Age Smart Fitness is dedicated to the health, fitness and well being of people aged 50 and over. Age Smart Fitness motivates and empowers older adults to take responsibility for their health and fitness through innovative programming and joyful training experiences.

Lisa McLellan is recognized for her leadership skills, creativity and the positive contributions she makes in her community. She has a MA in dance therapy and a BA in contemporary dance. She has studied a wide variety of body/mind integration approaches including yoga, Qigong and active meditation.

She is a canfitpro certified personal trainer since 2001 and, a canfitpro OAS Pro Trainer since 2003 (certifies trainers to be Older Adult Specialists). Ms. McLellan is an author of a self care book called All I really Need Is My health. She also created and animated a very successful seniors’ health and fitness Community TV series called: Toc! Toc! Santé, 2009 to the present day.

Ms. McLellan has over 30 years of teaching experience, the last 15 almost exclusively with older adults aged 55 to 95. Her alternative approach offers safe, effective and enjoyable exercise solutions. Her expertise, knowledge and sense of compassion allow her to help older adults face the many challenges associated with aging with humour, tenderness and lots of practical advice.

Looking forward to working together!
BALANCE & COORDINATION

If you work regularly with Older Adults you know how essential it is to include co-ordination and balance exercises in your training program. Experience how moving the extremities in opposing directions and in different combinations promotes core integration, and trains the neuromuscular pathways which support co-ordination and balance. Can be executed either standing or sitting. Effective and fun!

In the Balance and Coordination workshop we will:

1. Learn the theory and body/mind concepts behind the Balance & Coordination program
2. Practice a Balance and Coordination routine
3. Explore different variations and combinations to stimulate creativity and deepen understanding
4. Learn modifications, chair options and progressions
5. Practice creating Balance & Coordination routines and leading them in small groups.
6. Adapt this routine for resistance training to develop greater strength and skill using weighted bars and free weights

These tools can be used in 15 to 20 minute segments which can easily be incorporated into existing programs. Especially effective in the beginning of the class.
Objectives of the Balance & Coordination Workshop

1. Understand the terms: homolateral, contralateral and center line of integration, and their role in training/improving balance and coordination. Introduction to Body-Mind Centering and the Developmental Movement patterns and there relationship to the Balance & Coordination program.

2. Understand how spatial orientation can be used to train/improve balance and coordination

3. Learn how to progress the balance and coordination training safely and effectively.

4. Use verbal cueing to support learning and improve performance

5. Practice creating balance and coordination routines using this approach

6. Understand how this approach can be used with weighted bars and free weights to further enhance strength and skill with regards to balance and coordination

What are the challenges which make balance & coordination difficult for our older adult clients?

- Lack body awareness, exercise experience & bio mechanical technique
- Lack strength, connection & whole body integration
- Restricted range of motion, rigid fascia, pain
- Bad posture / Deformations of the spine / chronic disease issues
- Side effects stemming from medication
- Fear of falling / lack of motivation for exercise & movement
Core Integration and Connection
Coordination & balance are supported by connection and stability in the core

Working with 50+ untrained and nonathletic participants is very challenging. The problems are more complex, the system is weaker, rigid and often more fragile due to chronic disease and sedentary lifestyles. This is true especially in the initial phases of training. These bodies are simply not ready to jump into fitness training. They require pre training in order to recondition the sensorimotor system, reprogram foundational neuromuscular pathways, improve posture and engage the fascial lines. Regress to progress. Pre training facilitates the understanding and the integration of concepts and foundational skills for beginner students. It teaches them the basic principles that will be the building blocks of future learning. It also allows the trainers to restore the clients’ bodies to a healthy & normal condition or, at least to improve it.

Step one: improve mobility, stability and tone - which is actually very difficult due to the deconditioned, rigid and weak state many older adults have allowed themselves to get into! Step two: augment strength and incorporate complexity upon this solid foundation.

To address these problems and other challenges effectively I needed a program that could increase mobility in the shoulder girdle including the 5 scapular movements, spinal column, shoulders, pelvic girdle, hips and ankles while simultaneously increasing stability in the core and across the joints in a step by step, skill layering manner. My training as a dancer (BA Contemporary Dance, Concordia U.) and my studies in Dance Therapy (MA Dance Therapy, Naropa Institute Boulder, Co) provided me with the knowledge and experience necessary to find effective and interesting solutions to meet these (and other) challenges.

