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# Effects of an elastic taping application on active cervical R.O.M.

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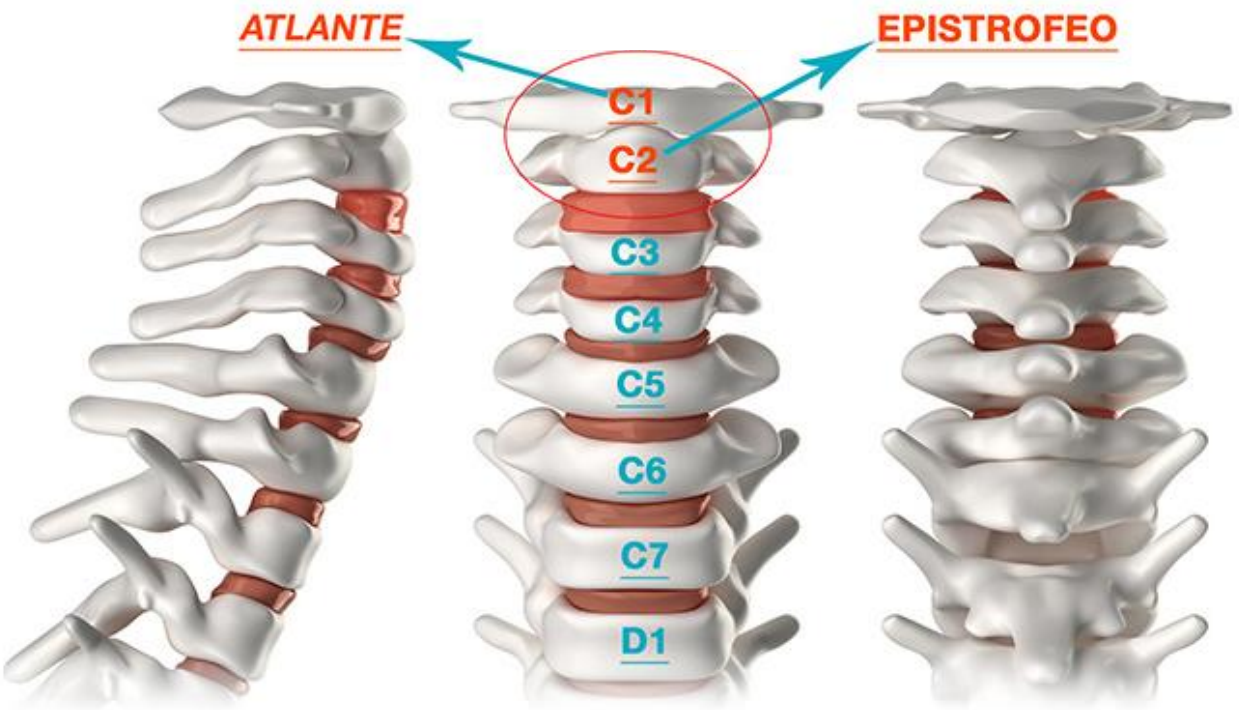
# Introduction

**Cervical Spine**

High number of daily movement

High injury risk in sport (Swartz et al., 2005)

Correct flexibility and Range of Motion are correlated with the health of cervical spine and neck (Meisingest et al., 2015)



# Introduction

## The use of elastic taping

Physiother Theory Pract. 2013 May;29(4):259-70. doi: 10.3109/09593985.2012.731675. Epub 2012 Oct 22.

**The clinical effects of Kinesio® Tex taping: A systematic review.**

Morris D[1], Jones D, Ryan H, Ryan CG.

***No clinical advantages***

J Orthop Sports Phys Ther. 2009 Jul;39(7):515-21. doi: 10.2519/jospt.2009.3072.

**Short-term effects of cervical kinesio taping on pain and cervical range of motion in patients with acute whiplash injury: a randomized clinical trial.**

González-Iglesias J[1], Fernández-de-Las-Peñas C, Cleland JA, Huijbregts P, Del Rosario Gutiérrez-Vega M.

J Orthop Sports Phys Ther. 2012 Aug;42(8):724-30. doi: 10.2519/jospt.2012.4086. Epub 2012 Apr 20.

