# Article information:

Effects of Variations of the Bench Press Exercise on the EMG... : The Journal of Strength & Conditioning Research
<https://journals.lww.com/nsca-jscr/abstract/1995/11000/effects_of_variations_of_the_bench_press_exercise.3.asp>

# Article summary:

1. The experiment investigated the effects of varying bench inclination and hand spacing on the EMG activity of five muscles acting at the shoulder joint during bench press exercises.

2. The sternocostal head of the pectoralis major was more active during the press from a horizontal bench than from a decline bench, while anterior deltoid activity tended to increase as trunk inclination increased.

3. The long head of the triceps brachii was more active during the decline and flat bench presses than the other two conditions, and was also more active with a narrow hand spacing.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Effects of Variations of the Bench Press Exercise on the EMG Activity of Five Shoulder Muscles" by Barnett, Kippers, and Turner investigates the impact of bench inclination and hand spacing on the electromyography (EMG) activity of five shoulder muscles during bench press exercises. The study involved six male weight trainers performing presses under four conditions of trunk inclination and two hand spacing at 80% of their predetermined max.

The authors report that there were some significant effects of trunk inclination and hand spacing on EMG signals during the 2-sec lift. The sternocostal head of the pectoralis major was more active during the press from a horizontal bench than from a decline bench. Also, the clavicular head of the pectoralis major was less active during the decline bench press than during the incline or horizontal one. The clavicular head was more active with a narrow hand spacing, while anterior deltoid activity tended to increase as trunk inclination increased. The long head of the triceps brachii was more active during decline and flat bench presses than other conditions, and it was also more active with a narrow hand spacing. Latissimus dorsi exhibited low activity in all conditions.

While this study provides valuable insights into how variations in bench press exercise affect shoulder muscle activation, there are some potential biases and limitations to consider. Firstly, only male weight trainers were included in this study, which limits its generalizability to other populations such as female weight trainers or non-weight trainers. Secondly, only five shoulder muscles were investigated in this study, which may not provide a comprehensive understanding of how different variations affect overall muscle activation patterns.

Additionally, while some significant effects were observed for trunk inclination and hand spacing on EMG signals, it is unclear whether these differences translate into meaningful differences in muscle hypertrophy or strength gains over time. Furthermore, this study did not investigate potential risks associated with different bench press variations, such as increased risk of shoulder impingement or rotator cuff injuries.

Overall, while this study provides valuable insights into how variations in bench press exercise affect shoulder muscle activation, it is important to consider its limitations and potential biases when interpreting the results. Future research should investigate a broader range of populations and muscle groups and explore potential risks associated with different bench press variations.

# Topics for further research:

* Risks associated with different bench press variations
* Muscle hypertrophy and strength gains from bench press variations
* Shoulder impingement and rotator cuff injuries from bench press variations
* Gender differences in shoulder muscle activation during bench press
* Effects of bench press variations on other muscle groups
* Comparison of EMG activity during bench press with other upper body exercises

# Report location:

<https://www.fullpicture.app/item/d2bacae06e77ea6b0ce660dd38966261>