I stumbled upon the idea of using a 4 foot dowel from a poster I saw in my massage therapist’s office. It was a series of exercises using a stick. I understood immediately how effective that would be with my clientele. That was the beginning of a long process which has culminated in my Balance & Coordination Stick program.
Elements of the Balance & Coordination Stick program:

- 4 foot dowel, 3/4 – 1 inch in diameter (can be 3 ft for chair programs)
- lines of integration (spinal, homologous, homolateral, contralateral)
- spatial orientation (movement across the horizontal, sagittal, vertical planes)
- push/reach patterns
- rhythmic and coordinated action
- levels of progression

This program works to:

1. Augments sensorimotor skills by
   - improving proprioception
   - reconditioning myofascial elasticity
   - reprogramming foundational neuromuscular pathways

2. Trains fascial lines & bio-mechanical technique (connection, sequencing & integration) by
   - improving ROM & bio-mechanical function in individual parts i.e. ankle, hips, spine, 5 scapular movements shoulder girdle, neck etc. (unilaterally & bilaterally)
   - engaging the anatomy trains – systematically reconnecting the individual parts to achieve integrated whole body movement through body awareness, connection, sequencing, phrasing and patterning
   - skill acquisition using a step by step progression based on the Body-Mind Centering® Developmental Movement patterns created by Bonnie Bainbridge Cohen. Those patterns in their developmental order are:
     1. Spinal push/reach – fish
     2. Homologous push/reach – frog
     3. Homolateral push/reach – reptile
     4. Contralateral reach – mammal
     (Refer to annexe A for more detail).
**Spinal connection:**
connection of the head, spine and pelvis
- everything is organized around the center line of integration
- differentiate between front & back
- gain the ability to attend

**Homologous connection:**
connection of the right side to left side upper and lower body
- develop symmetrical movement
- differentiate between upper and lower body
- gain the ability to act

**Homolateral connection:**
connection of the upper and lower body same side
- develop asymmetrical movement
- differentiate between right and left
- gain the ability to act

**Contralateral connection:**
connection of the upper and lower body diagonally
- establish 3 dimensional movement
- differentiate the diagonal quadrants
- gain the ability to integrate attention, intention and action
I have incorporated the developmental patterns in my program as a body/mind solution to some of the deeper challenges older adults have with regards to integration, balance and coordination as well as cognitive function, mental rigidity and negativity.

**In Bonnie Bainbridge Cohen’s own words:**

- The developmental process establishes the basic patterns for all of our movement and corresponding perceptual relationships (including spatial orientation and body image) and the basic elements of learning and communication.

- Development is not a linear process but occurs in overlapping waves with each stage containing elements of all others. Because each previous stage underlies and supports each successive stage any skipping, interrupting or failing to complete a stage of development can lead to alignment/movement problems, imbalances within the body systems, and problems in perception, sequencing, organization, memory and creativity.

- Skipping any stage leads to perceptual/movement problems. By returning to these basic patterns, we can repattern our responses and establish more efficient nervous pathways to support movement.

- The “push patterns” establish our primary gravitational support, strength and personal kinesphere.

- The “reach patterns” establish our lightness, spatial intent beyond our personal kinesphere and change of level.

- By exploring and integrating missing links of developmental movement, the mind can respond finding flexibility with less habitual reactions, expanding capacity for greater ease in relationships and interaction with our environment.

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* Sensing Feeling and Action 3rd edition, Bonnie Bainbridge Cohen pg 5,16,17
3. Use spatial orientation (bring clarity and structure to body and mind) by
   - incorporating the vertical (coronal), sagittal and horizontal (transverse) planes
   - cultivating a conscious awareness of spatial orientation using body and mind simultaneously (up/down, front/back, right/left, all diagonals and combinations thereof) - i.e. say front, move front, connect with eyes
   - moving across the different planes trains core stabilization and challenges balance and coordination
   - moving different body parts in a variety of directions, combinations and across the planes trains balance & coordination, and strengthens core stability
4. Use progression (promotes integration of balance & coordination)
Progression allows us to develop skills and build strength safely

General framework:
• Laying the foundation ➔ Building upon it
• Simple movements ➔ Complex movements
• Gradually increase the number of repetitions and series
• Faster ➔ Slower for balance
• Slower ➔ Faster for coordination (without losing technique)
• Without weight ➔ With weight
• Use a variety of tools (e.g. stick, ball, weights, ViPR etc.)

