



World Triathlon Coaching and Training Guidelines for the COVID-19 pandemic period

Version 1.0 – 19 March 2020

World Triathlon Development suggestions to National Federations, athletes and coaches

Table of Contents

1. Key messages	3
2. Facts about COVID-19:	4
2.1 What is COVID-19?.....	4
2.2 What are the symptoms of COVID-19?	4
2.3 How does COVID-19 spread?	4
2.4 Who is most at risk?	4
2.5 How to stay safe?	4
2.7 How to protect others?	5
3. Social considerations	5
4. Coaching implications of the COVID-19 period	7
4.1 Re-planning, periodisation considerations, adjusting the training load.....	7
4.2 Training in a home environment	7
4.3 Change mindsets.....	10
4.4 How to keep the immune system healthy?.....	11
4.4.1 The importance of exercising	11
4.4.3 Rest and recovery considerations	12
4.4.4 Nutritional considerations	13

1. Key messages

The current situation regarding Coronavirus will affect everyone in many ways. There is a wealth of advice that can be considered. Here is the perspective of World Triathlon regarding coaches and athletes:

- Follow the guidance from your own official government or region. Advice may be specific to the region where you are and so it is not necessarily the same the world over.
- Our first priority should be to our own and the greater community health. This must take precedence over training and competition. In any event, most if not all competition has been cancelled or postponed indefinitely.
- Ensure you follow guidance from reputable official sources such as:
 - Local Government
 - World Health Organisation's (WHO) guidance on COVID-19: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>
 - The International Olympic Committee's (IOC) COVID-19 updates: <https://www.olympic.org/athlete365/coronavirus>
 - National Federations may provide information as well.
- Anxiety and stress levels are likely to be much higher for many people, consider the use of non-contact ways of communication such as Skype/Zoom/Telephone/Social Media to keep contact, maintain good humour and aim to reduce stress levels in individuals.

According to the experiences of countries, where the COVID-19 outbreak is already in an advanced stage, the most important protective measure has proved to be social distancing. Travelling is already restricted in many parts of the world, but still there are many people moving internationally. Due to the relatively long, variable length incubation period of the virus and the fact that during the incubation period individuals are free from symptoms (asymptomatic) but can still spread the disease the risk is present worldwide and is/can spread quickly, even in territories which have no confirmed cases yet.

For this reason World Triathlon Development suggests the following measures to all National Federations, athletes and coaches regarding all activities other than qualification for the 2020 Tokyo Olympic Games:

- **Take individual responsibility to stop spreading the virus and strictly follow local governmental guidelines.**
- **Suspend national competitions, as these usually involve hundreds of participants including: athletes, coaches, organisers, officials, visitors, contractors, etc. sometimes with extensive travelling of many.**
- **Suspend all travel.**
- **Cancel other gatherings, including training camps, group training sessions, courses and seminars, social meetings, etc.**
- **Make health and immune system maintenance the top priority instead of performance training.**
- **From group sessions and face-to-face coaching shift to individual home training.**
- **Stop physical exercises immediately if there is any concern regarding health and consult a doctor.**
- **Provide extended coaching support to athletes by adjusting their training plans, giving them guidance and offering advice being aware of the psychological stress of the uncertainty surrounding them.**

The aim of this document is to provide basic information about COVID-19 and to give coaching and training guidelines during the pandemic.

2. Facts about COVID-19^{1;2}

2.1 What is COVID-19?

COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.' The COVID-19 virus is a new virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of common cold. There is currently no vaccine to prevent coronavirus disease 2019 (COVID-19).

2.2 What are the symptoms of COVID-19?

Symptoms can include fever, cough and shortness of breath. In more severe cases, infection can cause pneumonia or breathing difficulties. Less frequently, the disease can be fatal. These symptoms are similar to the flu (influenza) or the common cold, which are a lot more common than COVID-19. This is why testing is required to confirm if someone has COVID-19. In case of fever take only paracetamol and consult your doctor as soon as possible!

