Equal, But Not the Same
The Stability – Strength – Power Formula for Training Women
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POSTURAL AND ORTHOPEDIC CONSIDERATIONS

Females are faced with a number of postural challenges. Some stem from physiological, genetic - structural demands, while some stem from psychosocial pressures and concerns.

1. Head Carriage

2. First Rib Angle
   First rib angle is correlated with head carriage and shoulder girdle position

3. Shoulder Girdle Posture

4. Pelvic Tilt
   Pelvic tilt is highly correlated to
   - lumbar lordosis.
   - a functional abdominal wall.
   - lower extremity posture and incidence of injury.

5. Lower extremity posture
   Females have a wider pelvis to support child bearing. The wider pelvis creates a larger Q angle. Increased Q angle is well associated increased incidence of orthopedic dysfunction at the hip, knee, foot and ankle.

FLEXIBILITY

Nine Point Flexibility Index Test (3)
The nine points are as follows:
1. Little finger can be extended to 90° ( 1 point for each finger)
2. Thumb can be abducted to touch wrist (1 point for each thumb)
3. Elbow will hyperextend 10° or greater ( 1 point for each elbow)
4. Knee will hyperextend 10° or greater (1 point for each knee)
5. Client can touch both palms flat on the floor with legs held straight (1 point)

Scoring is as follows:
   0-2 = Physiologic finding
   3-4 = Mild hyper-mobility
   5-9 = Marked hyper-mobility

STABILIZER WEAKNESS

Stabilizer weakness is a common finding among males and females, although the incidence of Miserable Alignment Syndrome is reported to be higher in females (4).

- Survival and hormonal factors
- Lack of participation in exercise
- Overuse of machines

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ORTHOPEDIC DYSFUNCTION

The female athlete is at higher risk of injury to the thoracic outlet (1), shoulder, low back, sacroiliac joints, hips, knees, ankles and feet than their male counterpart (2,3,4).

PELVIC FLOOR DYSFUNCTION (7)

CORE STABILIZATION LOOP

1. Postural Dysfunction
2. Poor Abdominal Conditioning Technique
3. Stabilizer Weakness:
4. Overuse of Machine Exercises

5. Poor Cueing:
6. Sacroiliac dysfunction
7. Low Back Pain
8. Weight Belts

ECCENTRIC LOADING

There is a significant difference in eccentric loading capacity between males and females (13). The exercise professional should keep this in mind when developing plyometric programs and/or strength training programs. Should females be expected to perform at the same relative volume/intensity as males, injury is likely!

HORMONAL CONSIDERATIONS WHEN TRAINING FEMALES

There is a significant codependence between nutritional habits and hormonal balance in the female body. References 2, 3, 4, 6, 8 and 9 provide a better understanding of tactical preparation for female athletic performance.

NUTRITIONAL CONSIDERATIONS - DO NOT DIET!! (15)

NUTRITIONAL CONCERNS - PROTEIN

When studying protein deficiency and over training, an important correlation can be seen in that there are several common symptoms:

- Abnormal energy highs and lows
- Reduced ability to concentrate
- Lack of motivation
- Anti-socialism
- Poor recovery from exercise
- Reduced sex drive

FAT FIGHTING TIPS

1. Increase lean muscle mass
2. Use compound exercises
3. Balance cardiovascular & resistance training
   - avoid the “Chunky Aerobics Instructor Syndrome”!
4. Eat soon after exercise
5. Avoid eating big meals late at night
IS SHE REALLY GETTING BIGGER?
PROGRAM DESIGN STRATEGIES FOR FEMALES

SUGGESTED MODIFICATIONS FOR CLIENTS WHO HYPERTROPHY EASILY
1. Reduce exercise intensity to <70% by performing additional reps per set.
2. Alternatively increase exercise intensity to allow less than six reps per set. Note: only use this method on advanced level lifters.
3. Reduce volume of sets per exercise.
4. Reduce the number of exercises affecting the body part of concern.
5. Start and / or end the training session with aerobic exercise.
6. Change exercises more frequently.
7. Use rest periods of > 1 minute between sets.
8. Use compound exercises.
9. Reduce total time under tension per set by altering tempo. Be careful not to exceed a 202 tempo in novice lifters or you may encourage injury.

EXERCISING FOR OPTIMAL BONE HEALTH
✓ Avoid interrupting menstrual cycle through poor eating and training habits
✓ Don’t let body fat drop below 13% if possible
✓ Regularly perform weight bearing exercises to keep bones strong:
✓ Squats, Lunges, Presses, Jumping and Hopping Drills, Dead Lifts, Step-Ups, Dips and Push-Ups are all exercises that effectively load the bone structures

SELECTING EXERCISES FOR FEMALES
✓ Consider the type of exercises chosen relative to your client's current postural alignment, functional stability, functional capacity, and strength levels. When exercises are chosen for the purpose of improving esthetics, without regard for alignment and/or function the incidence of injury goes up and client retention goes down!
✓ Conditioning programs should always begin with posture correction. If this approach is not taken, mechanical loading will serve to accelerate musculoskeletal dysfunction.

PUTTING IT ALL TOGETHER
1. Assess Posture
2. Assess Stabilization
3. Functional Strength Training

IMPLEMENTING CARDIOVASCULAR TRAINING
✓ Cardiovascular training should follow strength training.
✓ If there are special needs for performing aerobic training first, the exercise professional must adjust the client’s training schedule accordingly.
✓ The conditioning specialist must be careful not to allow sessions to be too long (12).
REFERENCES

SUGGESTED STUDYING

For a complete list of references, please e-mail the C.H.E.K Institute.

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