Triathlon Programming

Marilyn Chychota

Marilyn Chychota

"My philosophy as a coach is to create an environment that enables athletes to develop confidence in their abilities and to have opportunities to understand their tendencies, while developing them to be their best in sport."


Every athlete has a goal.
What's your plan to reach it?

Learning Objectives

- ✓ **Understand** levels of effort and how to quantify them
- ✓ **Learn** each zone type
  - Names, definitions
  - How to identify them
  - How to execute them
  - How we use them in training
  - Why we use them in training, and their purpose
- ✓ **Create** sessions for each zone
  - Mental prep & fueling strategies
  - Warm-ups and cool-downs

Power + Endurance

- Specific to type of sport and individual goals
- Work smarter, not harder

Purpose of Programming

- Training is purposeful
  - a goal for every workout
  - a reason for every recovery
- Planned pattern of alternating stress and recovery
  - Avoid over-training
  - Minimize injury
  - Lifestyle balance

Training Zones

Training Zones	Goal	Intensity	Benefit	Examples	Duration	Fuel
Active Recovery	Speed recovery	**Easy** pace, low resistance Borg Scale: 9	Increased blood flow; may reduce muscle soreness and inflammation	Yoga, light swimming, easy spinning	20-30 min	Not required
Easy	Injury prevention / recovery	**Low** (4/10 effort) Borg Scale: 11	Promotes increased O_2 absorption; teaches the body to use fat as fuel	Warm-up & cool-down; Running, hiking, cycling, rowing; No weights	20-60 min	Not required
Aerobic	Tolerance for higher workloads	**Moderate** (6/10 effort) Borg Scale: 13	Develop body's ability to use fat as fuel	Conversational pace, minimal concentration	20-60+ min	Depends on athlete & duration of trainng; **Focus:** Hydration
Tempo	Aerobic capacity	**Mod-High** (7-7.5/10 effort) Borg Scale: 15	Develop fast oxidative glycolytic muscle fibers	Broken intervals (work to rest ratio = 3-5:1)	60+ min	Carbohydrates
Threshold	Develop fast-twitch muscle fibers	**High** (8/10) Breathing is difficult, but manageable Borg Scale: 17	Develops cardiac stroke volume & VO_2max; Improves athlete's ability to process lactate	Broken intervals (work to rest ratio = 2:1)	20-60 min	Carbohydrates (more may be needed)
VO2 Max	Speed	**Very high** (9+/10 effort) Borg Scale: 20	Develops ability of O_2 delivery system to get O_2 to working muscle	Broken intervals (work to rest ratio = 1:2)	5-15 min	Carbohydrates
Neuromuscular Quickness	Recovery (experienced athletes)	**Extremely light** load with high, smooth turnover Borg Scale: 7	Building coordination & quickness under light load; skill development	Downhill strides, agility ladders, high RPM work, overspeed work with assistance		Not required
Absolute Max	Top power + speed	**Very high** (9+/10 effort) Borg Scale: 20	Develops ability of O_2 delivery system to get O_2 to working muscle	Broken intervals (work to rest ratio = 1:5)	Short	Well-fueled prior; no fuel needed during; **Focus:** carbs post-workout
Conditioning-Specific Strength Endurance		Resistance: high load Focus: torque / resistance Borg Scale: 15	Sport-specific strength training	Big gear work, paddle work, towing work, hills		

Active Recovery

- **Goal**: speed recovery process
  - *Easy pace, low resistance, light load, no impact sports*
- **Benefit**: increased blood flow
  - *May reduce muscle soreness and reduce inflammation*
- **Examples**: yoga, light swimming, easy spinning
- **Duration**: 20-90 min
- **Fuel**: not required

Easy

- **Goal**: injury prevention & recovery
  - *Low intensity training (4/10 effort)*
- **Benefit**: promotes increased oxygen absorption
  - *Also, teaches the body to use fat as fuel*
- **Examples**: warm up & cool down
  - *Running, cycling, swimming, hiking*
  - *No weights*
- **Fuel:** not required

Aerobic

- **Goal**: develop tolerance for higher work loads
  - *Moderate intensity training (6/10 effort)*
- **Benefit**: develop body's ability to utilize fat as fuel
- **Examples**: conversational pace; minimal concentration
- **Duration**: 60+ min
- **Fuel:** depends on athlete and duration of training; focus on hydration