2.3 How does COVID-19 spread?

The virus is transmitted through direct contact with respiratory droplets of an infected person (generated through coughing and sneezing). Individuals can also be infected from and touching surfaces contaminated with the virus and touching their face (e.g., eyes, nose, mouth). The COVID-19 virus may survive on surfaces for several hours, but simple disinfectants can kill it.

2.4 Who is most at risk?

We are learning more about how COVID-19 affects people every day. Older people, and people with chronic medical conditions, such as diabetes and heart disease, appear to be more at risk of developing severe symptoms. As this is a new virus, we are still learning about how it affects children. We know it is possible for people of any age to be infected with the virus, but so far there are relatively few cases of COVID-19 reported among children. The virus can be fatal, so far mainly among older people with pre-existing medical conditions.

2.5 How to stay safe?

The best way to prevent illness is to avoid being exposed to this virus.

Clean your hands often:

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.

Avoid close contact:

- Avoid physical contact with people outside your household.
- Put at least 1-meter distance between yourself and other people.
- In case of fever or other medical problems, avoid training and consult your doctor.

¹ [Key Messages and Actions for COVID-19 Prevention and Control in Schools](#), World Health Organisation, March 2020

² [How to Protect Yourself](#), Centers for Disease Control and Prevention, Coronavirus Disease 2019 (COVID-19), How to Prepare, 2020

2.7 How to protect others?

Stay home and isolate yourself, only go out for basic needs (shopping for food, work, acute medical care). Except for urgent needs, postpone your medical appointments.

Cover coughs and sneezes:

- Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow.
- Throw used tissues in the trash.
- Immediately wash your hands with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol. Here's what your athletes need to know about handwashing: <https://youtu.be/d914EnpU4Fo>



Wear a facemask if you are sick:

- If you are sick, you should wear a facemask when you are around other people (e.g., sharing a room or vehicle) and before you enter a healthcare provider's office. If you are not able to wear a facemask (for example, because it causes trouble breathing), then you should do your best to cover your coughs and sneezes, and people who are caring for you should wear a facemask if they enter your room.
- If you are NOT sick, you do not need to wear a facemask unless you are caring for someone who is sick (and they are not able to wear a facemask). Facemasks may be in short supply and they should be saved for caregivers.

Clean and disinfect:

- Clean AND disinfect frequently touched surfaces daily. This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks.
- If surfaces are dirty, clean them: Use detergent or soap and water prior to disinfection.

3. Social considerations

Severe cases of the Novel Coronavirus pandemic (pneumonia or breathing difficulties) do require hospital care. As healthcare systems have **limited capacities** in this respect all around the world both in terms of equipment and in human resources, countries must slow down the spread.

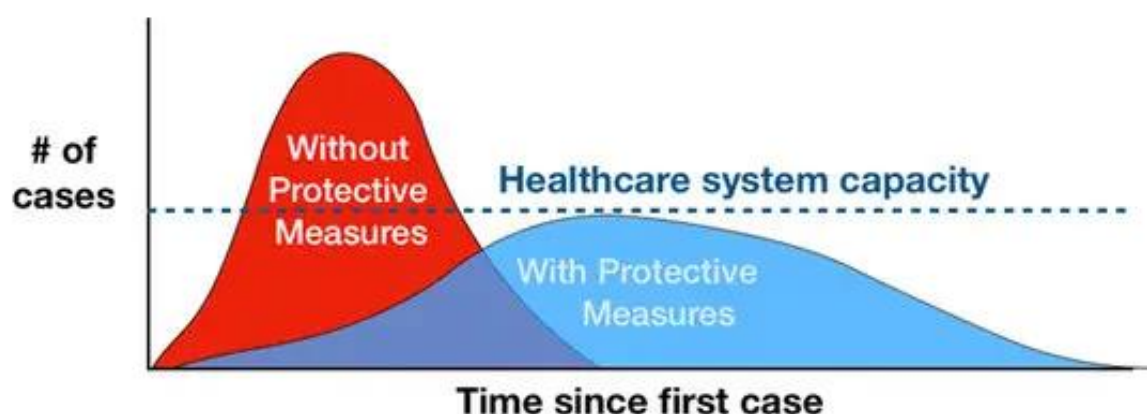


Figure 1 - Illustration of the importance of protective measures (adapted from CDC / The Economist)

As previously discussed, the virus is transmitted through direct contact with respiratory droplets of an infected person. Therefore, one of the key measures in controlling the progress of the recent pandemic is **rapidly adopted social distancing**.

