

PILATES AND YOGA NEWS FROM ACSM ANNUAL MEETING

Studies Span Activities, Training Methods, and Benefits

INDIANAPOLIS– Pilates mat exercises that lend to a flatter tummy may be those that are lower on flexion, including the Hundred and the Double-Leg Stretch, since these appear to engage the deeper muscles (i.e. internal oblique/transverse abdominis) of the abdomen more so than the superficial rectus abdominis. A new study presented today at the 55th Annual Meeting of the [American College of Sports Medicine](#) (ACSM) supports Pilates as a form of exercise to strengthen and tone the core abdominals.

The study compared select movements/exercises of Pilates, including the Hundred, Roll-Up, and Double-Leg Stretch and the standard Crunch, and recorded the extent to which they activated the abdominal muscles. Based on their measurements, the Hundred and Double-Leg Stretch exercises activated the deeper muscles to a higher degree.

Conversely, the Roll-Up elicited the lowest deep-muscle activity and the highest activity in the outer rectus abdominis, the muscles commonly known as the "six pack," which are paired vertically alongside each side of the anterior wall of the body's abdomen.

"From the aesthetic perspective, these deeper muscles contribute to the leaner, flatter appearance of the stomach," said Michele S. Olson, Ph.D., FACSM. "Strengthening the deeper abdominal muscles is truly a functional benefit of both health and fitness, providing better support for overall movement and a stronger back."

Yoga Mediates Factors for Chronic Low-Back Pain

A 10-week yoga intervention combining breathing, stretching, strengthening exercises increased factors relating to quality of life and decreased negative factors, such as fear of physical activity and pain disability, in a small study of people with chronic back pain.

Low-back pain is a major musculoskeletal complaint often contributing to inactivity and weight gain. To assess the impact of a yoga program implemented at the worksite, researchers enrolled participants in the 30-minute, twice-a-week yoga session or in the non-intervention control group.

Those who practiced yoga experienced significant improvements in their sense of feeling peaceful and calm, as well as their ability to climb stairs. Fear-avoidance beliefs, such as the idea that "physical activity worsens pain," were significantly altered when self-reported body weight was improved during the study term.

Yoga and Resistance Training Studied as Mood Boosters

Yoga and resistance training combined in a fitness regimen had positive effects on anxiety and other mood characteristics in another study presented at ACSM. The study examined the effects of acute bouts of these activities, and compared them to participants' mood states, including anxiety, tension, calmness, energy and tiredness.

The benefits of resistance training had longer-lasting, more robust effects post-activity, producing changes in all mood variables. The effects of yoga were most pronounced in anxiety reduction and calmness. Researchers believe the potential mental health and physiological benefits make these activities a unique combination for both improved physical health and mental wellness.

Combine Yoga and Dancing for Bone Health

Strength and flexibility can be favorably improved in pre- and post-menopausal women with activities such as yoga and dancing that promote slow, purposeful movement. The activities were joined to study strength and flexibility gained through yoga and the enhanced movement capacity gained through various forms of active dancing.

The study evaluated the changes in pre- and post-menopausal women throughout the course of a year of practicing yoga and dancing. Researchers paid particular attention to the effects of these practices on women with osteopenia and osteoporosis.

A small group of women, ranging in ages 39 to 60 years old, participated in a yoga and dancing program for four hours a week in two sessions for one year. The team tracked their body weight, physical fitness and bone health. The women lost weight during the program, and all improved their flexibility and strength of upper and low extremities.

Researchers credit purposeful movements in yoga and dancing for improvement of strength and joint mobility for women. “Yoga and dancing combined can also reasonably reduce the risk of an injury, such as bone fracture or break from a fall, because the participants will be stronger and have greater balance,” said Edtra Jauregui-Ulloa, Ph.D., lead author of the study. “These exercises may be especially appealing for older women, who need some type of physical activity to build their bone health but are not apt to be running or playing sports.”

An ACSM [Position Stand](#), “Physical Activity and Bone Health” from 2004 says that rates of osteoporosis are increasing faster than the rate of population aging in the U.S., making bone-strengthening activities especially important.

The [American College of Sports Medicine](#) is the largest sports medicine and exercise science organization in the world. More than 20,000 international, national, and regional members are dedicated to advancing and integrating scientific research to provide educational and practical applications of exercise science and sports medicine.