Tempo

- **Goal**: develop aerobic capacity
- **Benefit**: develop fast oxidative glycoltyic muscle fibers
- **Examples**: broken intervals (work to rest ratio = 3-5:1)
  - *Warm-up 3 min easy + drills/accelerations*
  - *3x8 min hard, 2 min recovery*
  - *Cool-down*
- **Duration**: varies by athlete/event
- **Fuel**: carbohydrates

Threshold

- **Goal**: develop ability of fast-twitch muscle fibers to generate energy aerobically
  - *High intensity training (8/10 effort)*
  - *Breathing is difficult but manageable*
- **Benefit**: develops cardiac stroke volume & VO_2 max
  - *Improves athlete's ability to process lactate*
- **Examples**: broken intervals (work to rest ratio = 2:1)
  - *Warm-up 5-10 min*
  - *Progressive build to 80% range for 3 min*
  - *4x30 sec fast, 1 min easy, 3 min easy*
  - *6x4 min threshold on 2 min recovery*
  - *Cool-down 10-20 min (*longer)*
- **Duration**: varies by athlete/event
- **Fuel**: carbohydrates (more may be needed)

VO2 Max

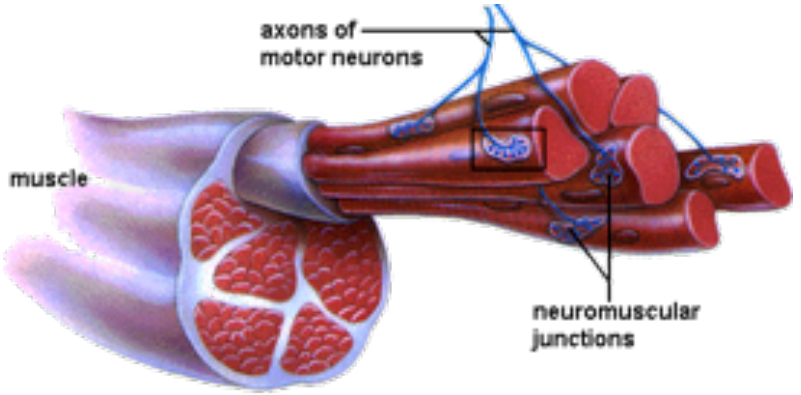
- **Goal**: speed
  - *Very high intensity training (9+/10 effort)*
- **Benefit**: develops ability of oxygen delivery system to get oxygen to the working muscle
- **Examples**: broken intervals (work to rest ratio = 1:2)
  - *Warm-up 15-20 min (*longer)*
  - *6x15 sec sprints, 45 sec easy*
  - *6x90 sec VO2 max, 3 min recovery*
  - *Cool-down 20 min (*longer)*
- **Duration**: 5-15 min
- **Fuel**: carbohydrates

Absolute Max

- **Goal**: top power + speed
  - *Very high intensity training (9+/10 effort)*
- **Benefit**: develops ability of oxygen delivery system to get oxygen to the working muscle
- **Examples**: broken intervals (work to rest ratio = 1:5)
  - *Warm-up 15-20 min (*longer)*
  - *6x15 sec sprints, 45 sec easy*
  - *3 min easy*
  - *4-6 x 10 sec start from a complete stop; 2-3 min complete rest in between*
  - *Cool-down 10-15 min*
- **Duration**: short
- **Fuel:** well-fueled prior; no fuel needed during; carbohydrates post-workout are necessary for recovery

Bonus: Neuromuscular Quickness

- **Goal**: recovery for experienced athletes
  - *Extremely light load*
  - *High, smooth turnover*
  - *Building coordination & quickness under light load*
  - *Skill development*
- **Examples:** downhill strides, agility ladders, high RPM light load cycling sessions



Bonus: Conditioning Specific Strength & Endurance

- **Benefit**: sport-specific strength training
  - *Training sport-specific strength comes through time spent under load in this zone*
- **Resistance**: high load
- **Effort focus**: torque & resistance
- **Examples:** Big Gear work, paddle work, towing work, hills

Activity

	Fuel	Warm-Up	Mental State	Workout
Active Recovery				
Easy				
Tempo				
Threshold				
VO_2 Max				
Absolute Max				
Neurom. Quickness				

- Fill in the table with workouts for each zone
- Take note of fueling needs & mental state

Final Thoughts

Questions?