Partial or Full Range of Motion During the Bench Press

THERE ARE STRENGTH AND conditioning professionals who believe that limiting the range of motion (ROM) during exercises, such as the bench press, is necessary for increased safety and joint integrity. They suggest that the upper arm should never go below parallel at the bottom of the eccentric phase of bench pressing. These proponents of partial ROM training often provide contradicting information in the name of safety. They follow recommendations for partial ROM bench pressing side-by-side with full push-up and door frame chest stretches. The only difference between a full bench press, full push-up, and the door frame chest stretch is the matter of load. Improper loading and lack of progression are the main culprits of injury, rather than properly performing an exercise through an individual’s full, functional ROM.

Before we can make these absolute recommendations we must consider some key issues. First, we must differentiate between an individual’s anatomical and functional ROM. If a joint’s anatomical ROM is 120°, there is no reason why an individual should be limited to training with less than that range unless there are functional abnormalities that would not allow movement through the full ROM. In this case, limiting the full, functional ROM would be prudent, and by doing this we maintain a ROM below the anatomically specified ROM, yet we are still performing within that individual’s full, functional ROM. Second, individuals such as athletes are required many times to accept heavy stress near the end of their functional ROM. In these instances, training an individual through some arbitrary limited range does not prepare the target structures for the stresses that they will surely encounter. This will increase the likelihood of injury. Therefore, to make the recommendations for exercising through partial ROM without regard for individual differences and needs is ludicrous.

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OPTIMALLY, FULL RANGE OF motion (ROM) movements are preferable for balance, stability, and total training of the joint and surrounding musculature. However, there are specific cases where partial ROM movements are desirable. In order to rehabilitate certain shoulder injuries, to prevent particular injuries, and to enhance overload and increase strength, athletes and coaches should consider performing partial ROM bench presses.

After shoulder injuries or surgeries, it may be necessary to slowly progress shoulder ROM to prevent pain, inflammation, or damage of healing structures. Why wait until the athlete can perform full-range bench presses to train that area? Partial ROM bench presses can be utilized in pain-free and medically prescribed ranges. This way, injured athletes can still perform movements to minimize tissue atrophy and maintain neuromuscular control and coordination.

Pectoralis major ruptures can be prevented by limiting bench press ROM. Research has shown that during the bench press, the short, inferior fibers of the pectoralis major muscle lengthen disproportionately during the final 30° of humeral extension. These inferior fibers have a mechanical disadvantage in the final portion of the eccentric phase of the lift, and application of high loads to these maximally stretched fibers can produce ruptures. Therefore, in order to prevent injury during cycles of heavy training, athletes may wish to limit full ROM bench presses in an attempt to minimize excessive overload on the mechanically disadvantaged fibers of the pectoralis.

For advanced athletes who have reached a plateau in the full ROM, 1RM, and 5RM bench...
press, partial ROM bench presses may be beneficial. The “sticking point” of the full ROM bench press movement limits training in the area of the ROM where maximal force development can occur. Partial ROM bench presses during training allow athletes to utilize supramaximal loads. These loads physiologically challenge the musculature in the ROM where maximal force development occurs. Research has shown that athletes training with partial rom bench presses can make strength improvements. This could possibly lead to a breakthrough in their full ROM bench press plateau.

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