Body leverage training is a hot trend in fitness. Exercising using body weight has been used for thousands of years, and is emerging as a popular work-out again. Plenty of research exists on the effectiveness of exercises such as push-ups (Cogley, et al., 2005), abdominal/core training (Monfort-Pañego, et al., 2009), and plyometrics (Markovic & Mikulić, 2010). This presentation will present, discuss, and demonstrate what the research indicates are the best exercises to enhance fitness using body weight. Body leverage training takes on many forms including push-ups, abdominal/back/core training, jump training, and partner resistance training. Body leverage training is at the forefront of innovative programming in the fitness industry. The research and efficacy of this form of training will be discussed with demonstrations of most of the exercises that appear in the research.

1) Warm-up

2) Push-Ups and Upper Body
   a) Research on effectiveness of push-ups with hands in different positions: “for greater muscle activation during exercise, then push-ups should be performed with hands in a narrow base position compared with a wide base position (Cogley, et al., 2005),
   b) “Perfect Push-up.” Perfect body position.
   c) “V” Push-up.
   d) Wide Hands Push-up.
   e) Plyo-Push-up.
   f) Modified Push-up.
   g) Multiple variations for hand placement for push-ups.
   h) Partner holding feet in air push-up (“Push-ups with the feet elevated produced a higher ground reaction forces than all other push-up variations, Ebben, et al., 2011).
   i) Plyo-Push-Ups: “fall push-ups required kneeling subjects to drop and then attempt to return to their initial position exercise achieved higher levels of muscular activation in the agonist and synergist muscle groups, and greater impact forces and impact force development rates.” (García-Massó, et al., 2011)
   j) Vertical Partner Push-Up
   k) Dips on partners knees with partner doing curl-ups and/or back bridge.
   l) Self-resistance – arm curls/tricep extension.
   m) Partner Standing Row and Partner Lat Pulldown

3) Abdominal/Back/Core
   a) Research on effectiveness of abdominal/core/back training.
   b) Neutral spine core training.
   c) Modified core training, Standing Front & Side Planks and Standing Bird Dog. For beginning exercisers and workplace training.
d) Front Plank, Modified on knees and normal with elbows under shoulder.
e) Right & Left Side Plank, Modified on knees and normal with elbows under shoulder.
f) Front plank and side plank pushing on partners hands . . . “Plank Arm Wrestle.”
g) Bird Dog, modified and regular to advanced.
h) Vertical core training – Arm Chops.
i) Pelvic stabilization exercises, Standing Cat Camel, Standing Pelvic Tilt, Pelvic Tilt with Ab Contraction, Pelvic Tilt-Ab Contract, Kelgal exercise (contracting and relaxing the muscles that form part of the pelvic floor, improve the tone and function of the pelvic floor muscles)
j) Pelvic stabilization: single leg pelvic stabilization.
k) Practice all exercises.

4) Legs
a) Self-resistance for single joint exercise, open kinetic chain: quads and hamstrings with self-resistance.
b) Hamstring partner exercise (Nordic Hamstring Exercise: Lorenz & Reiman, 2011) for increasing eccentric strength and injury prevention.
c) Closed Kinetic Chain Leg Exercises: Partner Squats, Squat Jumps, Single Leg Squats, and Lunges with different arm movements and positions. How does arm position challenge the core?
d) Jump Training & Plyometric exercises: “stimulate the series elastic component of the muscle, a small amount of volume is required to bring about these positive changes i.e. 2-4 sets of 10 repetitions per session.” (Matavulj, et al., 2001, Blackey & Southard,1987) or “4 sets of 8 repetitions.” (Gehri, et al, 1998).
e) Practice all exercises.

5) Compound Exercises
a) Partner Pull-Up Dead Lift

6) Periodization of Body Leverage Training
a) Endurance training for all body parts, reps or holding contraction for higher counts.
b) Why we need endurance for the core; endurance throughout the day.
c) Developing muscle strength with body leverage training, reps, static contraction, and speed of movement.
d) Power training for upper and lower body with jump training and Plyometrics, speed of movement.
e) Practice a periodization model.

Take Away Messages
a) Understand the multiple ways that body leverage training can be used for all clients.
b) Understand the research justification for body leverage training.
c) Understand how to periodize a body leverage training program.
d) Get a great work-out!!
Research Citations & Web Sites for Body Leverage Training


Web Sites