Young People

This guidance relates to the provision of safe exercise instruction to young people in a gym and studio environment (aged 14 to 17). Gym and studio environments are typically designed with an adult in mind; therefore certain elements and exercises may not be suitable until an individual reaches physical maturity. It is essential that Gym Instructors who work with adolescents on a more than occasional basis understand fully the physiological and psychological implications of working with adolescents, to enable them to work safely and effectively within these environments.

Fitness experts, organisations and medical researchers across the world have now concluded that a supervised muscular strength and endurance programme is beneficial to a child’s overall growth and development. A young person’s fitness routine should include activities that are aerobic or endurance based to work the cardiovascular and cardio respiratory systems, driven by the processes of both anaerobic and aerobic metabolisms (Preventing Childhood Obesity report – from the British Medical Association 2005).

Adolescence is characterised by dramatic physical, cognitive, social and emotional changes. These changes, along with the adolescent’s growing independence, search for identity, concern with appearance, need for peer acceptance and active lifestyle, can significantly affect their mental and physical activity behaviours.

The impact of exercise participation on the adolescent both now and in the future will greatly depend on how psychological and physiological changes are managed by the individual and others. If there is any doubt over the suitability of the environment, equipment and training for adolescents then instructors should contact a fully qualified children’s physical activity instructor.

Physiological Safety Considerations:

- A gym environment is typically designed with an adult in mind; therefore certain elements may not be suitable until an individual reaches physical maturity. For example: if an adolescent is unable to reach a lat pull down bar then they must be advised to use another piece of equipment.
- The same situation could also occur in a studio environment; for example if an adolescent is unable to meet the required adjustments on a spin bike it may not be suitable for them to attend the class.
- Emphasise the importance of variety within a session. It is extremely important to avoid excessive training. These include too much of one form of exercise, participating in the wrong class for their body type and using too heavy weight in weight training.
- Inappropriate size matching in pairs should be avoided.
• Too much high impact moves on the spot should be avoided
• The appropriate equipment for the activity (correct size, weight etc) should always be provided

Psychological Safety Considerations

• It is important to remember that psychological symptoms/difficulties often go hand in hand with growing up. It is extremely important that a qualified children’s physical activity instructor is consulted if any situations causing concern arise
• Instructors should be able to effectively communicate with both young people and parents to ensure an intelligent and safe session is followed. Simple language that is jargon free and not overly technical needs to be used
• Implement gym etiquette and rules from the onset (young people need clear guidelines of expected behaviour)
• It is important to identify common ground to build rapport and trust with adolescents but remain within the guidelines of safeguarding children
• Instructors should be aware of the lack of mental ability of some young people to cope with the psychological and physiological changes they are undergoing, especially if they are considerably bigger or smaller than the rest of their peer group. This may lead to low self-esteem or other psychological problems
• Instructors should be aware that psychological changes in adolescents could lead to bouts of teenage depression, social issues (such as violence), smoking and drugs, eating disorders and even over-training

Guidelines for Cardiovascular Training in Adolescents:

• Interval training should ideally form the main focus when designing cardiovascular sessions for adolescents. Interval training has been proven as the most successful type of cardiovascular training for adolescents for both physiological benefits and psychological benefits. It provides variety which boosts enthusiasm, motivation and confidence to complete short exercise tasks but also in relation to daily life
• During exercise young people should use the Rate of Perceived Exertion (RPE) scale (refer to the Borg RPE scale) the preferred method used by most experts. RPE requires the young person to pay particular attention to how they feel regarding how tired they feel, how much effort it is taking and how much physical stress they are under
• For safety reasons, young people aged 14 plus using a heart rate chart solely depends on the mental and physical maturity of the adolescent. The preferred recommended method is to start to educate the participant in the use of heart rate charts alongside the use of RPE until full physical maturity has been reached

• A youth specific PAR-Q and needs analysis will have to be devised to accommodate the adolescents who sign up to use the gym (this should be done by a qualified children’s physical activity instructor). The terminology used in a youth specific PAR-Q needs to be adolescent friendly to ensure they understand the questions asked. The PAR-Q and gym etiquette will need to be signed for by their parent or guardian, if they are under the age of 16, to allow access into the gym prior to their first session

