hip, can be increased with weight bearing and strength-training resistance exercise done 3 days a week in postmenopausal women who consume adequate calcium and dietary iron levels that met or exceeded the current Dietary Reference Intakes. For 4 years, the Bone Estrogen Strength Training study demonstrated that postmenopausal women maintained or increased their hip and lumbar spine BMD by continuing the exercise regime three times a week,

Ms. Williams

- Osteoporosis continued
  - She can NOT be placed on a hypocaloric diet for weight loss.
- Older adult with fear of falling
  - Falls is a major concern – major cause of morbidity and mortality in older adults.
    - Higher risk due to osteoporosis
  - Falls are predictable and preventable
  - Fear of falling is a RF for injurious falls
  - Caregiving?
  - Pickleball?
  - Senior Fitness battery – test/retest – reduced risk for falls
    - Ms. Williams and her doctor will appreciate that.

Ms. Williams

- Osteoarthritis
  - Accommodate in R.T. – no grip, warm up well, ICE, Sx surveillance
  - Ibuprofen

Communication is a team sport.