



HUMAN CENTRED MOVEMENT



Peter McVerry Trust

Wexford Cycle

PETER MCVERRY TRUST
WEXFORD CYCLE 2018
PREPARATION & RECOVERY



PREPARE TO PERFORM & PREPARE TO RECOVER

HUMAN CENTRED MOVEMENT

The Peter McVerry Trust Cycle is a great event for an even greater cause. As you begin to dust off your bike there are a few things to consider so that you can not only enjoy the cycle but get there pain and injury free!

There is a long road (excuse the pun) ahead of you so getting both your preparation and recovery right is paramount. This document is going to outline the key tips and tricks that will allow you to stay on the saddle as long as necessary and allow you to get back to the saddle quicker and in better shape.

We are happy to provide these guidelines and suggestions, but please remember, the Wexford Cycle is not a Race, it is an event to enjoy and take at your own pace. It is a social event as well as being a challenge. You may not be able to follow everything in these guidelines but that should not put you off participation at your own pace; understanding the concepts is the key;

You might take a few days off training, or start training later than planned, but don't worry; "it is as easy as riding a bike" and "I'm just getting back in the saddle" are not just metaphors. Listen to your body and enjoy the spin to Wexford!

The information supplied in the PDF is courtesy of Human Centred Movement. HCM are pioneering a new style of physiotherapy clinic. Specialising in injury prevention, resolving pain and improving people's posture. The clinic is located in Churchtown, Dublin.

The company is founded by 3 past pupils of Gonzaga College Hugh Byrne (BSc, MSc Physiotherapy), Mark McGroarty (BSc Health & Performance Science, MSc Injury Prevention) and Chris Coburn (Strength and Conditioning Coach) all with a keen interest in health, well-being and sports performance.



Hugh



Chris



Mark

EFFECTS OF RECOVERY

Your recovery between training is the most important aspect when considering sports performance. There's no use putting in the miles on the saddle if your body is not getting stronger after each bout! The following is a guide of how you can start to think about not just the recovery of your muscle tissues but the recovery of your mind as well, cycling is as much a mental game as it is physical.

<h2>PREPARE TO PERFORM</h2> <h3>Your Roadmap to Preparing your Mind and Body for Performance</h3>		
MIND Restoration <i>Clear head & Recharge your Mind</i>	Muscular Restoration <i>Stay injury free & Perform at your best</i>	Body Restoration <i>Revive & Optimise your Energy Levels</i>
<i>Is this a FOCUS area for you?</i>	<i>Is this a FOCUS area for you?</i>	<i>Is this a FOCUS area for you?</i>
Letting it go strategies Positive Self Talk	Foam roll / Self Massage Great way to freshen up muscles and maintain mobility following exercise	SLEEP Quality - Sleep hygiene habits (no screens 1 hour prior) Quantity - 8 hours minimum
Connecting with positive influences e.g. friends / family	Cold Immersion 10mins is ideal - keep the water moving (the sea)	HYDRATION 2/3L every day - Drink, Drink, Drink Pinch of salt in water to help absorption
SWITCH OFF Strategies e.g. Reading, hobbies, play	Stretching	HYGIENE Wash hands / Food safety / Own water bottle Minimise risk of illness
Enjoyment Do something that stimulates you	Pool Session 15 - 30mins of active mobility and swimming	CLEAN FOOD Cut out junk Where possible eat seasonal, fresh and local produce Eat often, good quality Protein and lots of Vegetables
Proactive Positive Mindset Mindfulness / Meditation	Compression Garments Wear for 4-6 hours Sleep in skins - if legs extremely tired / sore	BUILD STRONG SUSTAINABLE HABITS FOR SUSTAINABLE HIGH PERFORMANCE
Learn Something New	Active Flush 15 - 30mins of easy cardio Get your body moving!	

