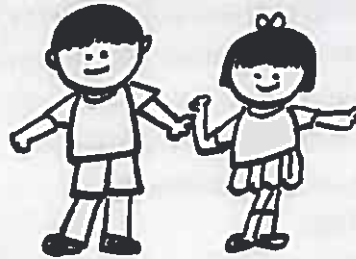


# CORE AND MORE

HOME EXERCISES ON THE THERAPY & BEYOND



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**NJ LICENSE #40QA00925100**

## THE CORE: WHAT AND WHY?

- All movement originates at the core. The abdominals and back muscles work together to support the spine when we sit, stand, bend over, pick things up, exercise and more
- The major core muscles consist of the abdominals, the back extensors, the hip and gluteal muscles
- Strengthening the CORE improves posture, balance, motor control, coordination and therefore the execution of gross and fine motor skills in the **school environment**

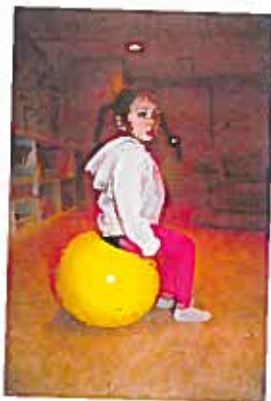
## WHY A BALL?

- Unstable nature of the ball that makes it unique. Sitting on a therapy ball with feet flat on the floor is work! It challenges your core muscles to co-contract so that you can sit upright.
- Fun and challenging treatment modality for kids
- Integrates strength, balance and postural control
- Can work easily in more than 1 plane of movement
- Increases attention & body awareness
- Unpredictable nature facilitates
  - Reaction Time
  - Coordination
  - Motor Planning
- Demands correct posture or FALL!



## WHAT SIZE BALL TO USE

- Child should be able to sit in a comfortable position with hips and knees at approximately 90 degrees, feet flat on ground.



HEIGHT	BALL SIZE
Under 4'6"	30 cm
4'6 to 5'0"	45 cm
5'1" to 5'6"	55 cm

**SOFTER = BEGINNER**  
**FIRMER = ADVANCED**

## SCHOOL IMPACTS OF WEAK CORE



Circle Time Sitting



Negotiate school environment



Squatting to Play



Tabletop activities



Playground Time



Gross Motor Activities

## OVERVIEW

For each exercise we will discuss the following:

**MUSCLES WORKED**

**CORRECT ALIGNMENT**

**HAND PLACEMENT AND ASSISTANCE**

**EXERCISE PROGRESSION**

## SITTING

- **BOUNCING** (abdominals; dynamic balance and motor planning)
  - Child sits on the ball and bounces up and down while he/she tries to hold head and trunk in an upright position
  - ASSISTANCE: Can first bounce then slow/fast or child performs bouncing movement
  - GREEN LIGHT/RED LIGHT GAME
  - PROGRESSION: Hand position can change difficulty level (ball, thighs, chest, overhead)

- **SITTING GAMES** (abdominals; dynamic balance and motor planning)

Child sits on the ball with feet flat on floor

ASSISTANCE: Side or front of child with hands on/guarding pelvis  
"HEAD, SHOULDERS, KNEES & TOES",

BUBBLES  
BALL TOSS



**WORKS ENDURANCE OF POSTURAL MUSCLES**

## WOODCHOP

Child sits on ball with feet flat on the floor

ASSITANCE: Stand behind child with a ball/beanbag

Child reaches with hand(s) over opposite shoulder for object

Places at target at opposite foot

DIAGONAL PATTERN OF MOVEMENT = FUNCTIONAL MOVEMENT

PROGRESSION: Increase ROM/repetition

Perform on the right and left sides 10 times each



## SITTING

### TRUNK ROTATION (abdominals and obliques)

Child sits on ball with feet flat on floor

**ASSISTANCE:** Stand behind child with a playground size ball  
Child reaches with 2 hands for ball and passes to you on other side