Reflection
Training in this way creates neuromuscular pathways which support coordination and balance. Repetition of patterns and their variations in a rhythmic fashion reinforces neuromuscular pathways, enhances myofascial flexibility and bio mechanical technique. Building strength in the core through connection and integration improves overall stability and coordination. Practicing balance and coordination using the developmental movement patterns with spatial orientation structures and organizes the mind, and improves mental clarity. Practicing balance and coordination increases older adults’ confidence, physical ability and helps to prevent falls.

Technical Cues
1. Movement execution is supported by
   • Awareness of and connection to
     • the center/core
     • the shoulder girdle (for integrated arm movement)
     • the ground, the pelvic girdle (for integrated leg movement)
     • placement of the head (draw chin back & in to improve alignment)
     • weight transfer
   • Coordinated action
     • Two or more body parts moving simultaneously either in same direction or in different directions, across 1 or more planes
   • Crystallized movement (3 dimensional awareness)
     • Body/mind awareness - being present to what you are feeling & doing
     • Inner connection of the body and awareness of the shape you are making moving through space (connecting self to environment - inner to outer)
2. The Push *

- Core activation is the basis of stability
- The PUSH activates and connects you to the core
  - Hand to hand (prayer position - push one hand into other.
  - Hand to knee (same side/opposite side/both sides)
  - Push feet against floor (notice pelvic tilt, core activation & feeling of stability)

**With the stick**
- Push stick against the floor (stick vertical, one end on floor. What do you feel in core, feet, legs? Answer: Connection & strength in core, legs & arm))
- Push stick against the floor and lift knee simultaneously (homo or contra)
- Push stick down across thighs, lift knee (horizontal stick; held with both hands. Feel connection through core of upper & lower body - homologous)
- Lateral flexion; push end of stick into outside of heel. lift (horizontal stick held with both hands - homolateral)
- Touch inside of right heel by reaching left hand down to touch heel with end of stick (horizontal stick held with both hands - contralateral)

3. Coordinated Action

- **How to hold and use the stick** (hold stick tightly to activate core & arm muscles, squeeze little finger to connect to bottom tip of shoulder blade)
- **What the stick communicates to the body**
  - connection to the center (visually and sensorially)
  - inner organisation of the body (unconscious)
  - awareness of the dimension of space (connects the mind)
- **Simple examples to better understand coordinated action**
  - Arm / head, Arm / leg with stick
- **Coordinated action finds its stability and strength by staying connected to the center vs focusing on the extremities**
- **Move from the center outward towards the extremities**

* For more detailed info about push : Bonnie Bainbridge Cohen : www.bodymindcentering.com
4. Levels of progression

Level 1 - Learn to connect to the center and to improve foundational technique
• One body part, one direction: use scooping action, name direction, see it, move it - proprioception, neuromuscular patterning, boy/mind integration

Level 2 - Practice coordinated action and strengthen core stability
• Two body parts, one or two directions: training coordination through simultaneous action of different parts coming together into the center - neuromuscular patterning, precision in direction, structures & organizes mind & body

Level 3 - Practice balance and core integration
• Two body parts in one or two directions + balance: trains deeper level of proprioception, core strength and control

Level 4 - Challenge balance and coordination skills
• Three or more body parts, two or more directions and/or balance + combinations: trains skill acquisition - proprioception, neuromuscular patterning, boy/mind integration

NB - Before adding a balance challenge, the homolateral and contralateral connections must be integrated and strong. This is the reason for progression; you only move to the next level when the previous level is integrated and well executed (within reason).

5. General Modifications
1. Reduce range of motion in case of pain
2. Simplify movement to basic unit (regress to progress)
3. Strengthen foundation (improve posture, mobility and stability)
4. Reduce intensity
5. Change the tempo
6. Avoid movement in case of injury or certain types of pain/problems
Sequencing & Routine Ideas - Explore! Experiment! Discover!

