

PHYSICAL PERFORMANCE POST-TESTING SUPPORT



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HEALTH · STRENGTH · PERFORMANCE



@NUMBERONEHSP -- WWW.NUMBERONEHSP.CO.UK -- INFO@NUMBERONEHSP.CO.UK

TRAINING GUIDE



INFLUENCE YOUR TRAINING

Your athletes have completed the testing, so it makes sense to use the information you have got to get the most from every training session!

The Number One HSP Sport Scientists / Strength & Conditioning Coaches have put together this booklet to provide a guide on how to best impact your performance!

IMPROVE YOUR SCORES

The testing battery highlights different aspects of physical performance. This gives you a good indication of your strengths and areas for improvement, as well as where you stand in relation to the rest of the squad, other teams/age groups or elite athletes.

The following sheets provide guidelines on how to understand the test results, as well as some ideas and examples of how to use the data to improve and individualise athlete strength & conditioning training..



WHAT'S INCLUDED

- **Run Faster, Jump Higher** --> Research and evidence-based **top tips** on what might be slowing you / your athletes down!
- **Compete for Longer** --> Understanding the MAS/30:15 tests and how the results have been proven to **directly improve endurance** (aerobic capacity), repeated sprint ability and sprint speed!
- **Stronger & Leaner** --> Access **individually designed Strength & Conditioning** programs via the Number One HSP mobile phone app!
- **All Round Athlete** --> Loads of information to build the all round high performing, **injury-free, physically dominant athlete!**



JUMP HIGHER, RUN FASTER

Increasing jump heights and decreasing sprint times is less 'black & white' than the prescription of individual conditioning drills. However, the Number One HSP coaches have identified a few top tips and key points.

SPEED, AGILITY & EXPLOSIVE ACTIONS

Evidence and experience has proven time and time again that the ability to produce single or repeated explosive actions is correlated to improved sporting performance!

TOP TIPS

The ability to rapidly produce muscular force has obvious links to an athletes' ability to change direction quickly, run faster and jump higher! So knowing how to improve is vital!

Force = Mass X Acceleration

Basically, as the formula above suggests to improve force output you need to either move less weight or move it faster (be stronger/more explosive)!!

There are a number of ways to go about this:

- **Weight** --> The easiest & quickest fix! The less weight your muscles have to move the quicker they can move it!
- **Strength** --> The physical component of strength underpins all other qualities. So it is common to find if strength increases, relative to bodyweight, other physical attributes like jump ability, sprint speed, change of direction time, flexibility and more will improve!
- **Unilateral & Triple Extension** --> Increasing strength and stability through 'Single Leg' training is really important. It has a huge influence on injury prevention and re-addressing muscular imbalances but also strongly relates to movement patterns seen in the majority of sports! Triple Extension involves recreating and loading extension at the Hip, Knee & Ankle to create a strong and explosive chain!
- **Plyometrics** --> Really, this is the icing on the cake when all the other boxes are ticked. Focus should be on minimising ground contact time and maintaining/increasing lower limb stiffness! Research has highlighted the correlation between the ability to maintain stiff ankles and quick sprint and change of direction times!

Still not sure? Get in touch with us!!

Get individualised coaching and a program straight to a mobile phone app from the a Number One HSP coach!!



CONDITIONING GUIDE

Here are some examples of the running conditioning drills commonly used by the Number One HSP coaches!!

Team sports use ALL of the energy systems so it's important not to put all your eggs in one basket and touch on all 3 throughout each week/month.

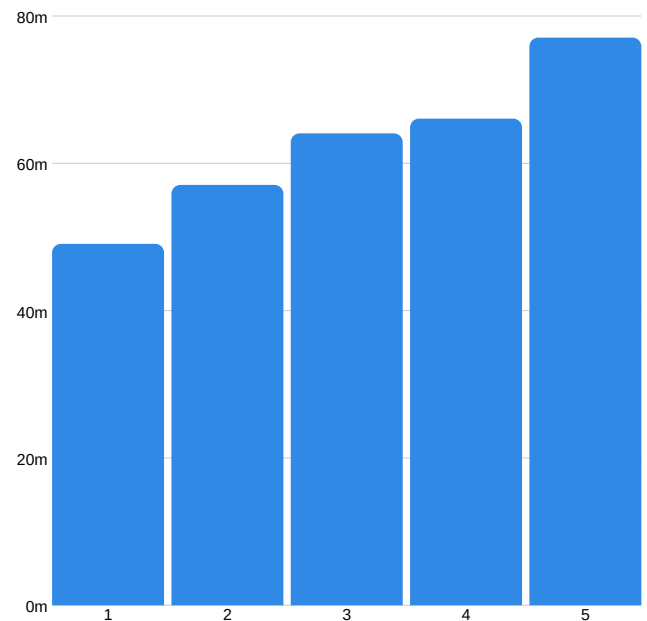
EXAMPLE 1 - TEAM TRIANGLE

This option is a great way to make a team training session specific to each **individual!!**

Each blue bar represents either a single athlete or a small group of athletes with the same or similar scores from testing.

