

FAQ

The application of dry land physical activity and weight training in the development of club swimmers

To develop an athletic swimmer requires more than training in the swimming pool. Although exercise in water has a certain amount of resistance against the pressure of the water, it is not nearly as great as can be achieved with exercising on land. Mobility, stability and learning the correct way to perform fundamental movement patterns is an essential part of swim training at an early age. It is also key to injury prevention and body conditioning. To increase the strength of the body it is therefore necessary to have a land training regime which initially should include the fundamentals of movement and body weight exercises.

Land training in this document refers to both the pre and post pool preparation and also the longer specific land sessions.

Pre pool preparation—should always be performed before participating in technical sports or exercising. A warm-up generally consists of a gradual increase in intensity in physical activity (pulse raiser), a joint mobility exercise, muscle activation and a sport related activity. For example, before running or playing an intense sport one might slowly jog to warm muscles and to increase the heart rate. It is important that warm ups should be specific to the exercise that will follow, which means that exercises (of warm up) should prepare the muscles to be used and to activate the energy systems that are required for that particular activity. Warming up prepares the body mentally and physically. England Programmes recommends a RMAP warm up consisting of exercises to

- Raise the Pulse
- Mobilise joints and muscles (specifically shoulders, thoracic spine, hips, hamstrings, lats combined elevation of shoulders and thoracic spine)
- Activate key muscles (shoulder rotator cuff, core muscles, Glutes)
- Prime to prepare the body for the start of the session

Post Pool Mobility

Usually stretches and mobility work is performed after the pool session to return the muscles and joints back to the normal length.

Swimmers often become overactive in muscles on the front of the body so mobility work post pool is essential to prevent overuse injuries and maintain joint and muscle range of movement

These can be done pool side as there is little impact during this type of exercise.

Dry land training is simply activities that take place out of the pool as a form of cross training (a variety of different training methods including both cardiovascular and strength exercises), and includes exercises to work on mobility, stability and fundamental movement patterns. Weight training is a form of land training but should be undertaken only when the swimmers have good mobility, stability and can perform body weight exercises with great form.

The main purpose of land training is to improve strength and stability whilst maintaining mobility and cardiovascular fitness.

Weight Training

It is felt from age of puberty that weight training is acceptable using low resistance high repetition sets whilst under the care/supervision of a fully qualified instructor. In some cases with Elite athletes a swimmer may start weight training before puberty but only with a qualified strength and conditioning coach and only if they have great movement patterns and can do the exercises correctly.

The majority of pre-pubescent children should NOT be lifting heavy weights and coaches/ clubs have a duty of care to the young swimmer to prevent this happening. The immature musculo-skeletal system is vulnerable due to the asynchronous growth rate between bone and soft tissues. In almost all cases exercises without the addition of extra weight would be adequate for young or inexperienced athletes, utilising body weight as the main source of resistance. The body weight exercises can be progressed and continued until the swimmer has good fundamental movement patterns and great stability. At that point increased load and weights can be introduced

Land Work Area

Land work ideally should be done away from pool side in an area such as a dance studio or sports hall. An ideal area is one with a sprung floor. However this isn't always possible. Before any land session a risk assessment should be performed by the coach looking at the area environment, swimmers footwear, floor condition, equipment and the exercises should be adapted to suit the environment to make this safe. This should be documented in the session notes.

Weight training should take place in areas with appropriate protective flooring to prevent damage to the facility and potential harm to the user.

Qualifications

The knowledge of the human physiology and the competences of the warm-up and post pool mobility sessions are gained within the ASA Swimming Teacher qualifications but the skills required to teach and coach land training are not.

It is recommended that swimming coaches that wish to implement a land training regime gain an appropriate land training via one of the following routes:

REPS training—registered exercise professionals with insurance for people on the register

YMCA course

NSCA-on line learning and examination

There are many courses available for exercise professionals and personal trainers. Ideally pick the course with practical assessments and exams to ensure competency.

Weight training should always be performed under the guidance of a qualified weights coach. A typical weight training qualification that is frequently gained by exercise supervisors for fitness suites in leisure centres and fitness clubs is the BAWLA (British Amateur Weight Lifters Award), however qualifications from UKSCA (United Kingdom Strength and Conditioning Association) and NSCA (National Strength and Conditioning Association) are both relevant and provide the competency required.

An example of a suggested introduction to weight training is the following course
Level 1 – Introduction to Resistance Training Using Free Weights

This course is recognised by the Register of Exercise Professionals (REPs) as Endorsed Training for Continued Professional Development (CPD) and is worth 16 credits. In order to claim the credits you must be at least 18 years of age and be qualified as an Instructor Level 2 in the Fitness Industry.

However, you may still apply to join a course even if you do not meet the above requirements. However, you will not be able to claim the CPD credits, even retrospectively, but will be issued with a certificate of attendance by the BWLA

The course has been designed to meet the needs of the Fitness Industry where the ability to demonstrate competence instructing in the use and instruction of free weights and exercise machines must also be supported by essential knowledge and understanding that underpins practical ability.

It is a competence-based course and candidates will be expected to show competence in the following areas:

1. Demonstrating and giving instruction in a small range of selected exercises, using free weights and exercise machines.
2. Planning and giving instruction for a beginner training session using free weights and / or exercise machines covering the warm-up, main work out and cool-down.
3. The essential basic knowledge and understanding of fitness training.

The course content will include:

- Using free weights and machine equipment
- Components of fitness
- Basic lifting position with free weights
- Teaching sequence for exercises
- Planning a schedule for free weights and machines
- Training principles
- Principles of strength development
- Health and safety
- Instruction with free weights and machines

