

canfitpro | EAST
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Core Training & Beyond

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Session Objectives...

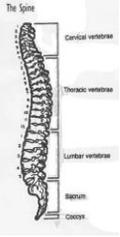
1. Learn the most common age-related risk factors that lead to back pain and injury.
2. Learn the 'Do's and Don'ts' for training the core.
3. Identify "Top 10" core-conditioning exercises for achieving better results and optimizing back health.
4. Learn how to integrate these exercises into your clients' exercise program; understanding regression & progression.
5. Experience a 30 minute Core Training Workout

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Age-Related Risk Factors That Lead To Core-related Back Pain/Injury...

- Ageing itself!
- Inactivity/sedentary living/reluctance to exercise.
- Poor postural habits- prolonged sitting the biggest culprit.
- Biomechanical compensation → muscle imbalance, adaptive shortening, muscle weakness & instability within the "core" muscles.
- Body composition – increases load, stresses on spinal structure, leads to spinal deviation.
- Workspace – ergonomics and habits.
- Poor movement technique/execution/training.
- Overuse

*All are life-style related and preventable!



Defining "Posture"...

The neutral position for the spine from which all movement originates... or the keyboard on which your brain orchestrates movement.

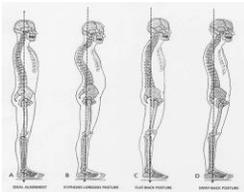


The Role of the Core...

- Cervical spine gives your head freedom of movement.
- Thoracic allows rotation.
- Lumbar spines provides stability.
- Sacroiliac joints act as a pivotal axes allowing movement between your legs, pelvis and spine.
- Sacrum provides the base for your spine to sit on.
- **'Core' muscles (inner & outer unit) act to stabilize and move the spine.**



Postural Types...





Fact of Life: A Better Core Equals A Better Back

- Your core - act like that of a corset to hold everything in or support and stabilize your lumbar spine.
- The core "corset" also functions: to move the trunk in all directions.
- These core muscles must remain strong throughout our lives to allow us to continue to move the way our bodies are meant to as well as help balance on one leg.
- To build a functionally strong back—a better back for life you must address posture/neutral spine.



A Better Core Equals A Better Back

*A good place to start:

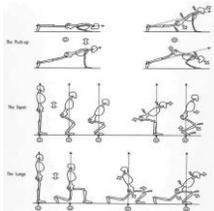
- **Assessment of Postural type- analysis**

Static Postural Assessment
 Dynamic Postural Assessment
 Gait analysis
 Flexibility assessment
 Muscle testing

- **Analysis** of what is "weak" and what is "tight" to help formulate an exercise plan
- **Activity** –select and integrate the exercises necessary to correct posture and build overall core strength and stamina.



Assessment...





Update on Core... Program Design

Don't

- ▶ Impose high loads (of resistance) in an attempt to gain strength.
- ▶ Avoid traditional curl ups that encourage flattening the lower spine (lumbar region) by modifying the exercise or selecting alternative ways to target abdominals.
- ▶ Exercise into positions or with loads that produce or increase pain.
- ▶ Perform range of motion exercises early morning if you suffer low back pain because disk hydration is at its greatest and compressive forces on the disks will be increased.
- ▶ Exceed the capacity or tolerance of the individual: reduce the number of sessions to 2-3 brief sessions per day vs longer sessions at a time.
- ▶ Stop exercising altogether but instead modify activity.
- ▶ Diagnose or prescribe therapeutic or rehabilitative exercise.



Update on Core... Program Design

Do

- ▶ Encourage daily exercise!
- ▶ Include cardiovascular training into back exercise programs— significant in reducing, managing and management back pain incidence and severity.
- ▶ Carefully evaluate and select exercise dosage— “less is more” and focus on form/technique versus repetition. Strength and power follows form and function.
- ▶ Increase range of motion to achieve and maintain neutral spine or ideal posture. Daily stretching and 'self care'.
- ▶ “Brace” vs. “Hollowing” technique.