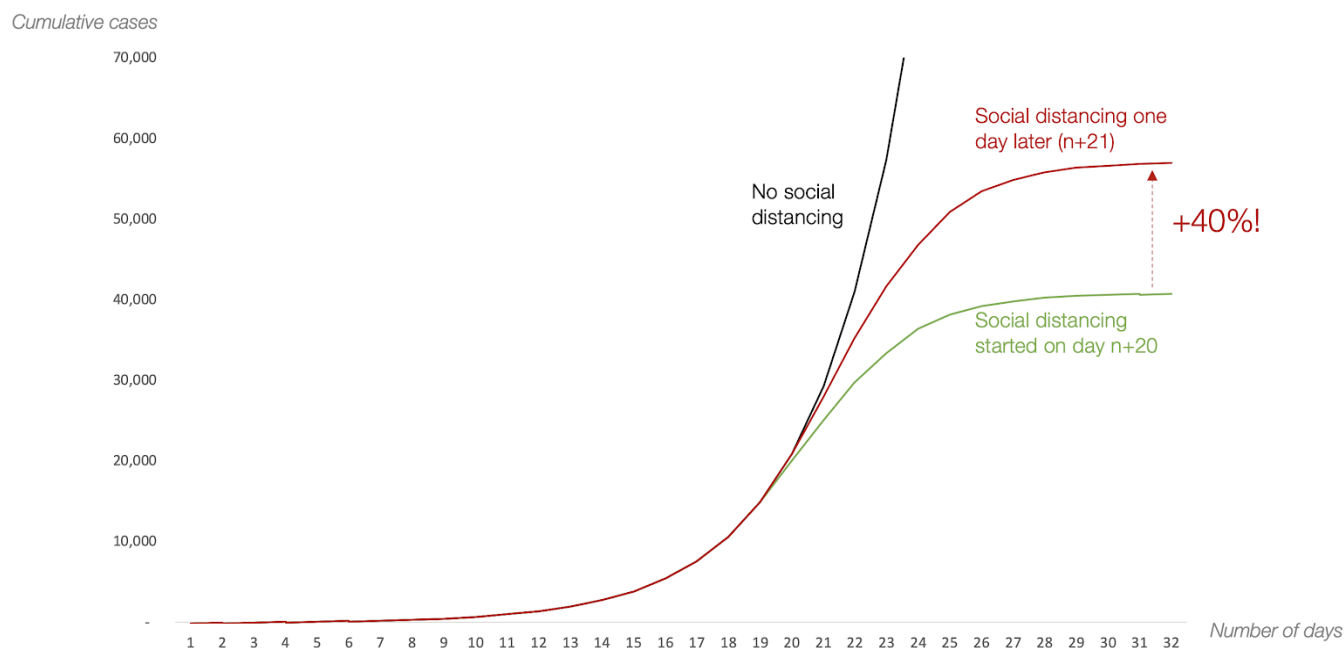


Figure 2 - An illustration why social distancing needs to be implemented quickly (adapted from Tomas Pueyo).

Based on the above National Federations and coaches do have the responsibility to make the hard call to cancel event participation, traveling, training camps and even suspend training sessions.

