

STRENGTH GUIDANCE AND EXERCISES

(see annex for video demonstrations)

FUNdamentals (Female 6-8, Male 6-9):

✓ **Work on Movement Patterns using body weight movements and games**

- Hip Hinge and Squat Patterns
- One Leg Balance
- Lunge Position
- Reaction Drills
- Ladder
- Mirror Games

✓ **Use games and drills that use all 3 planes of movement (Sagittal, Frontal and Transverse)**

- One leg balance games
- One leg tag
- Red Light Green Light (And Blue Light for slow; keep them on one leg), as well as on snow similar games
- Squat, Hip Hinge, Lunge
- Monkey tag, Orangutan tag (Monkey tag with arms overhead)
- Mountain Climbers
- Duck Walk and Duck Hop; Forward and Back
- Monkey Slap the Floor (then jump)

✓ **Upper Body and Shoulder Stability and Mobility**

- **Push Ups** (Should be able to do a push up moving the whole body as one unit; elevate hands if needed)
 - Bear walk
 - Seal walk
 - Wheel Barrows (Forward and Backward)
 - Crab walk
 - Crocodile walk
 - Out and Back (Downward dog to Cobra)
 - Walk Forward, Back, Sideways
- **Pull Ups**
 - Tug Of War
 - Farmer Walk (Stability worked as well)
 - Backwards Towing games (stability of knee worked as well)
- **Row Strength**
 - Partner Pistol Squats
 - Tug of War
 - Partner Rows

✓ **Plyometrics (SSC)** - Movement Skill Development: drills to ensure no valgus or inward collapse of the knees:

- **Running**
- **Skipping**
- **Standing Jump**
- **Hopscotch**

Learn to Train (Female 8-11, Male 9-12)

- ✓ **Games should still be used to get proper mobility and stability**
- **One leg balance games**
 - One leg tag
 - Red Light Green Light (And Blue Light for slow; keep them on one leg), as well as on snow similar games
- **Push Ups**
- **Pull Ups**
- ✓ **Introduce to the Weight Room:** Focus on learning technique; small weight - perfect technique. This is the time to push technique as next stage, particularly during PHV, technique will be difficult to learn. Can do any loaded exercise for which they can show perfect technical ability
- **Squat and Hip Hinge** (Weight is secondary to optimal movement for the squat)
 - Squat:
 - With a dowel overhead
 - Push Press and Jerk; with dowel
 - Box Squat
 - Goblet Squat
 - Partner Squat (on back)
 - Stiff leg Dead Lift; also called Romanian Dead Lift or, more simply, The Hip Hinge with a dowel placed down the spine touching head, shoulder blades and tail bone (as in FMS Lunge Mvt):
 - Work on stabilized Hip Movement: Straight leg Raise or Lowering
 - Dead Bugs
 - Superman Hip Hinge (or one leg Hip Hinge with arms overhead)
 - Kettlebell Swings
 - One Leg Stiff Leg Dead Lifts (1LSLDL)
- **Limited ROM Weighted Lifts** (keep weights on an elevated surface)
 - One Leg Balance
 - Standing Hip Rotations
- **Row Strength**
 - Partner Pistol Squats
 - Tug of War
 - Monkey Bars
 - Inverted Row (Start with bar higher and/or knees bent with feet under the body. Use a suspension apparatus; eg TRX)
- ✓ **Plyometrics (SSC)** - ensure no valgus or inward collapse of the knees:
 - **Lower tuck jumps**
 - **Jump & Stick Landing**
 - **1 & 2 Leg Hops**

Train to Train (Female 11-15, Male 12-16)

- ✓ **Incorporate more time in the Weight Room:** Pre Puberty work on learning and perfecting technique. Peak Height Velocity is a good time to work on strength as learning technique at this time is not optimal. Do not try to learn any new difficult technique. Should have the appropriate movement patterns by this time (Squat Pattern, Hip Hinge, Push Up, Lunge, Single Leg Balance/Mobility, Hurdle Step). Add Volume and more importantly; weight, to already learned technique. Can do any loaded exercise for which they can show perfect technique. Use med balls, dowels, lighter kettlebells, dumbbells and barbells.

- **Squat**
 - Overhead Squat
 - with a dowel overhead
 - with a bar overhead

 - Goblet Squat with med ball or light kettlebell or dumbbell at chest
 - In Line Split Squat
 - Rear Foot Elevated Dead Lifts

- **HIP Hinge** (Maintain perfect hip hinge)
 - One leg Hip Hinge (wt in hand on moving leg side)
 - 2 Leg Hip Hinge (Romanian DL)
 - Deadlift from Tibia Height (Lower if Form is maintained)
 - Romanian Dead Lift (Hip Hinge)

- **Upper Body Stability and Mobility**
 - Push Ups
 - Bench Press
 - Inverted Row(Seated and Standing Rows)
 - Pull Ups with no body movement (use spotters or rubber bands to grip the bar)

- ✓ **Plyometrics (SSC)** - ensure no valgus or inward collapse of the knees:
 - **Tuck Jumps**
 - **Sprint Stride Tuck Jumps**

Learning to Compete and Train to Compete (Female 15-23, Male 16-23)