PROGRAM DESIGN:

5 Stages:

- 1. Strengthen the weak and stretch the tight.
- 2. Build whole body and joint stability.
- 3. Increase endurance.
- 4. Build strength and stamina through introducing “corrective patterns of movement”.
- 5. Develop speed, power and agility as it relates to life.



Exercise #1: Learn how to achieve Neutral Spine...

- 1. Set the feet/foundation
- 2. Secure the pelvis
- 3. Stabilize the scapulae
- 4. Position the head



Exercise #2: Abdominal Bracing over Hollowing...

The abdominal brace has been proven to enhance stability. The brace produces a true muscular girdle around the spine- both the abdominals and extensors are active.

In Standing or Seated:



In Supine Lying:



Exercise #3: Spinal Balance...

- Minimize spinal load and compression and helps to ensure stable patterns of muscle activity.
- Begin on all fours with wrists under shoulders and knees under hips.
- Brace the abdominals and hold.
- Lift one arm and the opposite leg parallel to the ground for 8-10 seconds on each side.
- Progression to or from a prone plank.





Exercise #4: Side Bridge/Plank...

- Ideal for stabilization. Ideal for curl up/crunch free workout option.
- Utilizes all layers of the abdominal musculature to optimize performance while spine loads are minimized as one side of the torso musculature has much lower activation.
- Important stabilizers are trained including the quadratus lumborum.
- Bent knees (with hips slightly flexed) progressed to straight legs (with top leg in front) offers various degrees of muscle recruitment and challenge.





Exercise #5: Hip Bridging ...

- With lumbar spine remaining in neutral squeeze the buttocks, not by extending the hips.
- Lift off the floor.
- Progress to one leg hip bridging by crossing one foot over the top of the support knee.





Exercise #6: The Dead Bug...

- Introduces dynamic limb motion into an abdominal curl up.
- Involves a pre-bracing of the abdominal wall with a neutral spine and the opposite arm and leg flexed at the shoulder and hip to mimic the motion of a bug on its back.
- Beginners (and those with poor body awareness) can stabilize their lumbar spine by placing their hands underneath to ensure no lumbar motion occurs.





Exercise #7: Hip Hinging...

- Perform from a standing position a supported hip hinge (short stop position) with hand resting on the thighs, sending the hips back.
- Tip forward from the hips, sending hips back while maintaining a neutral spine.





Exercise #8: Passive Spinal Extension

- Perform from a supine lying position with arms bent and hands positioned just outside shoulders (palms down); in position to perform a triceps push-up.
- Relax buttocks and legs.
- As you exhale press up by pushing through the arms to perform a "sloppy push-up" or a passive spinal extension.
- Pause to inhale and as you exhale return to starting position.
- Perform 5-10 repetitions for 1 set and repeat 3 sets.





Exercise #9: Spinal/Torso Rotation

- Begin in a sitting position with one or both legs extended out in front.
- Bend one leg and cross the foot over to the outside of the other leg. The foundation leg can be extended or bent (as shown, if flexibility is lacking).
- With the opposite arm to the top knee, lift and reach to cross over, turning from the thoracic spine. The other arm can help support correct sitting posture.
- Keep the spine in a erect, neutral position.
- Hold stretch and breath deep for 15 seconds and switch sides.





Exercise #10: Release the Hips/Stretch the Hamstrings

- Begin in a supine lying position with both knee bent.
- Draw one knee towards the chest until you feel a stretch in the buttock/low back area.

Progress by:

- Crossing one knee over the other and turn the knee out to the side.
- Draw the furthest knee in assisting with your arms.
- Hold the stretch for 15 seconds and repeat 2-3 times or until the tension/tightness in the gluteal/hip region releases.
- Switch legs and repeat.
- Complement with a hip extension stretch ie: Low lunge





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