Level 1 - Learn to connect to the center and to have good technique

- One body part, one direction (connect eyes to stick)
Push front  
Cut to side  
Sweep up side & over head - arc

Push diagonal across  
Push back  
Push stick out to side  
Push stick across front of body

Lift over head - stretch shoulders &  
Bend to side  
Pull elbow into ribs - lateral flexion  
Twist - lead with ends of stick  
Touch knee to stick - alternate  
Heel raise up/down & balance
**Level 2** - Practice coordinated action and strengthen core stability

- Two body parts, one or two directions

1. Homolateral lift front
2. Homolateral lift side
3. Homolateral lift - extend leg back
4. Contralateral lift front
5. Contralateral lift side & leg back
6. Contralateral across touch knee front
7. Contralateral lift front & arm back
8. Contra arm side & leg extended back
9. Contra lift diagonal front
10. Contra lift side - leg extended side and complete with
11. Contra leg crossing front
12. Contra back with front leg extended
**Level 3** - Practice balance and core integration

- Two body parts in one or two directions + Balance

![Images of Level 3 exercises](images)

**Level 4** - Challenge balance and coordination skills

- Three or more body parts, two or more directions and/or + Balance, and in combinations

![Images of Level 4 exercises](images)
Incorporating Weights

**Purpose:**
- To further strengthen core integration and the connections which support coordination
- To strengthen functional movement and improve physical abilities
- To build confidence and decrease risk of falling
- Improve mental functioning and mental clarity
  - Practicing balance and coordination with the addition of weights is a logical progression to the stick program. It can be done either standing or sitting.

**How do we go about it?**

1. Use the Balance & Coordination concepts of spatial orientation and progression through levels 1 – 4
2. Use the same movement patterns you have already trained
3. Use the FITT strength training recommendations for Older Adults
4. A good progression is to start with weighted bars (*if available*) then move to one hand-held free weight, to two hand-held free weights.
5. Incorporate squats, lunges and balances

- Knee lift + biceps curl
- Leg extension with arm extension back
- Biceps curl + toe raise
- Front arm extension + leg extension back
- Side leg lift with arm extension back
- Side lunge, touch bar to ground
- Return + balance
- Set
- Back lunge
Look + bend + arm raise

Look + arm raise side + arm extend front

Push weight back + extend leg front (contra)

Arm raise side + look side + side leg extension (contra)

Squat + overhead press + arm extension front

Contra lift + biceps curl + arm extended side

Contra lift + biceps curl + arm extended side

Front arm raise + arm extended side + contra leg extended back

Knee lift + hammer curl + arm extension up
Contra lift + curl + arm front
Contra lift + curl + arm + head side-front
Homo lift + curl + head side + arm side
Contra lift + arm raise + squat
Contra lift + push arm back + arm front + toe raise
Contra lift + push arm back + arm side + head side

Push cross + arm extended side
Knee lift + biceps curl + 2 weights
same + squat
Toe raises + with or without press

Lift front & side + 2 weights
Hammer curl + side raise + front leg (homo) extension
same except contra (leg + curl)
Conclusion

1. Do you feel you have a better understanding of how spatial orientation can be used to train/improve balance and coordination? Explain.

2. Do you understand the terms: homologous, homolateral, contralateral and center line of integration, and their role in training/improving balance and coordination? Explain.

3. Do you understand how to progress the balance and coordination training safely and effectively. Give examples. Do you feel confident about doing it?

4. Do you feel you have acquired some helpful verbal cues to enhance the learning experience of your older adult clients and their movement execution? Give examples.

5. Do you feel equipped to create your own Balance and Coordination routines?

6. Do you understand how this approach can be used with weighted bars and free weights to further enhance strength and skill with regards to balance and coordination? How?

Notes

GOOD LUCK!
APPLY THE CONCEPTS,
EXPLORE AND HAVE
BALANCE & COORDINATION ROUTINE IDEAS

• Definitions
  • Push = arm alone
  • Lift = knee and arm
  • Right = rt, Left = lf (always do both sides)
  • Homolateral = same side i.e. right leg/right arm
  • Contralateral = opposite sides i.e. right leg/left arm
  • + = can be added to as a progression

• Music: Levels 1 & 2 Routine
  • Gabriel Roth & The Mirrors, Initiation, Body Jazz
  • John Mayer, Born & Raised, Something Like Olivia

• Music: Levels 3 & 4 Routine
  • Dolly Parton, Jolene, Jolene
  • Doc and Merle Watson, Elementary Doctor Watson, Summertime
  • Madonna, Hard Candy, Give It To Me

PRACTICE: LEVELS 1 & 2

• Horizontal stick with 2 hands
  • Raise stick over head
  • Lateral bends
  • Twists
  • Circling around the body
  • Knee raises, touch stick
  • Alternating legs o Right leg / left leg o Jogging