**Short-term effects of kinesio taping versus cervical thrust manipulation in patients with mechanical neck pain: a randomized clinical trial.**

Saavedra-Hernández M[1], Castro-Sánchez AM, Arroyo-Morales M, Cleland JA, Lara-Palomo IC, Fernández-de-Las-Peñas C.

***Few significant changes not clinically relevant according to authors***

Rev Bras Reumatol. 2016 Mar 9. pii: S0482-5004(16)00042-5. doi: 10.1016/j.rbr.2015.12.004. [Epub ahead of print]

**The effectiveness of kinesio taping on pain and disabilty in cervical myofascial pain syndrome.**

[Article in English, Portuguese]

Ay S[1], Konak HE[2], Evcik D[3], Kibar S[2].

***Alternative treatment***

# Hypothesis and aim of the study

A lot of studies and trials on sore subjects but no data on healthy individuals.

What are the effects of elastic taping on neck for healthy subjects

**Hypothesis:** can elastic taping enhance the neck movement and the correct neck perception also in healthy subjects?

**Aim:** to measure the neck motion changes before three days of using elastic taping on the neck on healthy subjects.

# Methods: subjects and procedures

| Group | Age (years) | Height (cm) | Weight (kg) |
|---|---|---|---|
| Study (n=50) | 33,9 ± 4,8 | 174,5 ± 8,2 | 73,5 ± 11,2 |
| Control (n=20) | 36,2 ± 3,9 | 174,9 ± 10,9 | 71,2 ± 12,9 |

**T0**

- ACROM measurement to assess head movement
- NRS to assess subjective neck “condition”
- Elastic taping application (Study Group)

**20’ after**

- ACROM measurement to assess head movement
- NRS to assess subjective neck “condition”

**3 days after**

- ACROM measurement to assess head movement
- NRS to assess subjective neck “condition”
- Elastic taping removal (Study Group)

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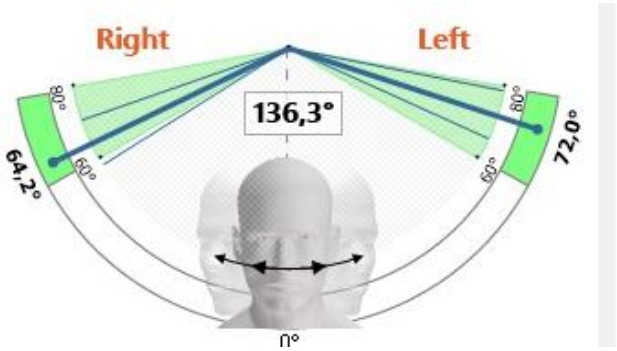
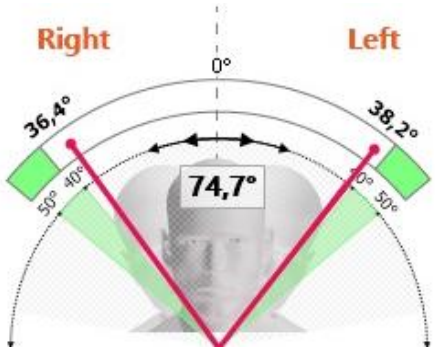
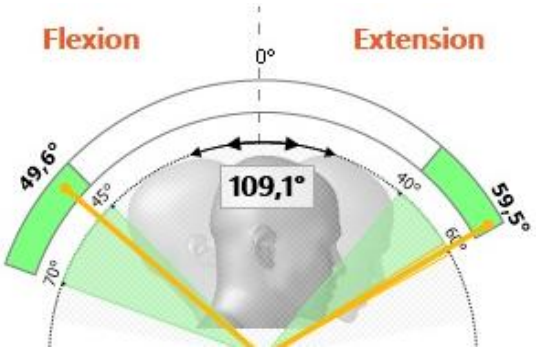
# Methods: ROM measurement


ACROM was measured by an inertial sensor (Moover, Sensor Medica, Italy)

Measurements:
Maximum and average ROM for head rotation, lateral inclination, flexion and extension