- Competitions are normally public gatherings with several hundred participants (including athletes, coaches, organisers, officials, visitors, etc.). This is already a magnitude that is considered as mass gathering, which represents significant risk in the spread of the virus. This is exactly the reason behind the recent cancellations and postponements of international events in endangered areas.
- Training camps usually require travelling and temporary relocation for several weeks. The spread of the COVID-19 pandemic so far shows patterns where the number of cases could change dramatically within only a few days. For this reason, it is simply not predictable how events evolve or what measures will be taken at the location of the training camp in 1-2-etc. weeks. Examples so far show that in territories where the number of confirmed cases show a rising trend, authorities do take the measures suggested by WHO and close facilities, limit gatherings or even lock borders.
- Under these circumstances travelling to a training camp (or even travelling in general) not only means breaking the basic requirements of social distancing and isolation, but additionally exposes travellers to unpredictable situations, such as facing a lock-down abroad and/or being quarantined for weeks upon trying to return home.

We are facing a situation, where the normal life of our athletes is / will be dramatically changed. The closing of schools, universities, facilities and the cancellation of travel and public gatherings has / will have a major impact on their social lives. The role of a club, a coach and co-athletes therefore changes emphasis and needs to be guiding and supportive, trying to engage young athletes, aiming to fill in the new gaps in their social relations. All this needs to be done with maximum respect to health and safety guidelines.

Coaches have a responsibility in educating their athletes regarding the fight against the virus spread, while athletes are responsible to comply with restrictions, coaching advice and new regulations.

4. Coaching implications of the COVID-19 period

4.1 Re-planning, periodisation considerations, adjusting the training load

Planning is one important aspect of coaching. Coaches solve problems by setting goals, break them down into sub-goals, then figure out a way of achieving these. Their plan is a roadmap that has been drawn based on many factors: the profile of the athlete, the resources available, the targeted events, and so on. If any of these factors change, coaches must adjust the map.

In other words: re-planning (or adjusting to changes) is also an integral part of a coach's everyday job. What we are facing these days is an unforeseen and rapid change of some of the basic factors we took for granted until now. Events are being cancelled or postponed, facilities are not accessible anymore, public gatherings are limited and, in many locations, a full lock-down is already in place.

Still coaches must guide their athletes, who rely on their advice - in many cases not necessarily only regarding sports.

The main priority now for everybody should be personal health and the health of loved ones and close relatives, of whom we are all responsible for.

As of now, sports performances are of secondary importance to everybody, even those who are aiming for the 2020 Tokyo Olympic Games.

Training for high performance competition is a regular stress that periodically brings down the levels of the athletes' immune system. This is something that coaches have responsibility in avoiding when making suggestions on physical activity, but athletes also play a vital role in obeying these suggestions. During the coming weeks and months training sessions will have altered functions than normal.

Most importantly, training shall temporarily serve general wellbeing and the maintenance of the immune system, not performance enhancement.

With this clear new focus, coaches must look at their annual plans and redraw the roadmaps for their athletes. The first iteration of this adjusted plan should be going back to health maintenance, base- and skill work then later as the situation hopefully resolves, introduce progressions again. As it is difficult to predict how long restrictions will apply or when can we go back to our normal schedules, being conservative might be a wise choice.

We need to bear in mind to **allow a minimum of 4-6 weeks of adaptation** to athletes once they will be able to resume normal training before taking up any racing again. The approach to this should be progressive and not aiming for top performance too early!

4.2 Training in a home environment

Training sessions that might put athletes into close proximity or would require visiting public facilities or using shared equipment (such as weights, dumbbells, etc.) shall be cancelled. Pools, gyms, public training parks are not considered as safe training environments during the COVID-19 outbreak. **Home training is the preferred option during the outbreak.**

As we have already seen in many countries, an often-introduced authority measure in controlling the disease is quarantine or lock-down, where citizens are only allowed to leave their homes for their basic needs, like shopping for food or visiting a doctor.

Coaches need to help their athletes to understand and accept such a situation. Not complying to the extraordinary regulations of a lock-down puts at risk the health of wider communities. Consequences for not complying individuals could be considered a criminal act.