  • Pushing stick front; slow, faster
  • Pushing stick up; slow, faster
  • Combination front and up
  • Toe raises
  • Transfer the weight front (rt foot front, lf foot front) - without stick / with push stick forward / push stick forward with balance
• Transfer the weight side - without stick / with push stick forward / push stick forward with balance

• **Vertical stick with one hand**
  • Push front
  • Push side
  • Front & side combined, + head *(look)*
  • Push front diagonals; out to side then across body
  • Push back, + head *(look)*

  • Homolateral lift front
  • Homolateral lift side
  • Contralateral lift front
  • Contralateral lift side

  • *Arc (arm side, semi-circle up over the head)*
  • *Arc with contralateral lift and touch (lift opposite knee up and touch with hand)*

  • Homolateral push with leg extension back
  • Contralateral push with leg extension side
  • Contralateral push with leg extension side, + return and cross arm and leg
  • Contralateral push side with leg extension front, look side, + look opposite side
  • Contralateral diagonal lift into homolateral front lift

• **Standing, stick on the floor beside the foot**
  • Leg extension side *(push stick with outside of foot)* + contralateral push front, + look
  • Leg extension front diagonal *(push stick with inside of foot)* + contralateral diagonal arm sweep

**Review**

• *Before adding a balance challenge and more complexity, the homolateral and contralateral connections must be integrated, and the core becoming stronger.*

• *This is the reason for progression; you only move to the next level when the previous level is integrated and well executed.*
PRACTICE: LEVELS 3 & 4

- **Vertical stick with one hand**
  - Homolateral front lift, + toe raise
  - Contralateral front lift, + toe raise
  - Alternating homolateral and contralateral front lifts, + toe raises
  - Homolateral side lift, + toe raise
  - Contralateral side lift, + toe raise
  - Alternating homolateral front lift and contralateral side lift, + toe raises

- **Interlude: calf stretch, marching, twists etc.**
  - Contralateral front lift with other arm to the side, head looking to side (rt, lf)
  - Homolateral side lift with other arm extended front, + look (rt, lf, up)
  - Contralateral side push, with leg extension back, + front arm push, + look
  - Contralateral side push with leg extension back, + front arm push, + drop down into back lunge
  - Homolateral lift front into back lunge
  - Push back, look at stick
  - Push back, look at stick, with other arm extension diagonal front
  - Contralateral push back, look at stick with front leg extension
  - Contralateral push back with front leg extension, other arm extension side

- **Cool Down**: marching, stretching, forward bend, slowly roll up ...

GO STEP BY STEP
EXPERIMENT
ENJOY
VERBAL CUEING FOR BODY AWARENESS

The exercises and accompanying cues must be repeated over and over again. They will help older adults feel their bodies and become aware of how they are moving. They must be done slowly, especially in the beginning – so your clients have time to feel. Many months will pass before they are able to get their bodies to respond to all the exercises and cues. It doesn’t matter! Slowly but surely, their postures will improve and their bodies will become more supple, fluid and integrated; all parts acting as one. Be patient and have lots of fun - laughing, good music and sharing. NO STRESS! I have focused on the verbal cues that are connected to the body sensations which most favour postural integration. I hope this will be meaningful and helpful to you. Enjoy.

Grounding

Grounding is important because it allows the body to become more relaxed and to have a solid base of support. Grounding calms the mind and helps us to be in the present moment. Grounding is essential for proper movement technique.

Verbal cues:
- Feel your feet on the floor.
- Relax your knees & ankles.
- Let your weight drop down into your feet, into the floor, into the earth.
- Send your energetic roots down into the earth ... like a tree. Imagine it. Sense it.
- Let go of “holding” (holding yourself up against the unknown, against being hurt, against your fears, etc).
- Stand on your feet. Stand on the ground.
- Trust the ground. Trust yourself. Grounding is a question of trust. Ground yourself.
- Push from the center of your heel, down into the ground to get a lift through the center of the body and activate your core muscles.

Core Activation

Core activation is important because it provides the inner support and connection necessary for good posture, whole body integration and technique.

Verbal cues – level one:
- Pull in your lower belly.
- Exhale, pull your lower belly in towards your spine/your sacrum. Inhale, release.
- Feel how when your pull your lower belly in your lower back lengthens.
- Pull your lower bellymyofascial in to protect your lower back and eliminate pain.
The Shoulder Girdle and corresponding myofascial web - a very challenging part of the older adult body to train properly

Learning how to properly use the shoulder girdle will transform posture, biomechanical technique, ROM and core integration.

