



Goals

- Learn to vary muscular effort
- Experience varying exercise intensities
- Explore deep water training options
 - Interval training
 - Circuit training
 - Non linear patterns
 - Work against currents

Research Review

- Fluctuating cycles of work and rest allow for more work load in a shorter time
- Results-oriented format for clients who are more fit or seek athletic training
- Results-oriented format to educate and motivate beginners
- Provides “jump-start” to changing metabolism

Muscular Effort

- Teaching use of effort in class - pacing
 - Low intensity: cue stretchy, easy (20-30%)
 - Moderate intensity: cue with intention, “push more water” (55-70%)
 - Higher intensity: cue “use more power & force”, be “make white water!” (75-85%)
- Use resistance equipment
- Include the How & Why in your cueing

Vary Exercise Intensity

- Short levers, low intensity to “set up” exercise
- Progress to moderate intensity, cue to push more water & lengthen levers (surface area)
- Short bout of high intensity, specific cueing for effort level, position & posture
- Speed
- Cadence (tempo & ½ tempo)

Measuring Intensity

- Heart rate monitors
- Palpating heart rate
- Rate of Perceived Exertion (Borg Scales)
- Teach and use it every day
- Engage students in feeling and understanding effort and intensity

Karvonen's Formula - H2O

- $220 - \text{AGE} = \underline{\hspace{2cm}}$
- $-\text{Resting HR} = \underline{\hspace{2cm}}$
- $\times .6 \text{ minimum work} = \underline{\hspace{2cm}}$
- $\times .8 \text{ maximum work} = \underline{\hspace{2cm}}$
- $+\text{ Resting HR} = \underline{\hspace{1cm}} \text{ low}$
 $= \underline{\hspace{1cm}} \text{ high}$
- $- 17 \text{ beats or } 13\% = \underline{\hspace{1cm}} \text{ low}$
 $= \underline{\hspace{1cm}} \text{ high}$

Intensity Variables 1

- Overload
 - use equipment
 - add surface area
 - increase force (muscular effort)
- Inertia
 - Stop and start travel
 - Engage core to resist tipping (streamlining)

Intensity Variables 2

- Acceleration
 - Use power pops, explosive moves
 - Elevation
- Action/reaction
 - Cue direction of force
 - Use core to stabilize, responding to force of limbs

Sample Choreography 1

1-3 ratio for Beginners, increase distance

- Run right to first line moderate effort (40%)
- XC Ski to start - Sweep - easy (20%)
- Run to second line moderate effort (40%)
- XC Ski to start - Alternate sweep - easy (20%)
- Run to third line intense effort (60-70%)
- XC Ski to start - Press - moderate effort (40%)
- Run to last line intense effort (80%)
- XC Ski to start - Triceps press - easy (20-30%)

Sample Choreography 2

- Stair-step (1:2 ratio)
 - Work interval 10 secs
 - Recovery interval 20 secs
 - Work interval 20 secs
 - Recovery interval 40 secs
 - Work interval 30 secs
 - Recovery interval 60 secs
- Long lever work? Short lever recovery?
- What moves = work? What moves = recovery?

Sample Choreography 3

- The Chase
 - Chase another student—one is streamlined, one has more surface area drag
 - Reverse the chase, add visualization to increase effort level
 - Use personal currents, forward, backward and lateral traveling

Rules of engagement

- Train within limits
- Use progression
- Time precisely
- Rehearse for success
- Repeat to enhance results

Your Role as Coach

- Give your students the power
- Involve them in fun ways
- Keep their eye on the prize
- Motivate, coach, correct
- Praise their successes
- Notice the individual