

7.0. SUMMARY OF THE ASCA POSITION STAND

It is the **position of the ASCA** that:

1. There is an abundance of evidence to suggest that when appropriately performed **resistance training is a safe and effective exercise to be engaged by children and youth.**
2. Prior to the commencement of resistance training all **children should receive comprehensive instruction on gymnasium safety** including use of collars, placing weights away correctly, correct handling and storage of dumbbells, barbells, collars and weights, appropriate spotting procedures, no playing around in the weights room.
3. Throughout their training period **youth should be instructed by competent strength and conditioning coaches who can ensure correct lower back lifting technique** involving the adoption of the natural lumbar curve and effective use of the abdominal and lower back muscles when lifting.
4. **Strong muscular action from the abdominals and lower back muscles can significantly serve to reduce dangerous shear forces on the spine.** Hence training of the vital musculature of the abdominals and lower back should be a fundamental aspect to all training programs for children and youth through all phases of the training process.
5. **Technical competence in the performance of resistance training exercises is the primary focus for children and youth** prior to any progression in loading or training volume.
6. All individuals should adopt a **standard grip whereby the thumbs are securely rapt around the bar during all lifts where the bar is lifted above the body such as bench press.** The use of a **false grip is strongly discouraged.**
7. **The youngest a child should commence resistance training is at 6 years of age provided they have the maturity to follow clear instructions** and an appreciation of the dangers present when training.
8. When training children and youth the long term athletic development of the child needs to be of paramount concern and various logical progressions in the training cycle are required to be systematically imposed throughout the child's development which are age related but also muscular function dependent. It is the **position of the ASCA that the following training loading intensities and exercise selection strategies be adopted when training children and youth:**
 - **Level 1: 6-9 years of age:** modification of body weight exercises and light resistance (brooms and bands etc) work only for relatively high repetitions eg 15+ reps;
 - **Level 2: 9-12 years of age:** 10-15 RM; (maximal loading approximately 60% maximum) using predominantly simple single joint exercises with dumbbells and machine exercises where the machine is an appropriate size for the child.
 - **Level 3: 12-15 years of age:** 8-15 RM; (maximal loading approximately 70% maximum) using progressively more free weight exercises but avoiding complex lifts such as cleans, snatches, deadlifts and squats etc unless competent coaching is available from a coach with at least a Level 2 ASCA strength and conditioning accreditation.
 - **Level 4: 15-18 years of age:** 6-15 RM; (maximal loading approximately 80% maximum) progressively moving towards an advanced adult program involving split routines where appropriate and complex multi-joint movements provided sound technique has been developed under competent coaching by a coach with at least Level 2 ASCA strength and conditioning accreditation.



9. **Children and youth in the first 3 stages (i.e. Levels 1-3) benefit most from programs that improve body/limb control and joint stability.** These programs would also inadvertently improve other outcomes (eg. strength-endurance, general strength) without specific training for those outcomes. **With a solid foundation of training emphasizing body/limb/joint control and stability and technical mastery during resistance exercises, athletes entering the fourth stage (i.e. Level 4) may more safely embrace training aimed at improving other resistance training outcomes such as strength and hypertrophy.**
10. **Resistance training can be effective in reducing the likelihood of the occurrence of sporting injuries** by the development of the musculo-skeletal system and through reducing muscular imbalances.
11. **All programs performed by children must be strictly coached by an adult(s) and that the adult be accredited with at least a level 1 ASCA Strength and Conditioning coaching accreditation.** To coach youth in level 3 and 4 in the more complex lifts a coaching accreditation of at least ASCA Level 2 would be required with a preference for such coaches to be moving towards the ASCA Pro Structure. Further, when supervising groups of children the **ratio of coaches to children is recommended to be 1 coach for every 10 children.**
12. Young and less experienced, school-aged resistance trainers can have their strength capabilities assessed utilising **lighter resistances and performing a “repetitions till fatigue” test**, from which **1 RM can be extrapolated** with reasonable accuracy.
13. Children and youth require **appropriate energy intake**:
 - 7-10 yrs 70 kcal/kg/day
 - 11-14 yrs 47-55 kcal/kg/day
 - 15-18 yrs 40-45 kcal/kg/day
14. **Macro-nutrient recommendations are:**
 - *Protein: 1.4-1.8 g/kg/day; or 15-25% total energy intake*
 - *Carbohydrate: 5-7 g/kg/day increased to 7-10 g/kg/day if engaged in intensive training; or 50-55% total energy intake*
 - *Fat: lower limit of 15%, with upper limit of 30% total energy intake*
15. **Supplement timing represents a simple but effective strategy that enhances the muscular adaptations from resistance training.** There is this ‘**anabolic window**’ prior to and following training that during which, ingestion of small amounts of **protein/essential amino acid maximises the training response** to resistance exercise. Such supplement strategies may benefit young athletes wishing to increase lean body mass and strength.
16. Recovery techniques including **active cool-down and water immersion (CWI, contrast, pool)** offer an effective recovery strategy and should be adopted by adolescent athletes in serious training.



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