Verbal cues:

- Relax your shoulders. Let your shoulders drop down.
- Let the weight drop down into your hands. Let your arms hang.
- Your arms won’t fall off. :) I promise you. You don’t have to hold onto them. Relax.
- Feel your shoulder blades. The shoulder blade is shaped like a triangle. The bottom point points down. Feel it.
- Your shoulder blades move. They glide on the ribcage; towards the spine, away from the spine, up and down, and all around. Let’s try.
- Lift the bottom of the ribcage up to straighten the thoracic spine.
- Breathe.
- Connect your elbows to the lower point of the shoulder blades. Connect your little finger to your shoulder blade (lower point)

Head

The placement of the head is important because it has a profound impact on alignment (posture) and body/mind integration. Good head placement is very tricky to train and won’t really change until the ribcage becomes more mobile. Be persevering. Verbal cues:

- Can you feel how your head connects to your spine? The skull is balanced on the atlas. That is why the head is so mobile.
- Draw your chin in towards your throat. (You can use the fingers on the chin at first to help them get the right sensation). Move your throat towards the back of your neck.
- Feel the back of your neck lengthening as you draw your chin back and in.
- Reach with the top of the head - not the chin, to elongate the cervical spine and the top of the thoracic spine.
- Your head is connected to your spine which is connected to your pelvis. Together they form the center line of integration.
Balance and Coordination - Stick Program
These cues will help anchor postural integration during movement execution.

Grounding (same as above)

How to hold and move stick
These details are important because they will affect the inner experience of the participant as well as improve their execution of the movement which in turn will improve their training results.
Verbal cues:
- Squeeze the stick with your hands, don’t forget the little finger.
- Feel how when you squeeze the little finger it activates the muscles around the bottom tip of your shoulder blades, activates your core and arm. Feel how they are connected together.
- When you push the stick front or up, or side, you always reach the elbows down (to activate scapular retraction/depression) before you go out, up or side. N.B. This creates a scooping motion
- Down to go out. Down to come back. Down to go up. Down to come back. Down to go side. Down to come back.
- Push with the hand(s). Pull back with the elbow(s).

Coordinated Action in homolateral and contralateral lifts
Coordinated action is very important because it strengthens the neuromuscular connections and the core integration which support coordination and balance.
Verbal cues:
- Down (scooping action) to go out. Front, side, across, back
- Hand and foot arrive at the SAME TIME. Hand & knee to go out, elbow and foot to come back
- Out TOGETHER, in TOGETHER. It is very important to coordinate your action in order to connect your upper body with your lower body.
- Transfer your weight before you lift your foot.
- Look at the stick. Look at the wall. Etc. Look at something to help crystallize the movement.
- Down to push out. Drop your chin when you push. No Banana!
- Keep your shoulder blades flat on your back. Don’t over reach. If you over reach you will be fighting gravity and creating tension in your lower back and shoulders. (demonstration).
Balance
Losing balance is a major concern because it can lead to serious injury. Most older adults find balance challenging. They approach balance with fear and tension which only makes things worse!
Verbal cues:
  • Don’t panic! Stay calm. Simply lift your heels. Don’t try to lift your body from your shoulders. Lift from your feet. Much more effective. Demonstrate.
  • Draw your ankles inward and pull your lower belly in.
  • Draw your chin in to straighten your spine. Imagine the stick in the center of your body (show them by placing the stick against your body vertically)
  • Push down through the toes and lift your heels. Activate your lower belly. Reach with the top of the head. Not the chin! And no banana! Great! Good for you!

Balance and coordination program with weights
By the time you add the weights they will have improved their foundational skills and will be able to add weight safely. Verbal cues:
  • To understand core support from the lower belly I use this exercise. Hold both weight-ed bar or free weights in each hand (a little heavier is more effective). Can you feel how your lower belly contracts automatically to help you support the extra weight? Yes? Now put the weights down. Can you feel how the lower belly has relaxed? Yes? Good. Now pick up the weights again. Can you feel the lower belly activation? Good. Now strengthen it by pulling inward. Can you feel that? Let’s do it again. Pull your lower belly in and activate your core strength for more support.
  • Use the same cues as with the stick – down to lift, activate the lower belly, chin in, transfer weight if you lift a leg, look with your eyes

Modelling
Modelling is a very effect teaching aid. Use it often to help clarify your point. Model the wrong way, then the right way – repeat several times - to help the clients further understand the work being undertaken.
ANNEXE A

I have included these definitions and articles for a deeper understanding of the ideas behind the Balance & Coordination Program.