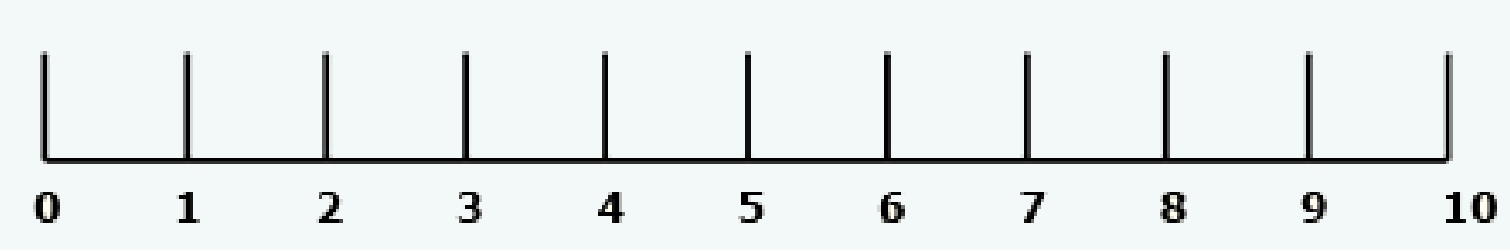



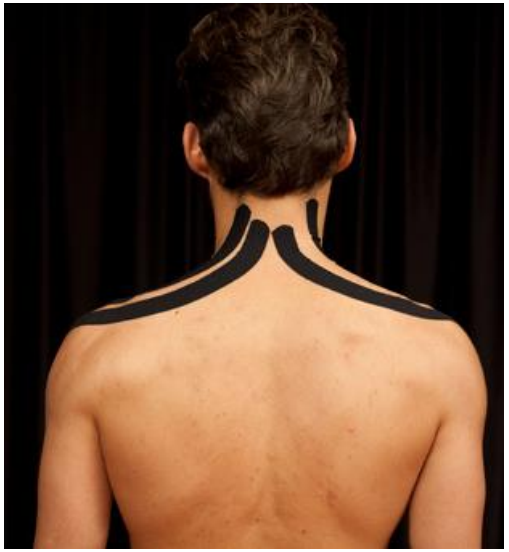
# Methods: subjective condition

To assess the subjective neck condition, comfort and pain was used a Numerical Rating Scale (0-10)

| Rate | Comfort and pain |
|---|---|
| 0 | no pain, good feeling and comfort of the neck |
| 10 | the worst pain, bad feeling and discomfort of the neck |