Guidelines for Strength Training in Adolescents:

• If an instructor does not hold a children’s physical activity qualification then they should not instruct adolescents to lift weights. With proper training and supervision from qualified children’s physical activity instructors adolescents can safely lift weights. Adolescents should not attempt to lift maximal amounts of weight until they are physically mature (on average, age 16 for males and 2 years after the menarche for females)

• Heavy weights can be potentially dangerous and damaging to the developing skeletal and joint structures. It is not recommended that resistance exercise be performed to the point of momentary muscular fatigue

• It is important not to impose adult training regimes on young people and recognise the developmental age of the adolescent not just their chronological age

• Instructors should be aware that all models of fitness equipment are designed and manufactured with a particular ‘end-user’ in mind. The bodies of young people are unique and adult equipment is not the most suitable for the most functional range of movement in a young adolescent. If the facility has adult equipment then reasonable adjustments and adaptations to that exercise need to be made in order for the adolescent to participate. N.B. Equipment specifically designed for children and young people is available

• It is far more beneficial to the young adolescent to use gym equipment that has been designed for the size and proportion of adolescents’ anthropometric measurements
• Progression in resistance, repetitions and sets should only be programmed when the adolescents are ready both physically and mentally. Care should also be taken with a progressive programme when using the traditional pin loaded adult equipment, since weight increments on adult machines far exceed the 0.5 – 2kg increase recommended for adolescents.

• Free-weight exercises including dumbbells, barbells and cables require a significant amount of knowledge and experience with regards to postural alignment and engaging neutral spine. Therefore these exercises must be proceeded with a qualified children’s physical activity instructor to encourage and develop solid basic skills.

• Ultimately the most effective form of resistance training could cause the most harm if not supervised correctly by an experienced children’s physical activity instructor. Therefore, where possible, youth equipment that is suitably designed and manufactured for adolescents should be used.

In 2004 the British Association of Exercise and Sport Sciences (BASES) offered the following prescription for muscular training with Children and Young People:

**Frequency:** 2-3 times a week to develop strength
Rest between sessions: 48 hours recovery for heavier training sessions

**Intensity:** Repetitions and resistance:
Lighter resistance (15-20 repetitions),
Moderate resistance (10-15 repetitions),
Heavier resistance (6-10 repetitions)

**Time:** Sets:
Begin with single sets and progress to 3-4 sets.
Rest (between sets): Will vary depending on training goals. Circuit resistance training should be encouraged to maximise cardiovascular benefits

**Type:** Promote muscle balance and joint stability by using a whole body approach and working all major muscles.
Avoid too much eccentric muscle work
Guidelines for Flexibility Training in Adolescents:

- Caution should be taken when teaching any stretch exercise especially when adolescents are in a growth spurt. These are really vulnerable times and there is an increased injury risk as the soft tissue around the joints is already stretched as muscle growth does not keep up with bone growth rates.
- Flexibility classes, for example yoga, need to be taught with caution especially with adolescents who are in their growth spurt. Adapted exercises may need to be applied if the adolescent complains of any discomfort or pain during certain exercises.
- Some adolescents will not have gained sufficient motor skills to develop their flexibility with good technique and therefore risk injury by not understanding stretching to the point of ‘mild tension’. Terminology and understanding needs to be adapted to ensure adolescents understand the given task.

The Safeguarding of Children and Vulnerable Adults

- With adolescents training within a gym environment the instructor is in “loco parentis” in this situation and it is their responsibility to ensure the individuals are using the correct and suitable equipment according to their statue and mental capacity. In legal terms this is known as Duty of Care. If during a liability claim procedure it was found that an accident occurred on a piece of equipment that was unsuitable for the end-user, then the instructor and his/her employer would be held jointly responsible and therefore be deemed negligent.

(N.B There is a separate CPD section on safeguarding children and vulnerable adults).