Proprioception:
Proprioception is the body’s ability to transmit a sense of position, analyze that information and react (consciously or unconsciously) to the stimulation with the proper movement (Houglum 2001). Put simply, it is the ability to know where a body part is without having to look. Taken as a whole, proprioception includes balance, coordination and agility because the body’s proprioceptors control all these factors. Proprioceptors consist of both sensory and motor nerves that send and receive impulses to and from the central nervous system from stimuli within the skin, muscles, joints and tendons (Houglum 2001).

By improving their proprioception, clients can gain the balance skills necessary to maintain stability; hone their agility so they can quickly change direction when necessary; and fine-tune coordination skills so they can perform physical activities accurately and consistently. Proprioception is a primary building block in the human’s ability to learn, repeat and become comfortable with so many movements throughout life. By improving their proprioception, clients can gain the balance skills necessary to maintain stability; hone their agility so they can quickly change direction when necessary; and fine-tune coordination skills so they can perform physical activities accurately and consistently. There is a proper progression to follow, starting with static balance activities, progressing to dynamic balance activities and finally advancing to coordination and agility training. Proprioception exercises reduce the risk of injury by teaching the body to react appropriately to sudden changes in the environment. A good sense of proprioception is vital for many fitness activities, especially some of the more advanced core-training classes currently attracting large numbers of clients.

Article Source: http://www.ideafit.com/fitness-library/focus-on-the-lower-body-to-train-balancehow-to-improveproprioception

Neuromuscular Pathway:
Neuromuscular pathways are the communication channels between the brain and the muscles. Whenever a person wants to perform a certain movement, skill, or task it is along these pathways that the brain informs the body’s muscles what action is going to be required to accomplish the goal at hand. Once these pathways have been developed, the nerve impulses, which carry the brain’s communication to the muscles, travel them over and over creating more efficient neuromuscular pathways.

Good training regimens are able to redefine the way your brain tells your muscles how to move. Your body is constantly in a state of learning, adapting, memorizing, and recalling movement patterns. Therefore, if you repeatedly tell your body to move in a specific way your body will accommodate this goal. These new paths will become more efficient and thereby deliver messages from the brain more quickly so the muscles will fire faster. It will also allow for the brain to better sequence different muscles firing. The result of your muscles firing in better sequences and in faster succession with one another is what we call coordination. Elite athletes have superb coordination and is the primary reason they are able to perform highly difficult tasks with such ease.

Article Source: http://EzineArticles.com/4150888
Fascia:
Fascia is a specialized system of the body that has an appearance similar to a spider's web or a sweater. Fascia is very densely woven, covering and interpenetrating every muscle, bone, nerve, artery and vein, as well as, all of our internal organs including the heart, lungs, brain and spinal cord. The most interesting aspect of the fascial system is that it is not just a system of separate coverings. It is actually one continuous structure that exists from head to toe without interruption. In this way you can begin to see that each part of the entire body is connected to every other part by the fascia, like the yarn in a sweater.

Fascia plays an important role in the support and function of our bodies, since it surrounds and attaches to all structures. In the normal healthy state, the fascia is relaxed and wavy in configuration. It has the ability to stretch and move without restriction. When one experiences physical trauma, emotional trauma, scarring, or inflammation, however, the fascia loses its pliability. It becomes tight, restricted, and a source of tension to the rest of the body. Trauma, such as a fall, car accident, whiplash, surgery or just habitual poor posture and repetitive stress injuries has cumulative effects on the body. The changes trauma causes in the fascial system influences comfort and function of our body. Fascial restrictions can exert excessive pressure causing all kinds of symptoms producing pain, headaches or restriction of motion. Fascial restrictions affect our flexibility and stability, and are a determining factor in our ability to withstand stress and perform daily activities.

John F. Barnes PT.
https://www.myofascialrelease.com/about/fascia-definition.aspx

Watch this YouTube video:
Thomas Myers Fascia 101 - Youtube
https://www.youtube.com/watch?v=-uzQm87Hq0

Read this article by Tom Myers:
Staying Fit All Life Long: 10 tips for Fascial Fitness in Manual

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Please read these 3 articles to better understand the Developmental Movement patterns and the role they play in underlying perceptual-motor integration. These articles come from the book:

1. Perceiving in Action
2. Developmental Movement
3. Developmental Patterns