

The Brookbush Institute Announces New Lessons on learning "Joint Actions"

A better teaching approach is needed for introducing anataomical terms and joint actions to fitness, sports performance, and physical rehabilitation students.

NEW YORK, NY, UNITED STATES, April 30, 2024 /EINPresswire.com/ -- The Brookbush Institute leads the charge with the development of a studentcentered course that is far more than memorization. The course includes a video lecture, activities, tons of examples, and a bit of humor to make learning, understanding, and applying the terms a fun and rewarding experience! (Note, this course is also approved for credits toward continuing education and certification)



All of us deserve student-centered education. Every learner should be given the best chance to succeed.

INTRODUCTION from "Lesson 3: Joint Actions" (from "Introduction to Functional Anatomy <u>Courses</u>" at <u>BrookbushInstitute.com</u>)

Joint Action (Definition): Joint actions are the labels given to the movement of bones around a joint. Each pair of joint actions is associated with a plane of motion. Joint actions may be referred to as "osteokinematic motions" or "osteokinematic joint actions" to differentiate them from "arthrokinematic motions" (e.g. spin, glide, roll, etc.).

The motions of bones that are permitted by joints are described with the terms known as "joint actions." Joint actions are used to improve the accuracy of communication between movement professionals when describing exercise, therapeutic interventions, sports motions, and daily activities. Examples of joint actions include flexion, extension, adduction, abduction, horizontal adduction, horizontal abduction, internal rotation, and external rotation. Movement professionals can use knowledge of joint actions to aid in analyzing motion; for example, a wide-grip (conventional) pull-up is shoulder joint adduction, and a close-grip (chin-up) pull-up is shoulder extension. Or, during a lunge, the hip joint performs extension, the knee joint performs extension, and the ankle joint performs plantar flexion. The joint actions correspond to the

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Just wanted to say thank you. These videos have been so helpful. You are a great teacher. I went to college for exercise science, and I'm learning more from these courses than I ever did in college."

Frances, Personal Trainer and BrookbushInstitute.com member. recruitment of muscles, which may have a significant effect on exercise and technique selection.

Sports medicine professionals (personal trainers, fitness instructors, physical therapists, athletic trainers, massage therapists, chiropractors, occupational therapists, etc.) must know joint actions to communicate with other professionals, analyze movement, and develop sophisticated exercise programs and therapeutic (rehabilitation) interventions. Note, that joint actions also correspond to the planes of motion discussed in the previous lesson (For example, flexion and extension are sagittal plane joint actions). Further, joint actions are essential knowledge for upcoming lessons discussing the

function of synovial joints (e.g. pivot joints, gliding joints, hinge joints, etc.), connective tissue (ligaments, tendons, etc.), muscle actions (e.g., eccentric, concentric, etc.), etc.

Joint Actions by Plane of Motion

Sagittal Plane Joint Actions

- Flexion: A decrease in joint angle (in the sagittal plane)

- Extension: An increase in joint angle (in the sagittal plane)

Frontal Plane Joint Actions

- Abduction: Movement away from the midline of the body (in the frontal plane).

- Adduction: Movement toward the midline of the body (in the frontal plane).

- Lateral Flexion: Displacement of the trunk away from the midline in the frontal plane (in the frontal plane).

Transverse Plane Joint Actions

- External (lateral) Rotation: Movement of the anterior side of a segment away from the midline of the body.

- Internal (medial) Rotation: Movement of the anterior side of a segment toward the mid-line of the body.

- Horizontal Adduction (flexion): Horizontal motion that results in movement toward the midline.'

- Horizontal Abduction (extension): Horizontal motion that results in movement away from the midline.

THIS COURSE INCLUDES:

- Video Lecture
- Study Guide
- Text of Material

- Learning Activities

- Planes and Exercises Table
- Practice Exam
- Continuing Education and Certification Approved Final Exam

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