Under these circumstances home training becomes very important for multiple reasons:

- it takes over the already mentioned role of general health maintenance;
- brings activity into everyday life that could otherwise easily become monotonous after a while;
- is something to allocate time to, therefore helps to establish a daily routine and schedule;
- helps to ease frustrations;
- could become a family activity which is fun and enjoyable.

Coaches can now plan home sessions that are doable considering the levels and capabilities of their athletes and the equipment which is available for them. These sessions can (and must be) individualised, as some may for example not have home trainers, many will not be able to run on treadmills, and in general athletes have different training equipment at home. Also, advanced exercises are not to be prescribed to less fit / skilful athletes.

Coaches need to think responsibly about the risk assessment of their training sessions as any accident or crash would put extra load on the already busy healthcare system which must channel all its resources to fight the pandemic.

Additionally, an athlete training alone who has a serious accident may not be discovered for some time. Equipment, drills and tasks therefore need to be selected with extra precaution.

We need to pay attention to the requirements of training indoors. Sweating is limited compared to outdoors therefore ventilation and increased flow of air might be necessary. Sweat rates will most probably still be different, so hydration is also something to address. Again, this is a good opportunity to educate athletes.

In terms of **endurance workouts**, the options in a home quarantine are limited to the following:

- Treadmill run sessions for the few athletes who have treadmills at home.
- Home trainer bike sessions.
- Rowing machine sessions again for the ones who have such equipment.

It is still possible to incorporate some higher intensity workouts (threshold sessions, VO₂max repeats, even some speed work) using the above-mentioned equipment and in line with the adjusted workload. Coaches need to make sure to prescribe higher intensities only if the workouts can be executed safely with the gear available.



Figure 3 - Illustration source: *Resistance Training for Health, American College of Sports Medicine.*

Strength training offers wider options. Exercises range from own-body-weight exercises to the utilisation of various home training equipment (resistance bands, weights, pull-up bars, etc.). Sessions can cover:

- core strength, stability and balance;
- strength maintenance;
- power;
- and even maximum strength.

Power and maximum strength exercises shall be prescribed only if proper equipment is available for their execution. Bear in mind that many maximum strength exercises require some assistance for the safe execution, therefore avoid these if the athlete trains solo.

Always bear in mind, that the proper execution of strength exercises is key. If the athlete practices any of these in an improper way, results can be easily harmful. A coach's task now is to pre-

scribe only exercises which the athlete is capable of executing properly on his/her own. Advanced, more difficult or complex exercises shall be given only to athletes, who are used to performing these and know the key points of proper execution.

It might also be possible to incorporate some **drills** into home training and address technique development. We can also look at the current situation as an opportunity to continue working on flaws. Shall there be adequate space for the safe execution indoors (or maybe in a garden), running drills are the

most obvious examples. Agility ladders, small hurdles and cones (or objects similar to these) can be utilised for a fun and enjoyable session.

Dryland swimming drills are also something to consider. Various resistance cord exercises are the obvious choice, but more advanced athletes who are already familiar with this can also practice swim mechanics.

In terms of cycling technique, free-roller exercises that incorporate dynamic balancing are always useful. Cadence and single leg drills can be performed on any roller or trainer.

Again, all the previously mentioned technique sessions need to be individualised according to the level of the athletes and their areas of development. Coaches can recall the memories of previous sessions or watch videos of these to identify the exercises that they suggest to individuals.

In a lock-down scenario **technology** becomes very important for various other reasons as well:

- Data from sport watches, smart trainers and treadmills can be monitored (as coaches already do this in more and more cases).
- Various platforms (such as Trainingpeaks, Bereda or Finalsurge) provide opportunities for follow-up and communication. The coaching practice already applied for busy age-groupers can now be extended for youth and junior athletes.
- Exercises can be demonstrated using Youtube videos, other points of education can also be incorporated (rest and recovery, nutrition, hygiene, etc.).
- If the coach can provide corrective advice and guidance using technology such as Zoom/Skype this could be a viable option for skills practice or incorporating new exercises.