- ✓ **Regularly in the Weight Room:** Should be able to do any exercise asked of them if they were able to do suggestions of the previous stages; Should have the proper movement patterns; At T2C stage, balance positions and exercises should be emphasized (one leg exercises, in line squats and lunges, core exercises focusing on anti rotation (planks with limb lifts, planks with hurdle position involved etc). Can do any loaded exercise for which they can show perfect technique. Use med balls, dowels, lighter kettlebells, dumbbells and barbells.
- **Overhead Squat**
 - with a dowel overhead
 - with a 45 lb olympic bar overhead
- **Goblet squat**
 - with med ball or light kettlebell or dumbbell at chest (goblet squat)
- **Front Squat**
- **In Line Squat**
- **Rear Foot Elevated Dead Lifts/Squats**
- **HIP Hinge** (Maintain perfect hip hinge)
 - One leg (wt in hand on moving leg side)
- **Push Ups**
 - Ballistic push ups (clap, air, bench, medball etc.)
 - Bench Press
- **Inverted Row**
 - Bar at arm reach height plus 10 inches; feet are at a distance that allows the bar to come to the lower ribs, upper arm is around 45 degrees from the torso (or use a suspension apparatus; eg TRX)
 - Seated and Standing Rows
- **Pull Ups**
- ✓ **Plyometrics (SSC)**
 - **Bounding**
 - **Multiple High 1 & 2 leg hops**
 - **Low Unweighted Drop Jump (at T2C stage, higher drop jumps with minimal weight depending on individual ability)**

Train to Win (Female 23+, Male 23+)

- ✓ **Regularly in the Weight Room:** Focus on technique and increase repetitions. Balance positions and exercises should be emphasized (one leg exercises, in line squats and lunges, core exercises focusing on anti rotation (planks with limb lifts, planks with hurdle position involved etc). Can do any loaded exercise for which they can show perfect technique. Use med balls, dowels, lighter kettlebells, dumbbells and barbells.

- **Overhead Squat**
 - with a dowel overhead
 - with a bar overhead
 - with med ball or light kettlebell or dumbbell at chest (goblet squat)

- **In Line Squat**

- **Rear Foot Elevated Dead Lifts**

- **HIP Hinge** (Maintain perfect hip hinge)
 - One leg (wt in hand on moving leg side)

- **Push Ups**
 - Ballistic pushups (clap, air, bench, med-ball etc.)
 - Bench Press

- **Inverted Row**
 - Bar at arm reach height plus 10 inches; feet are at a distance that allows the bar to come to the lower ribs, upper arm is around 45 degrees from the torso (or use a suspension apparatus; eg TRX)
 - Seated and Standing Rows
 - Ballistic
 - Towing

- **Pull Ups**

- ✓ **Plyometrics (SSC)**
 - **Add high intensity jumps**

LINKS FOR VIDEOS

Squat

<http://www.athletesacceleration.com/mastering-the-squat/>

<http://www.dieselcrew.com/how-to-squat>

Overhead Squat

<http://www.exrx.net/WeightExercises/OlympicLifts/OverheadSquat.html>

Split Squat

<http://www.exrx.net/WeightExercises/GluteusMaximus/BBSplitSquat.html>

Dumbbell Split Squat

<http://www.exrx.net/WeightExercises/GluteusMaximus/DBSplitSquat.html>

Push Up

<http://www.exrx.net/WeightExercises/PectoralSternal/BWPushup.html>

http://www.youtube.com/watch?v=Eh00_rniF8E&NR=1&feature=fvwp

Dumbbell Front Squat

<http://www.exrx.net/WeightExercises/Quadriceps/DBFrontSquat.html>

Romanian Deadlift or Barbell Hip Hinge

<http://www.exrx.net/WeightExercises/OlympicLifts/RomanianDeadlift.html>

http://www.youtube.com/watch?v=tFEjgnqBu7Y&feature=player_embedded

Single leg Hip Hinge

http://www.functionalmovement.com/exercises/hip_hinge_single_leg_with_dowel

Hip Hinge with weight

http://www.functionalmovement.com/exercises/deadlift_rnt_single_leg_single_arm_with_kb

Double Leg Hip Hinge

http://www.beta.functionalmovement.com/exercises/hip_hinge_double_leg_with_dowel

Goblet Squat

<http://strengthcoachblog.com/2010/08/27/dan-john-was-right-about-goblet-squats/>

Bench Press

<http://www.exrx.net/WeightExercises/PectoralSternal/BBBenchPress.html>

Inverted Row

<http://www.youtube.com/watch?v=iinDb2zf8c8&feature=related>

<http://www.youtube.com/watch?v=1QKQA1drJbk&feature=related>

Seated Row

<http://www.exrx.net/WeightExercises/BackGeneral/CBStraightBackSeatedRow.html>

Pull-Ups

<http://www.livestrong.com/video/5230-wide-pullups/>

<http://stronglifts.com/how-to-do-pull-ups-and-chin-ups-with-proper-technique/>

http://www.youtube.com/watch?v=HQa7iV9sE_w

http://www.nation.com/free_online_article/sports_body_training_performance/things_you_should_know_how_to_do_1_the_pullup