RECOVERY FOR THE MIND

Anyone can benefit from understanding how to regularly incorporate psychological recovery strategies into their training and competitive schedules. Think of psychological recovery as giving one of your body's most valuable organs – the brain, a chance to recover. Recovery is the re-establishment of the initial state – it allows the restoration of physiological and psychological processes, so that you can compete or train again at a similar level. It can be passive or active and is an integral aspect of training that requires planning. It focuses on identifying strategies that athletes can use to minimise and manage fatigue from training.

MIND Restoration <i>Clear head & Recharge your Mind</i>
<i>Is this a FOCUS area for you?</i>
Letting it go strategies Positive Self Talk
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Proactive Positive Mindset Mindfulness / Meditation
Learn Something New

RECOVERY FOR THE BODY

Building recovery time into any training program is important because this is the time that the body adapts to the stress of exercise and the real training effect takes place. Recovery also allows the body to replenish energy stores and repair damaged tissues. Exercise or any other physical work causes changes in the body such as muscle tissue breakdown and the depletion of energy stores (muscle glycogen) as well as fluid loss. Recovery time allows these stores to be replenished and allows tissue repair to occur.

Body Restoration <i>Revive & Optimise your Energy Levels</i>
<i>Is this a FOCUS area for you?</i>
SLEEP Quality - Sleep hygiene habits (no screens 1 hour prior) Quantity - 8 hours minimum
HYDRATION 2/3L every day - Drink, Drink, Drink Pinch of salt in water to help absorption
HYGIENE Wash hands / Food safety / Own water bottle Minimise risk of illness
CLEAN FOOD Cut out junk Where possible eat seasonal, fresh and local produce Eat often, good quality Protein and lots of Vegetables
BUILD STRONG SUSTAINABLE HABITS FOR SUSTAINABLE HIGH PERFORMANCE

MUSCLE TISSUE RECOVERY

The Principle of Adaptation states that when we undergo the stress of physical exercise, our body adapts and becomes more efficient. It's just like learning any new skill; at first, it's difficult, but over time it becomes second-nature. Once you adapt to a given stress, you require additional stress to continue to make progress. There are limits to how much stress the body can tolerate before it breaks down and risks injury. Doing too much work too quickly will result in injury or muscle damage, but doing too little, too slowly will not result in any improvement. This is why personal trainers set up specific training programs that increase time and intensity at a planned rate and allow rest days throughout the program.

Muscular Restoration <i>Stay injury free & Perform at your best</i>
<i>Is this a FOCUS area for you?</i>
Foam roll / Self Massage Great way to freshen up muscles and maintain mobility following exercise
Cold Immersion 10mins is ideal - keep the water moving (the sea)
Stretching
Pool Session 15 - 30mins of active mobility and swimming
Compression Garments Wear for 4-6 hours Sleep in skins - if legs extremely tired / sore
Active Flush 15 - 30mins of easy cardio Get your body moving!

20 WEEK TRAINING PLAN

Having gotten your recovery right, it's time to look at your preparation on the saddle, below is an example training plan. **Remember that this is only a guide, it's important that you listen to your body and go at a pace that suits you! Training is about being consistent, not a hero.**

WEEKS 1 - 5

Long Cycle

10-30k
Start at 10k and increase to 30k by week 5.

Shorter Cycle

spinning for 20mins working up to 45mins in easy spin or try indoor spinning class.

Other Exercise

Second spinning class or/ 30 minute or/ 30min swim.

WEEKS 6 - 10

Long Cycle

30-50k
Increase to 50k by week 10 and include some hills.

Shorter Cycle

Do a 20min warm-up and then 3 minutes fast, 1min break, working up to 6 x 3mins

Other Exercise

Try and increase slowly your third exercise session to at least 45mins.

20 WEEK TRAINING PLAN

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WEEKS 11-15

Long Cycle

50 - 70k
Increase by another 20k during this 5 week period.

Shorter Cycle

Outdoor Cycle 1-2hours.
or
60min stationary cycle
6 x 3mins . sprint
spinning w/ 1min slow.