Virtual environments (the most popular being Zwift) also provide great opportunities to socialise, as athletes can get in touch during their workouts, are able to chat and communicate with each other, which is key in breaking solitude. Coaches therefore can set up virtual events for those, who have infrastructure to participate in these.

Without smart trainers and virtual environment access sessions of individuals can still be scheduled for the same time and calls / video calls can be used to connect the training group.

Stretching and mobility exercises are often overlooked in the normal everyday rush, where facility bookings limit the length of training sessions or schedules are busy otherwise. A special home training environment where training volumes and intensities are cut back is the perfect opportunity to change habits related to this area. Key points for coaches and athletes to remember regarding stretching and mobility exercises are:

- Warm up properly, ideally finish each training session with the stretching of muscle groups that had been worked on. Performing stretches / mobility exercises without preparing the muscles first actually might damage muscle fibres.
- Hold each stretch for about 30 seconds.
- Overstretching might result in joint instability and injury.
- Bouncing while stretching / holding a position could also cause injury.
- A feeling of tension is normal during the stretch / holding the position, but there shall be no pain - this could be a sign of injury or damage. Painful stretches / positions shall be aborted.

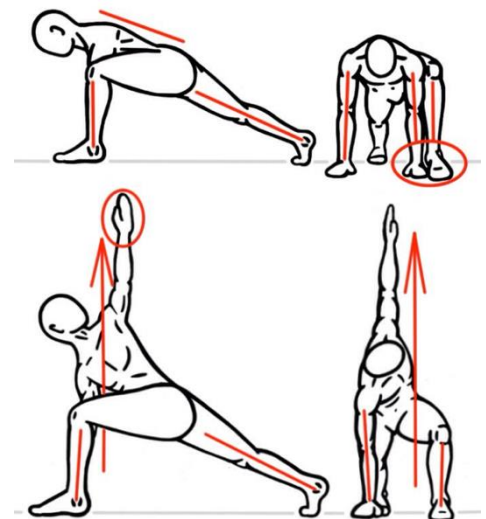


Figure 4 - Illustration source:
<https://sportspecialists.ca/>

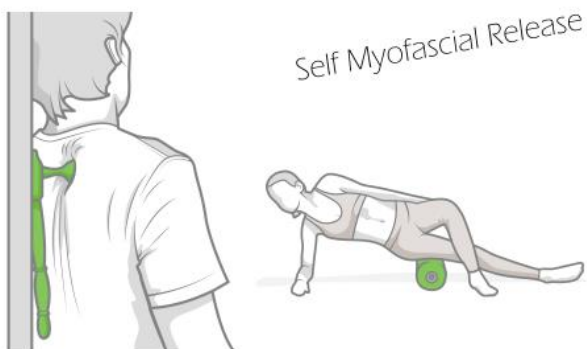


Figure 5 - Illustration source. <http://backrelease.com>

Self Myofascial Release (SMR) has become popular in the past few years and many athletes - young and adult - already use this method to relax contracted muscles. SMR exercises can be ideally performed at home, so coaches might want to reinforce their importance and encourage their athletes to make a habit of SMR related to their physical activities. As the lifestyle of those in a home quarantine will inevitably become more sedentary, SMR is the minimum that one can use regularly.

In response to the increased time spent sitting, coaches can encourage athletes to use unstable objects such as an appropriate size exercise ball to sit on

to stimulate muscle activity of the core muscles and thus maintain good posture. In regions where children are ordered to take part in remote education - of which formal requirements are less strict than in a class - they can also use a balance cushion, stability disc, a balance board, a bosu, etc. to stand on for similar purposes as previously mentioned.