Athletes scoring lowest in testing would be '1' and athletes scoring highest would be '5' in this scenario. Every player runs for the same time e.g. 10s but the target distance is individual and dictated by the calculations from testing (previous sheet).

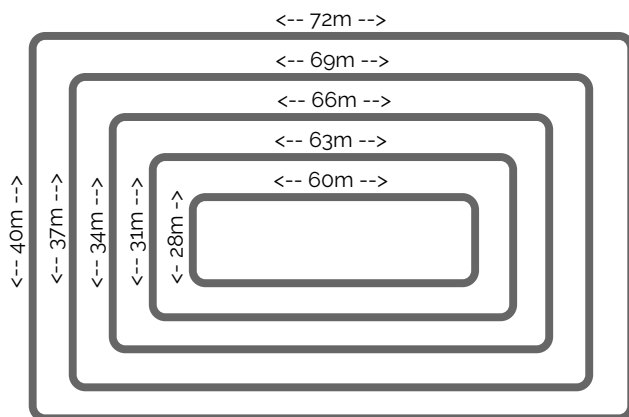
This set up works well because it is easy to understand for the athletes - line up together and run to a target within the desired time.



TOP TIP -- When using this drill with a team mark distances with different colour cones so that it's clear which to each athlete which their target it.

EXAMPLE 2 - CONDITIONING BOX

The set up for this one is a little more complex. Think of it like Russian Dolls - a boxes inside boxes!



This option involves active recovery as well as higher intensity efforts. The easiest way to implement this example is to ask the athlete(s) to complete all sides of the box in the same time period. For example, the target could be 15s per side, meaning a full lap would 1 minute. As the sides are varied in length there would be 2 x slow (recovery) and 2 x fast (conditioning) elements.

TOP TIP --

Keep athletes engaged by changing drills or adding light activities in to active recovery e.g. dribbling / passing a ball.

The size of the box and work:rest times are dependant on individual test score but as many boxes as needed can be set up.

USING YOUR SCORES

As you/your team have now completed either the 30:15 or a Maximal Aerobic Speed (MAS) Run, next you will want to use the info to improve performance. So just follow our guide!!

STEP 1 - CALCULATE BASE RUNNING SPEED

MAS run --> convert your time to seconds e.g. 4mins = 240s.
--> Divide distance by time e.g. 1200m / 240s = 5 metres per second

30:15 --> This is more specific to each athlete as its based the speed achieved in the test although it's harder to calculate. So ask a Number One HSP Coach for info or to help!

STEP 2 - WHAT DO YOU WANT TO IMPROVE?

Use the table below to design running interval sessions based the individual test scores.

	Effort	Exercise Phase	Work : Rest Ratio Options	Number of Reps	Number of Sets	Effects
Aerobic Power	Long - Long	3-10mins 70-120% MAS	1:0.25 1:0.5 1:1	3 to 5	1 to 2	↑ Endurance ↑ V02 Max
Anaerobic / Lactate	Medium - Medium	30s-2mins 100-110% MAS 70-90% Max Velocity	1:1 1:2 1:3	2 to 8	1 to 3	↑ V02 Max ↑ Buffering Capacity
ATP/PCr	Short - Short	5s-20s >120% MAS 100% Max Velocity	1:3 up to 1:10	4 to 10	2 to 5	↑ V02 Max ↑ Repeated Sprint Ability

STEP 3 - PUT IT ALL TOGETHER

Work/Rest times are dictated by the energy system you want to work (left column).

For example if you want to improve the repeat sprint ability, using the info and data above the table above you could aim to complete:

--> 2 sets x 4 reps. Using 1:3 Work:Rest, Run = 10s & Rest = 30s

--> Sprint distance is calculated by the 30:15 or MAS run, so someone with a score of 5m/s @120% would be aiming to cover 63 metres in each 10s run!