Paper 1: Optimising training – training intensities

The intensity of training can be altered in order to train different components of fitness. The calculations needed to work out the intensity of exercise required are provided below:

Calculations

Anaerobic/Aerobic

Anaerobic and aerobic training thresholds are determined by your heart rate during exercise and indicate which energy systems you are using.

One Repetition Max

$$1\ RM = Weight\left(1 + \frac{Repetitions}{30}\right)$$

Max heart rate:
- ✪ 220 − age (years)

Training zone:
- ✪ Aerobic: 60–80% of max heart rate
- ✪ Anaerobic: 80–90% of max heart rate

Strength / power training:
- ✪ Performed with weights greater than 70% of 1 RM
- ✪ Low number of repetitions

Muscular endurance:
- ✪ Performed with weights less than 70% of 1 RM
- ✪ High number of repetitions

Paper 1: Optimising training – reduce the risk of injury

- Wear safe clothing/footwear
- Wear bracing, if required
- Maintain hydration
- Perform stretches prior to physical activity, but do not overstretch or bounce
- Use the correct technique
- Ensure adequate rest is taken
- Warm up before stretching the muscles
- Avoid overtraining
- The training should be appropriate for what you are intending to train, e.g. the correct intensity for aerobic/anaerobic training