4.3 Change mindsets

Adaptation to the above-mentioned major changes is a challenge for all, especially for young athletes. Coaches need to communicate many things very clearly and definitely:

- Priorities have changed, health is the most important, performance is of less priority.
- Athletes should not feel guilty or at fault because of missing training sessions or experiencing a setback in their performances. This is completely acceptable and normal and is outside their control.
- Coaches need to make decisions regarding the withdrawal from those originally planned competitions which are not realistic anymore for whatever reason (postponement, cancellation, lack of preparation, risk, etc.). They also need to take the responsibility for these decisions allowing athletes to accept the changes more easily.
- Athletes should feel the continuous support of their coaches in whatever way it is possible. This includes but is not limited to: missing planned training sessions until they are allowed; writing individualised training plans; giving advice; getting in touch on a regular basis; keeping the team together - mostly likely virtually, etc.

Enhanced motivation could be achieved if the positive sides of the changes required are explained to athletes, possibly opening new opportunities and maybe also setting some new goals. As there are probably more relaxed weeks to come, escaping the everyday rush of modern life, they can start working systematically on possible flaws or continue solidifying their base with no risk in terms of everything being temporarily suspended and will need to be re-planned once returning to normal.

A simple mobility issue, a difficult drill or an imbalance can easily be addressed during this period, which will enable further progress right away upon restarting regular sessions.

Athletes also have the opportunity now to change or adjust some of their routines that they already know could be improved. Allowing time for proper rest and recovery, eating healthy, avoiding junk food, going to bed earlier and at a regular time, establishing better sleep hygiene, getting engaged in "old fashioned" tasks of reading books, listening to music, drawing or solving quizzes and puzzles, etc.

Coaches might also need to address some stress issues linked directly to the pandemic. Stress during an infectious disease outbreak can include:

- Fear and worry about your own health and the health of your loved ones.
- Changes in sleep or eating patterns.
- Difficulty sleeping or concentrating.
- Worsening of chronic health problems.
- Increased use of alcohol, tobacco, or other drugs.

Advice for such problems other than exercising, eating well and sleeping well can include:

- Take breaks from watching, reading, or listening to news stories, including social media. Hearing about the pandemic repeatedly can be upsetting. For example, check the news only once a day from a reliable source.
- Make time to unwind. Try to do some other activities you enjoy.
- Connect with others. Talk with people you trust about your concerns and how you are feeling.³

4.4 How to keep the immune system healthy?

4.4.1 The importance of exercising

Regular exercising is proven to have multiple positive effects on health:

- improves sleep quality;
- reduces stress;
- facilitates cognitive functions;
- has positive effect on mood and attitude;
- helps to control body weight.

Aerobic exercises activate the cardiovascular system and according to research have a major role in preventing heart diseases, hypertension and diabetes.

Strength training mainly engages the musco-skeletal system, which provides form, support, stability, and movement to the body. Stronger muscles also mean better mobility and balance, and thus a lower risk of injury.

Shorter, stiffer muscle fibres make the body vulnerable to injuries, back pain, and stress. Post-workout stretching exercises that isolate and stretch the elastic fibres surrounding muscles and tendons can counteract this. In addition, stretching improves posture and balance.⁴

Physical exercise has numerous effects on the human body, including the immune system. **After strenuous exercise, athletes pass through a period of impaired immune resistance.** During this period, athletes are theoretically more susceptible to upper respiratory tract infections, although a causal relation has never been demonstrated. Moderate exercise seems to have a beneficial effect on the immune function, which could protect against upper respiratory tract infections. Exercise has effects on both the humoral and the cellular immune system.⁵

³ [Manage Anxiety & Stress](#), Centers for Disease Control and Prevention, Coronavirus Disease 2019 (COVID-19), How to Prepare, 2020

⁴ [The secret to better health — exercise](#), Harvard Health Publishing

⁵ The effects of physical exercise on the immune system, Jeurissen A., Bossuyt X., Ceuppens JL., Hespel P., Ned Tijdschr Geneesk. 2003 Jul 12;147(28):1347-51.