Other Exercise

Increase your third exercise session to 60mins.

WEEKS 15-20

Long Cycle

70 - 100k
Do one 70 - 100k cycle at least 2 weeks prior. In the week leading up cycle 50k and 30k.
Your longest cycle should be 2 weeks prior to the actual cycle.

Shorter Cycle

Cycle outside for a min of 120mins including a 20min warm-up. Perform 10 x 5min at a high speed with 2mins slow cycling between sets. Perform a 20min cool down. No tough hill work the week prior

Other Exercise

Continue with a session at 60mins or less. Reduce your load in the final weeks before the cycle, your preparation is done.

WARM - UP

Before beginning to exercise it is vital that we warm up properly, to avoid injury and to ensure that we can get the most out of the session. Ian Jefferys' 4 stage RAMP(Raise, Activate, Mobilise, Potentiate) protocol is commonly used by athletes, coaches and general population alike. Even though Ian Jefferys laid out the phases in this order they can be done at the same time or in many different orders. At HCM we believe in mobilising joints before activating the muscles around those joints, we also believe there is an extra stage required before starting the RAMP protocol.

PRINCIPLES OF A GOOD WARM-UP

- Comfortable, pain-free movement of the whole body.
- Appropriate to your level of fitness, experience and overall health.
- Gradually increase the intensity and range of movement towards the intensity of the exercise you are about to do.

This allows our blood flow, muscles, joints and nerves to be prepared for exercise.

AN IDEAL WARM-UP FOR CYCLISTS

Step 1 Ankle and foot warm up

Step 2: Cycle 3 - 5 min

Step 3: Dynamic calf, quad and hip workout 1 - 3 min

Step 4: Light Cycle 3 - 5 min - Slow controlled full revolutions of the pedal, building pace

Step 5: Dynamic warm-up 3 - 8 min, building to training intensity

Step 6 Proceed to normal Cycling

Step 7 5 - 10 min Cool Down and Stretch



MUSCLE-TISSUE HEALTH

Muscle tissue release refers to soft tissue myofascial release (trigger point release). Myofascial release is essentially what a Physiotherapist or masseur perform on your muscles when they are tight (ie. poking and prodding at the sore part!). The sore / tight spots within a muscle tissue are called 'trigger points'. We believe that everyone should be able to perform this simple task themselves, taking back the power to resolve pain and prevent injury. We use these exercises to restore muscle tissue function, remove trigger points and knots, improve blood and nutrient flow to an area, relieve stress and tension and improve a tissues movement capacity. In order to benefit from the soft tissue release work we need to access our parasympathetic (relaxation) system. This is best done through the use of your breath, there's a reason that you sigh after a long day, it's our bodies natural tension and stress reliever. It's nothing new, Yoga and Pilates have been using this methodology for years! The easiest way to access our parasympathetic system through breath is to use deep diaphragmatic breathing. Deep diaphragmatic breathing are correct breathing mechanics, filling our belly with air rather than our chest.

CORRECT BREATHING MECHANICS

To use correct breathing mechanics:

1. Place your hands on your belly.
2. Draw breath in through your nose.
3. Keep your chest down and fill your belly with air.
4. Exhale through your mouth.

SOFT-TISSUE RELEASE

To release muscle tissue follow along with the videos and these simple steps:

Find a trigger point (sore spots in a muscle)

Add as much pressure as you can while still being able to take deep breaths

30sec Deep diaphragmatic breathing

30sec Small movement

30sec Larger movement

30sec Contracting and relaxing



Mobility refers to the amount of active, usable motion that one possesses. The more mobile a person is, the more they are able to maximize their movement potential safely, efficiently, and effectively. While improving movement potential, mobility also acts to 'bullet proof' (or safe-guard) your joints so that movement can be executed safely. Performing a daily mobility routine improves the function of your nervous system. This leads to a reduction of pain and injury, joint health and longevity, as well as an increased ability to move freely and easily.