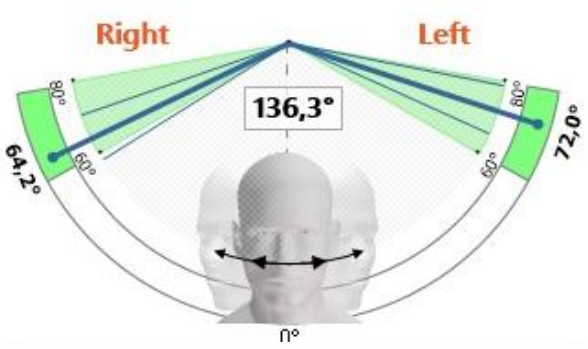
# Methods: elastic taping application

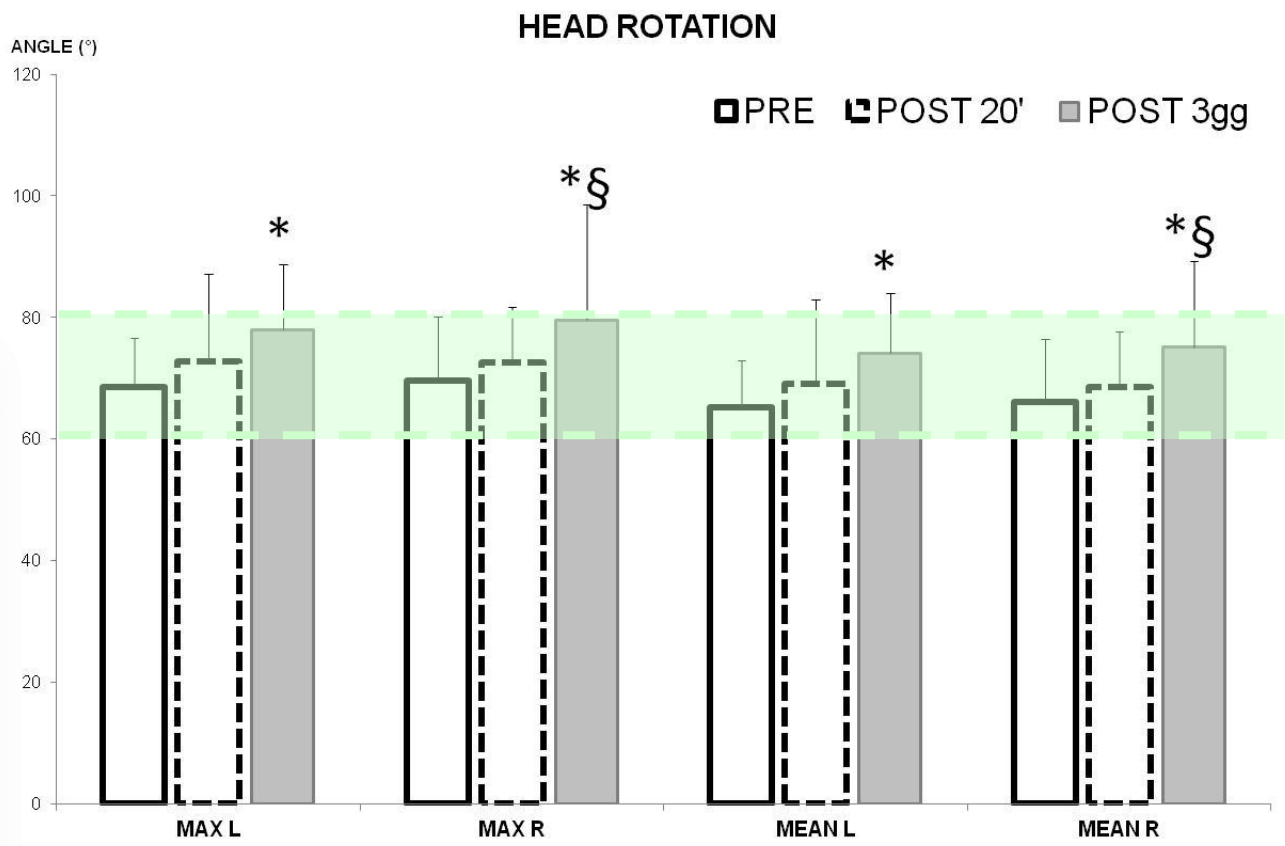


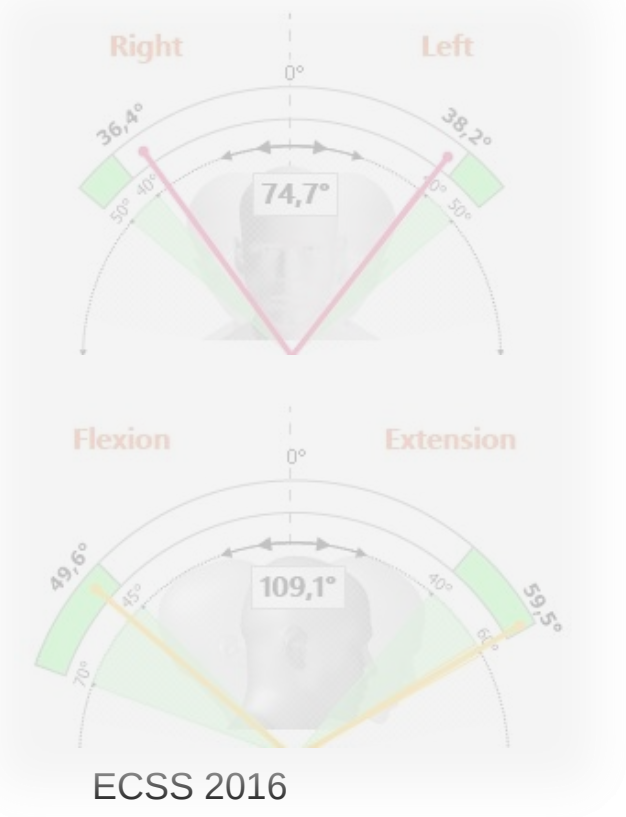
The elastic taping (Taping Elastico®, ATS, Italy) was applied on the *superior Trapezius* and cervical zone