4.4.3 Rest and recovery considerations

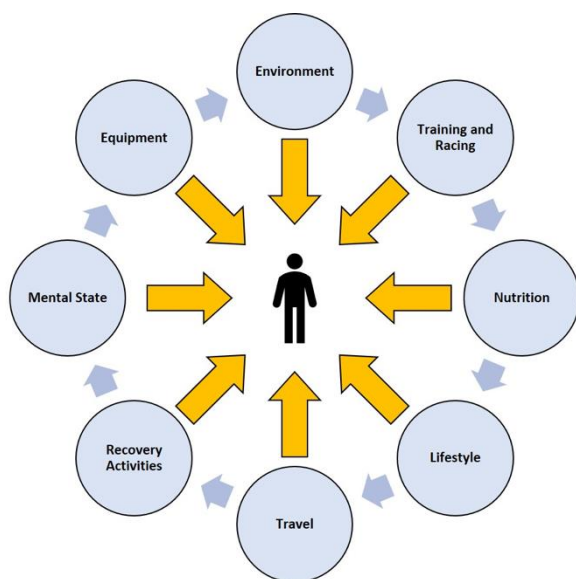


Figure 6 – Source: ITU Triathlon Coaching (Level 1 and Level 2 combined)

Physical exercises are stresses applied to the body. To get fitter the body needs to be allowed time to rest and recover after exercising. During this rest and recovery, the body overcompensates and strengthens itself, so that it is better able to cope with being asked to undertake the same activity again. After a sufficient period of rest, the body has adapted and has achieved a higher level of fitness. This also means improved functionality or “fitness” of the immune system.

In the period of COVID-19 coaches should not only be careful with the training loads but must enable the necessary time for rest and recovery bearing in mind that factors that have effect on recovery (such as environment, lifestyle, stress factors, nutrition, etc.) might have changed.⁶ Make sure to choose recovery times in line with the training load that has been applied!⁷

Zone - Training Type	Time (Hours)
Zone 1: Regeneration Aerobics	to accelerate recovery
Zone 2: LT-1 Extensive Aerobics	6-12
Zone 3: Intensive Aerobics	12-48
Zone 4: LT-2 “Threshold”	48-100
Zone 5: V02max	36-72
Zone 6: Anaerobic Capacity	12-24
Zone 6: Lactate Tolerance	48-72
Zone 6: Max Strength	24-48

Table 1 - Source: ITU Triathlon Coaching (Level 1 and Level 2 combined)

⁶ ITU Triathlon Coaching (Level 1 and Level 2 combined), Principles of Conditioning (L1c), [Recovery](#)

⁷ ITU Triathlon Coaching (Level 1 and Level 2 combined), Measuring Fitness (L1c), [Recovery](#)

4.4.4 Nutritional considerations⁸

Eating healthy is also of key importance in this exceptional situation. A balanced diet of natural food can deliver everything that an athlete needs, but special attention needs to be paid to proper vitamin intake. There are many recommendations for a balanced diet, and this can vary for individuals and different genetic and cultural backgrounds. A healthy diet should be:

- Complete – contains all nutrients, across a daily diet, so food items from each Macronutrient group are consumed and a balance across micronutrients is also maintained. The closer to their natural state a food is the more of the nutrients it retains, an apple is significantly more nutritious than apple juice. Therefore, target whole foods where possible.
- Balance Nutrients – for adults a ratio of 60-65% carbohydrates, 10-15% protein and approximately 25% 'healthy' fats would be a sensible starting position for a diet. Children need slightly more protein in their diet.
- Safe – ensure food is free of contamination or infectious disease, such as Salmonella.
- Enough – sufficient to cover needs for energy and growth and repair.
- Suitable – according to tastes and culture of those consuming food and adjusted to their economic resources and availability. In many locations the COVID-19 pandemic brought exploding demands towards basic goods, including food products. We all might face shortages and products that cannot be sourced making it challenging to put together a healthy plate, but it is still important to keep in mind the basic nutritional considerations.



⁸ Based on: ITU Triathlon Coaching (Level 1 and Level 2 combined), Sport Science, [Nutrition \(L1a\)](#)