WHY IS MOBILITY IMPORTANT FOR CYCLING?

As you will be spending the majority of your training time in a fixed position, it is important that you do not 1. Sustain and overuse injury and 2. Ensure that you have the joint and muscle strength to perform long consecutive cycles.

IMPORTANT TERMS OF REFERENCE FOR THE VIDEOS

CARs: CARs stands for a controlled articular rotation which in other words means a slow controlled circle. The CARs are really just slow controlled joint circles. The concept of CARs is that the every joint capsule needs to have it's full range of motion with full control. If you lack the full range or the control over the full range then you are already compensating somewhere and compensation over time leads to injury.

PP's: PP's stands for push pulls of a joint at its end range of motion. Think of PP's as improving the movement capacity of a specific joint and the surrounding musculature. Think of this as traditional stretching on steroids! Your body will thank you in later years.

MOBILITY OVER FLEXIBILITY?

Old school stretching does not improve the function or control of a muscle. All that it does is increase the length of a tissue. Mobility training is the best way to increase the length of tissue while also improving the control and function of the tissues. It's a win win!



STRENGTH TRAINING

If you are already a member of a gym and participating in strength training programmes then keep it up! If you are not currently a member of a gym or participating in a specific gym programme then we wouldn't suggest joining a gym! However we will suggest that you perform some of the exercises in the videos.

The main things to consider in your strength training routine are simple and effective. As you will be spending the majority of your time in a fixed position your body will naturally begin to adapt and strengthen in this position, what is important to consider is spending time in the opposite positions! It can be easy to sustain an overuse injury from performing the same exercise over and over again, to stave off this we suggest strengthening the opposite muscles to those used when cycling!

There is no need to be spending too much time on your strength programme 45min X 2/3 times per week is more than enough to get you fighting fit!



FINAL CONSIDERATIONS



Have a good read over this PDF. There is a huge amount of valuable information here which you won't absorb in one reading! The videos are there to support you and will link in with this document.



It will be handy to have a checklist of all the necessary exercises types and sessions that you need to do on a daily basis. Getting into good habits will make life a lot easier.



Try to get a community aspect going to your training. If you have training partners you are less likely to miss/skip a session! Motivation will be paramount during tough times!



Take time to plan out your trainings, what dates, times and the training type. Having a plan laid out will make it that little bit easier to follow!



THE LAST WORD

At HCM we are pioneering a new style of physiotherapy clinic, we call it a Movement Clinic. We operate our Movement Clinic in Churchtown, Dublin. Here we work with our members on a one-to-one and small group basis specialising in resolving long-term pain and injury.

HCM takes an innovative approach to dealing with pain and injury. Through our multi-disciplinary team we are able to get to the root cause of the postural deficits and movement compensations that lead to pain and injury. We use the latest techniques that are grounded in sport and exercise science to increase mobility, improve flexibility, reduce pain and resolve injury. We pride ourselves on treating the causes and not the symptoms.

Our Movement Clinic is where we turn the traditional physiotherapy clinic on its head. At the Movement Clinic we get to the root cause of your postural deficits and movement compensations. Each of our members goes through an initial assessment consisting of a Postural Assessment, Biomechaical Assessment, Physiotherapy Screen and Goal Setting.

Where we differ is not only the length of our programmes but in it's application. Following an assessment our multi-disciplinary team will create a personalised 12-week programme. The programme will consist of the latest techniques grounded in exercise science to restore your movement capacity, resolve pain and rehabilitate injury. You then come into the Movement Clinic on a weekly basis to perform your programme in a small group setting or alternatively work one-to-one with a member of our team. Our unique approach will allow for 'Freedom of Movement, Freedom from Pain'.

In the weeks ahead if you wish to get advice on your training, mobility or strength work please don't hesitate to get in contact. If you are currently suffering from an injury or pain we would be more than happy to take care of you, its what we do best at HCM.

Best wishes,
Hugh, Chris and Mark



HMM

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