Injury Prevention: Group Strength

Help students get and stay strong safely.

Strength training has long been a popular component of group fitness programs. With a wide variety of styles to choose from, participation is high. According to the 2006 IDEA Fitness Programs & Equipment Survey, 77% of respondents reported offering group strength training classes (Ryan 2006). Traditional formats that focus on cardiovascular training have been overtaken by those that emphasize slower, more strength-based conditioning.

The term group strength training describes anything from a traditional sculpting class to a prechoreographed class set to music. Other popular formats that incorporate strength training into group fitness include hybrids such as "get and sculpt," and boot camp-style classes, which incorporate both cardiovascular and resistance drills into a fast-paced circuit workout.

Today's instructors have access to a great assortment of equipment for group strength classes. In addition to dumbbells, barbells and tubing, instructors can choose from kettle bells, CoreBell, Gravity Training System® (HTS®), weighted vests and gloves, medicine balls and stability balls, to name just a few. With all this variety comes a great responsibility to offer safe and effective classes, regardless of the equipment or programming choices that are made. It's important to be aware of common injuries that occur in group strength classes and to know how to minimize risk.

COMMON GROUP STRENGTH INJURIES

Muscles. A strain occurs when muscle tissue stretches or tears. When a muscle is powerfully contracted or stretched too far, the strain is acute. Chronic strains result from excess use over time. Many people call muscle strains "pulled muscles." Unconditioned group strength participants often experience muscle strains and delayed onset muscle soreness (DOMS). It is common, for example, to see pulled hamstrings and/or lower back injuries when participants overestimate their hamstring flexibility while executing a dead lift. DOMS occurs 24–48 hours after the exercise session and can last several days. It is not considered serious (except to the participant who is experiencing it for the first time); however, an individual's voluntary range of motion may be hindered, which can also affect subsequent training sessions. If pain persists past the initial period of soreness and/or increases in intensity, students should be referred to a physician. >>

teaching tips

- Before class starts, tell participants to get several levels of resistance equipment (e.g., different colored resistance bands) so they can make adjustments during the class.
- Show participants proper posture and body position before each exercise.
- First teach each movement pattern without using any weight and resistance only after correct technique and alignment have been established.
- Make sure that participants perfect their alignment before progressing loads.
- Establish the correct movement pattern before adding speed.
- Offer variations and modifications to accommodate different body types/fitness levels and to reduce the risk of overuse injuries.
- Control the number of repetitions.
Tendons and Bursae. Tendonitis and bursitis are common overuse injuries seen in group strength training. Tendonitis is an inflammation or irritation of a tendon. Tendons are the thick, fibrous cords that attach muscles to bones. Tendons turn power generated by muscles into motion by transmitting dynamic force to bones, causing movement at joints. Bursitis is inflammation or irritation of a bursa. Bursae (the plural of bursa) are small sacs located between moving structures such as bones, muscles, skin and tendons. Bursae act as cushions to allow smooth gliding between these structures (American College of Rheumatology 2005). If participants perform exercises such as bicep curls, triceps extensions and push-ups with too much weight or too many repetitions, they may irritate tendons and bursae in the shoulders, elbows and wrists.

Safe Group Strength Training: Injury Avoidance

When executed properly group strength training is a safe form of exercise that provides many benefits. Here are a few fundamentals that will assist you in creating an injury-free environment.

Warm Up. A good general warm-up increases blood circulation to the muscles, lubricates the joints and prepares the body to handle increased loads placed on the muscles and joints. The warm-up should address all major muscle groups and associated joints; increase the heart rate and simulate or teach movement patterns that will be performed in the class.

Teach Alignment. Teach and consistently reiterate proper alignment for each exercise. Train for perfect alignment with little or no resistance before progressing to loads. The success of your class depends on how well you can set up the movement, provide motivation and alignment cues, and help each individual feel challenged without going beyond her own ability level (Crews 2000). Assemble a mental toolbox of technical cues, including both visual and verbal directions. This is a proven strategy you can use to help all students understand what you are looking for. Let participants seek, feel it and do it.

Slow Down. Encourage students to learn correct alignment slowly at first. Add speed as the last training variable. When good form starts to suffer, take it as a signal that participants have exceeded their own safe "speed limit." Slow them down until they re-establish proper form. If faster music feels more motivating, try teaching the exercises in half time.

Modify. As a group strength instructor, you must know how to modify exercises to suit the skills and body characteristics of a wide range of participants. Decrease the range of motion when a participant complains about feeling joint discomfort. Encourage participants to talk to you before or after class about modifications or substitutions if an exercise causes pain or if the participant has pre-existing injuries.

Do Your Homework. Group strength is a specialized format and, as such, requires additional training. Inexperienced or poorly trained instructors can unintentionally cause student harm. Here a good understanding of basic anatomy, the biomechanics of resistance exercise and the nuances of working with the different types of equipment available today. Observe these standards of professionalism and prepare yourself to deliver life-changing benefits to your participants.

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References


Ryan, F. 2006. 5 viewpoints on starting your class’s needs. IDEA Fitness Journal 17(5), 61-65.