

Recovery during training cycles

The principle of recovery states that for fitness to improve and even be maintained, a period of reduced effort is necessary. The need for recovery is inherent at all levels of training; within workouts, between workouts, between days of training, etc. By allowing differing amounts of recovery, a program can direct an athlete's preparation towards a specific goal; be it aerobic, anaerobic or technical.

Adaptation to training is accelerated when fatigued functions are restored to normal operational levels as quickly as possible during training sessions and between training days.

Recovery factors to be considered are training load/phase, gender and age of athletes – we can be dealing with ages 16 to 60+ years in one boat at club training

Different training loads and/or intensities need specific recovery

i.e. paddlers training 2-3 sessions per week

or paddlers training 2 sessions per day whether be water based and/or land based

Training plans require adequate recovery for each drill in order to gain maximum benefit and effective development.

Observation of how quickly athletes recover – heart rate monitoring is key for on water sets

Primarily we dealing with restorative recovery, mostly at training we will concerned with returning physiological markers to normal levels e.g. HR whilst regenerative recovery deals with psychological traits associated with mood, refreshing motivation, introducing cross training modalities off season

Why is Recovery so Vital?

- Produces training adaptations
- Enables us to increase quality & quantity of training
- Restores mental balance
- Reduces over-training, fatigue, muscle soreness, illness & injuries

Recovery Time frames:

Intra set recovery

End of session recovery

Recovery between different sessions in one day

Recovery between different training days

Recovery post regatta-championships

Recovery between different training phases

Recovery-regeneration between seasons

Plan activity during different phases of the season, ensuring adequate time is factored in for recovery.

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
am							
pm							

CONTRIBUTORS TO RECOVERY

Active recovery post session

Light exercise to keep blood flowing after training to remove waste products and aid repair brought in by blood

Passive rest – movie/book

Sleep 8 hours per night, teens will require more, essential for physical & psychological recovery

Sound, clean nutrition

Hot & cold therapies, hydrotherapy, sauna, ice baths

Foam rollers, trigger point aids

Compression garments,

Massage & stretching routines

Mental recovery techniques, meditation, positive visualisation, music

AGE SPECIFIC RECOVERY

Our bodies usage of oxygen becomes less effective as we age.

We see this all the time at regattas when our competitive juniors get off the boat after an intense race, they debrief, refuel, change out of wet clothes then it seems within minutes they are sufficiently restored to throw a foot- ball around. Whereas senior athletes refuel & take full resting recovery – sometimes even a micro sleep.

The maximal ability to utilize oxygen (VO₂max) is a predictor of endurance performance across ages. VO₂max is a numerical value that describes how much oxygen your body can use per kilogram of body weight by bringing oxygen into lungs and then carried into our bloodstream to the working muscles. Training will enhance this performance; therefore, an aerobically fit athlete will generate more endurance work for their body weight.

In the general population, VO₂max tends to decline by about 10% per decade after the age of 30. Athletes who continue to compete and train hard can reduce the drop by about half, to 5% per decade after the age of 30. In studies it appears that master aged athletes that suffer the least decline are from the sport of rowing, there are no studies available to date that include dragon boat paddlers but we can draw some similarities between the two sports. In terms of competitive endurance exercise, rowers have shown the least decline in VO₂max with age, but the difference to other sports isn't huge, it may be because rowing is a lower-impact sport.

The reason VO₂max declines with age is that our maximal heart rates go down as well.

Maximal heart rate is the highest heart rate in beats per minute one can achieve during increasing intensity of endurance exercise. It is often roughly predicted as "220 minus your age = maximal heart rate." VO₂max declines with age as our maximal heart rates go down. Muscle mass tends to decline with age if not maintained and can contribute to declines in performance as well.

Dragon boat starting sequences draw on type II muscle fibres, called fast twitch fibres to produce power. Research indicates that these cells decline in number and function with age.

As coaches we need to consider these factors when working with athletes of all ages, to structure training and allow adequate recovery periods for older athletes.

References:

ASCA Lvl 1 Content

<https://theconversation.com/how-does-aging-affect-athletic-performance-36051>