**PROGRESSION:** Increase weight, size of ball and speed of passes



## REVERSE SIT UPS

(rectus abdominus, internal and external obliques, gluts)

- Start sitting on the ball and slowly walk feet forward until back of shoulders are on ball
- **ASSISTANCE:** from the side guide through the movement with the ball one hand on hips to prevent hip drop
- **PROGRESSION:** Work on walking forward slowly and assist back to sit

**DON'T LET BOTTOM DROP!**



## SUPINE (BACK)

- **BRIDGES (works hip extensors/core)**
  - Child lies on the floor and puts legs on the ball and hands flat on the floor
  - Push down into legs and lift hips off the ground, relax the neck and shoulders
  - Try having child lift and lower with control ( up for count of 3 and down count of 3)
  - "Lift high enough to let the boats, animals, cars go under the bridge"
  - MAKE IT FUN. Zoom cars under the bridge- how many cars can you get under the bridge before it falls?
  - Try to do at least 10 in a row
  - HAND PLACEMENT: Hands on the ball to increase stability or under the hips to cue to lift higher
  - PROGRESSION: Lower leg, calves, feet on the ball



## PRONE (BELLY!)

- **TRUNK EXTENSION (back and neck extensors)**
  - Child lies on stomach and you hold at hips
  - Place beanbags, or other sorting toys on the ground and have them pick 1 up at a time with 1 or both hands and LIFT UP and place above on couch or chair
  - ASSISTANCE: Initially you may have to give a little extra support at trunk to help lift
  - PROGRESSION as child gets stronger, you can roll them more forward on the ball, the muscles have to work harder to extend and lift



## PRONE

### UPPER EXTREMITY WEIGHT-BEARING

#### – SUSTAINED ACTIVITY

- Child supports weight on 1 hand and use the other to perform activity
- ASSISTANCE: Hands on hips or assist with shoulder alignment
  - Puzzle, Connect 4 while support weight on one hand
  - Alternate hands and maintain alignment shoulder/elbow/wrist



## PRONE

#### – BALL WALK-OUTS

- Child starts on knees behind ball and walks out forward over ball hand over hand to marked spot
- ASSISTANCE: Side of child at hip and guide ball
- PROGRESSION: hips, thighs, shins, feet on ball



## PRONE

- WATCH TV ON BELLY
- DO A PUZZLE ON BELLY
- COLOR ON BELLY
- BELLY BOWLING
- WHEELBARROW WALKING
- AIRPLANE CATCH



## STANDING

**BALL SQUISHES/REACHES** (quadriceps, gluts and core)

Child stands tall holding the ball

Cue child to "Squish the bugs" with the ball and "reach for stars"

Slowly bend knees and lower toward the ground and then extend legs and reach arms overhead, maybe on tiptoes

**ASSISTANCE:** Perform the motion with your child and may assist lifting the ball

**PROGRESSION:** Increase number of repetitions





# STANDING

## RAINBOWS (obliques, shoulder girdle)

Child stands holding the ball

Cue your child to PAINT A RAINBOW with the ball lifting from one side overhead to the over

ASSISTANCE: Guide child through the movement to get full ROM

PROGRESSION : Increase number of repetitions



## CORE STRENGTH IDEAS THROUGH EVERYDAY PLAY...



- ANIMAL WALKS
- CLIMBING
- SWINGING
- TALL KNEELING
- WHEEL BARROW WALKING
- CLIMBING UP THE SLIDE
- SWIVEL CARS
- PUSH/PULL WEIGHTED LAUNDRY BASKET



## USEFUL TIPS

1. **BREATH**... Breath holding cau sesyour child to compensate and not use the crucial core muscles that these exercises target
2. Gradually increase repetitions/time as child gets stronger
3. Always perform exercises on both sides of the body one side will always be harder to do
4. When in doubt ASSIST at child's hips
5. Avoid giving assist high up on the trunk- want child to engage the core muscles
6. Make an exercise chart for child- kids love visual aides
7. Use objects that your child loves to play with to motivate (prone activities)

**HAVE FUN!**