According to the Taping Elastico® method the tape was cut in the middle on the long axis ("Y" cut) and it was applied on the skin without tension (0%) from the distal to the proximal "basis"

# Results for Study Group



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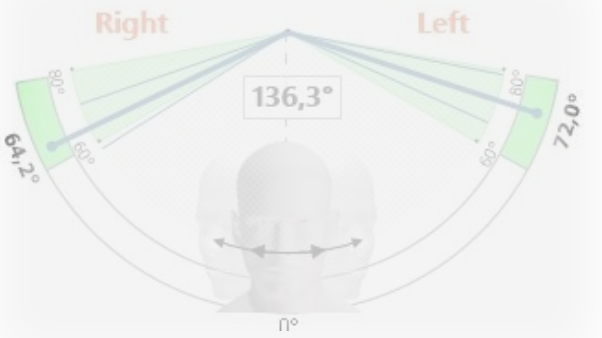
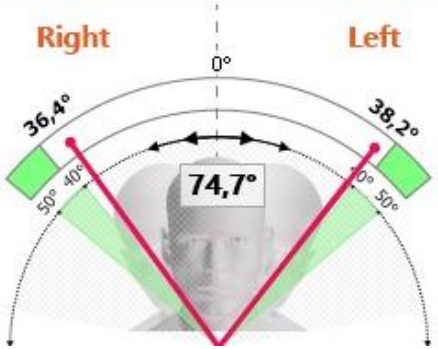
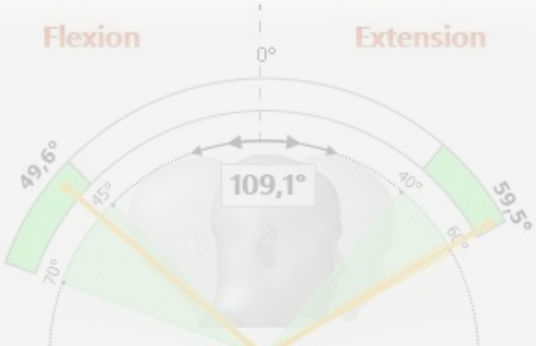
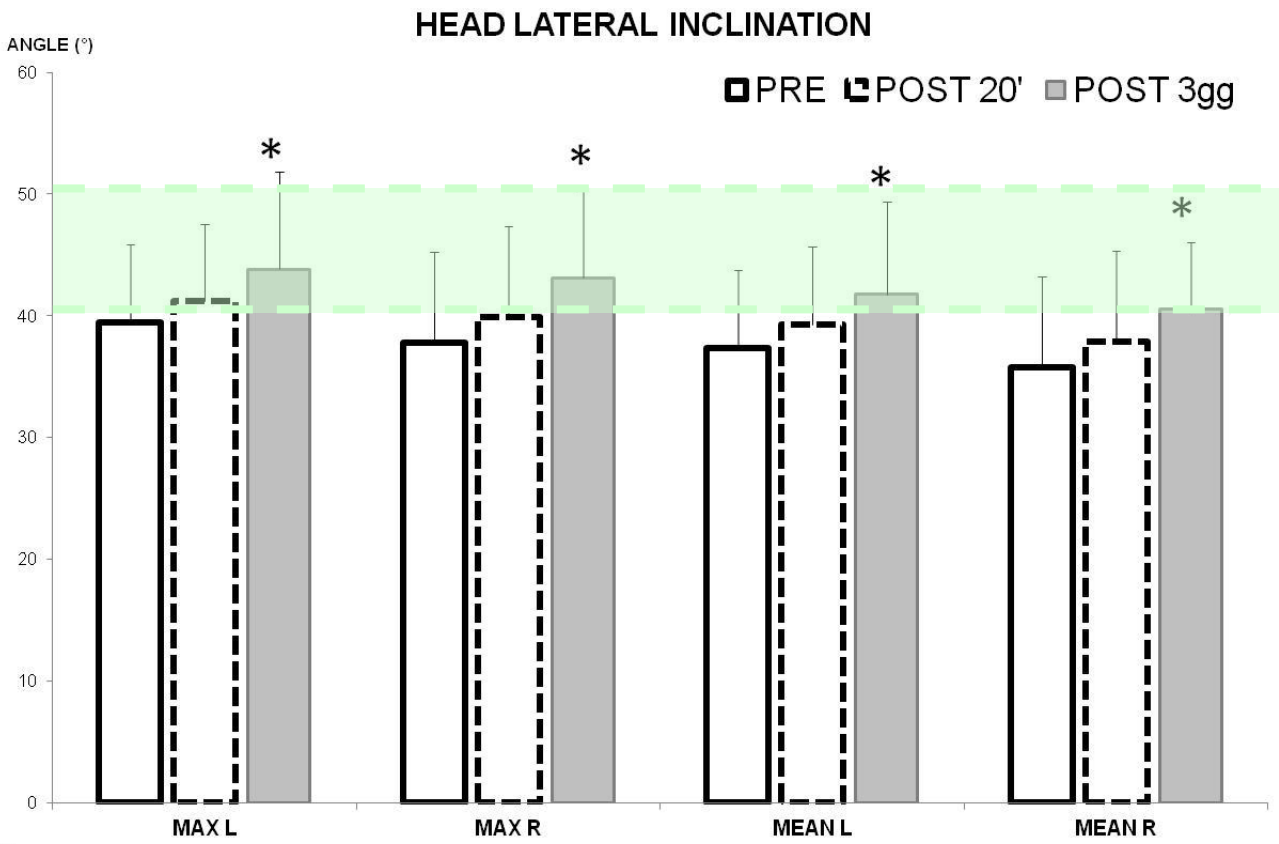
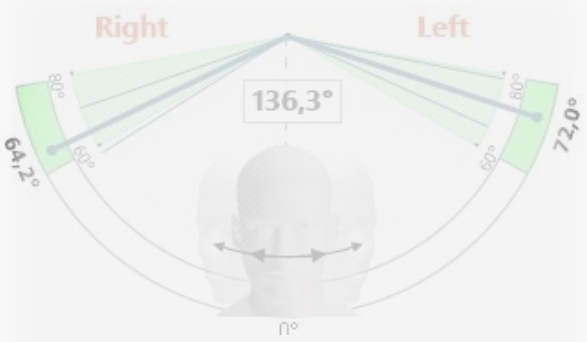


