# Article information:

Specific prime movers’ excitation during free-weight bench press variations and chest press machine in competitive bodybuilders: European Journal of Sport Science: Vol 20, No 5  
<https://www.tandfonline.com/doi/abs/10.1080/17461391.2019.1655101>

# Article summary:

1. The study compared muscle excitation in free-weight bench press variations and chest press machine in competitive bodybuilders.

2. The clavicular head was more excited in inclined bench press and less excited in chest press machine compared to all other exercises during the concentric phase.

3. Triceps brachii and lateral deltoid excitation were overall greater in free-weight bench press variations compared to chest press machine due to greater instability.

# 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 titled "Specific prime movers’ excitation during free-weight bench press variations and chest press machine in competitive bodybuilders" published in the European Journal of Sport Science provides insights into the muscle excitation patterns of competitive bodybuilders while performing different bench press variations. The study aimed to compare the muscle excitation in free-weight bench press variations and chest press machine.

The study recruited ten competitive bodybuilders, and the EMG-RMS amplitude of clavicular and sternocostal head of pectoralis major, long head of triceps brachii, and anterior and lateral deltoid was recorded while performing horizontal (BP), inclined (45°) (IBP) or declined (-15°) bench press (DBP) and chest press machine (CP). Four non-exhaustive repetitions were performed using 80% of 1-repetition maximum of each exercise. Both concentric and eccentric phases were recorded.

The study found that during the concentric phase, clavicular head was more excited in IBP and less excited in CP compared to all other exercises. The sternocostal head was similarly excited in DBP vs. BP and BP vs. CP and more excited compared to IBP. Triceps brachii excitation was overall greater in BP and DBP compared to all other exercises. Anterior deltoid was less excited in DBP compared to all other exercises. Lateral deltoid excitation was greater in BP, IBP, and DBP compared to CP.

However, the article has some potential biases that need consideration. Firstly, the sample size is small as only ten competitive bodybuilders were recruited for this study. Secondly, the study did not consider other factors such as age, gender, training experience, or injury history that could affect muscle activation patterns during different bench press variations.

Moreover, the article does not provide any evidence for claims made regarding muscle activation patterns during different bench press variations. The study only recorded EMG-RMS amplitude, which is not a direct measure of muscle activation. Additionally, the article does not explore counterarguments or potential risks associated with performing different bench press variations.

Furthermore, the article seems to be promotional in nature as it suggests that using BP variations vs. CP allows overall greater triceps brachii and lateral deltoid excitation due to greater instability. This claim needs further evidence and research to support it.

In conclusion, while the article provides some insights into muscle activation patterns during different bench press variations, it has some potential biases and limitations that need consideration. Further research with larger sample sizes and considering other factors such as age, gender, training experience, or injury history is needed to provide more conclusive evidence regarding muscle activation patterns during different bench press variations.

# Topics for further research:

* Bench press variations and injury risk
* Gender differences in muscle activation during bench press
* Age-related changes in muscle activation during bench press
* Training experience and muscle activation during bench press
* Comparison of free-weight vs. machine-based exercises for chest muscles
* Muscle activation patterns in different bench press variations for non-bodybuilder populations

# Report location:

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