










Physical Education Teachers' Workshop- Children Weight Training

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Children Resistance Training


- * Reason for not recommended for children
- * Myth → no respond with
 - ↑ muscular strength
 - ↑ endurance
 - ↑ hypertrophy








Strength Improvement


- * Significant
 - ↑ muscular strength
 - ↑ muscular endurance
 - Limited ↑ muscle size of hypertrophy
 - ↑ muscular strength → neural factors
 - instead of ↑ muscle cross sectional area
- * Greater strength improvement in novice lifters than those w experience



Advantage of Wt. Training





- * ↓ risk of sports injury
- * Improve other sports performance
 - Muscular strength
 - Endurance
 - Coordination
- * Improve the ability: jump, run, throw etc.




Concern of Injury

- * ↑ of injury in children on wt. Lifting
- * Occurring to the epiphyseal growth plates
 - Incorrect technique
 - Improper exercise programs
 - Ballistic movement
- * Result of lifting max. wt. or near max. wt.

Minimize of Injury

- * Conduct an introduction course
 - min. risk of injury
- * Proper design resistance training program
- * Instruction on technique and load
- * No evidence in higher risk of musculoskeletal injuries in children or adolescents participating in resistance training program than other physical activities



Recommendations of Resistance Training

- * Not be implemented w/o supervision of certified strength professional
- * Correct technique taught for each exercise
- * Size of exe. equipment match of the child's size
- * Small increment (2.5-5 lbs) instead of large increment on using in exe. equipment
- * Routine safety inspections of the equipment
- * Avoided high training intensities (max. int. not allow on child age < 16)



Recommendations of Resistance Training Cont'

- * Gradual increase in training intensity
- * Resistance training as a supplementary activity
- * Training programs in sport specific
- * Performed in control manner w full ROM
- * Avoid fast, sudden and ballistic movement
- * Training w warm-up, flexibility (stretch) & cool-down




Table 1: Sample program for a pre-adolescent child w/o using weights

Exercise	Sets	Repetitions	Comments
Push-ups	1 - 3	10 - 20	Start w modified push-up
Biceps curl	1 - 3	10 -15	Exercise tubing
Lateral Arm Raise	1 - 3	10 -15	Exercise tubing
Abdominal Crunch	1 - 3	15- 30	Avoid full sit-up, be sure the low back remains in contact w the floor
Back Extensions	1 - 3	5 - 15	Lying flat on your stomach, extend the chin off the ground, hands behind the back
Squats	1 - 3	10 - 20	Angle of knees does not < 90 & knee do not extend beyond the toes
Heel Raises	1 - 3	15- 30	Once 30 repetitions can be performed w both feet together, go to one foot at a time




Table 2. Sample schedule for weight training progression in a child

Stage	Week	Sets	Repetitions	Wt./ Comments
1	1 - 2	1 - 2	10 - 15	No wt. or min. wt. Focus on proper form & on finding adjustment for the equipment
2	3 - 4	1 - 2	10 - 15	Use a wt. That allows the child to comfortably perform 10-15 rep. Be sure proper form is used for each repetition before advancing to the next level
3	5 - 7	1 - 2	10 - 15	Gradually increase wt. as tolerated (using the smallest increments available). Do not increase the wt. if the child can't perform at least 15 rep. w proper form
4	8 - 10	1 - 3	8 - 12	Continue to gradually increase wt. as tolerated (using the smallest increments available). Do not increase the wt. if the child can't perform at least 12 rep.
5	Active rest			Approx. @ 10 wk. , 2-3 wks. Off of resistance training. Prevent over training. Upon training start back at stage 3