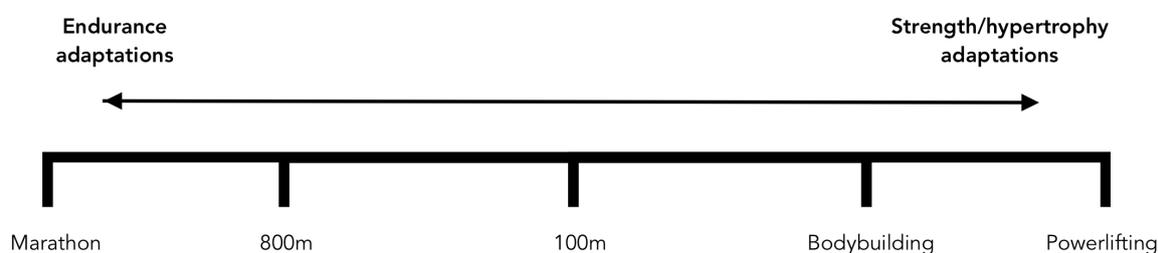


The Interference Effect:

- Training is a stress on your body.
- Your body adapts to the training stress so it's better able at handling it in the future.
- These adaptations are the gains we see from training and make us bigger, stronger, faster etc.
- The adaptations your body makes are specific to the type of training you do. So the adaptations to long distance running are specifically geared towards making you better at handling the stressors of running long distances.



Training Specificity:

The adaptations your body makes to training are specifically geared towards making you better at dealing with the training stress it's subjected to in a session. So if you lift heavy weights, your body adapts so it's better at lifting heavy weights and therefore you get bigger and stronger. The adaptations your body makes to endurance training are different to strength training and can be thought of as being at the opposite end of a spectrum.

- Your body can only adapt a certain amount and at a certain rate.
- Because of this, when you train in different ways (eg: cardio training and strength training), you have an interference effect/competing adaptations as both types of adaptations are competing for the same bodily resources.
- So high volumes of cardio will detract from strength/muscle gains as the adaptations to cardio training compete with strength training adaptations.

Form of Cardio:

- The form of cardio matters too: high intensity cardio is a similar training stress to lifting heavy weights so the adaptations to this form of cardio won't compete as greatly with strength training adaptations. Moderate intensity cardio is a much different type of stress to the body than resistance training

though, so adaptations to moderate intensity cardio compete to a greater degree with strength training adaptations than high intensity cardio does.

- Similarly, how you choose to do your cardio matters with low impact variants (eg: cycling, rowing, barbell complexes) having less of a negative impact on strength training. Cycling, rowing, and barbell complexes will have a greater carry over to resistance training too as they work muscles in similar movement patterns and ranges of motion to exercises such as deadlifts, squats, and lunges.
- That doesn't mean you should do solely high intensity cardio and steer clear of the treadmill completely though as it's the dose, form, and preferences all together that matter.
- Plus, high intensity cardio takes longer to recover from so needs to be considered carefully.

Cardio Considerations			
	High intensity	Moderate intensity	Low intensity
Adaptations	Similar to strength training	Not similar	Neutral
Recovery	Requires more recovery	Relatively easy to recover from	Easy to recover from
Time	Efficient and non time consuming	Not time consuming	Can be very time consuming
Preferences	Personal preference is key. Which form of cardio do you enjoy the most?		

Recommendations:

Based on the above, a broad range of recommendations can be made:

- 1-3 HIIT sessions per week.
- No more than 1 or 2 moderate intensity sessions.
- Low intensity cardio as needed to increase energy expenditure.
- Start with the minimal effective dose and taper up if needed. For example, you could start with 2-3x 20-30 minute cardio sessions a week. One might be a high intensity barbell complex session and the others could be low intensity bike rides.