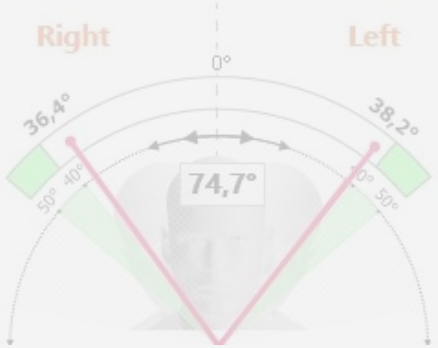



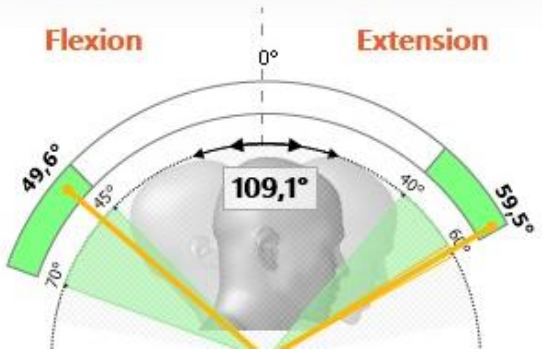



# Results for Study Group

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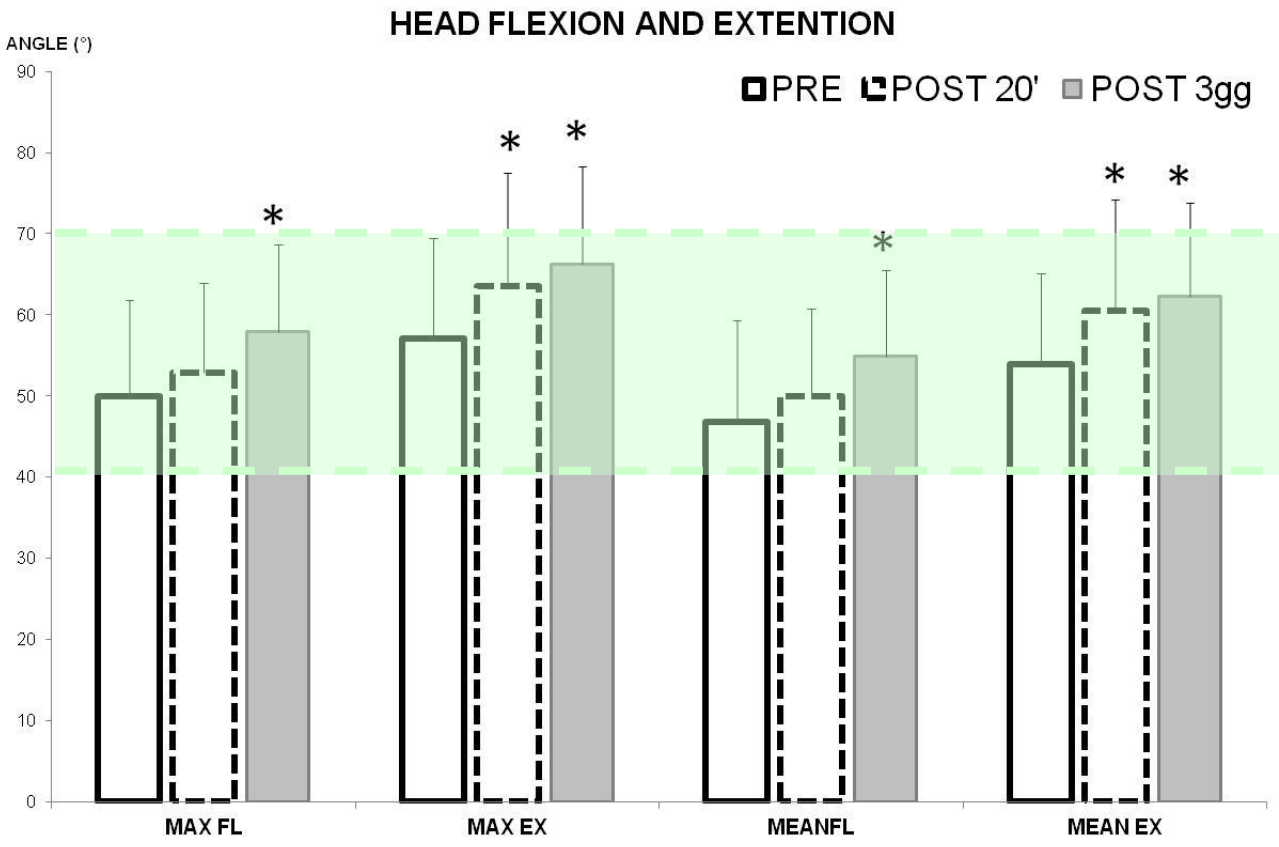
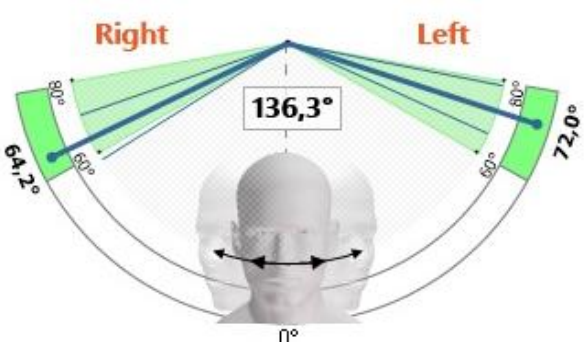
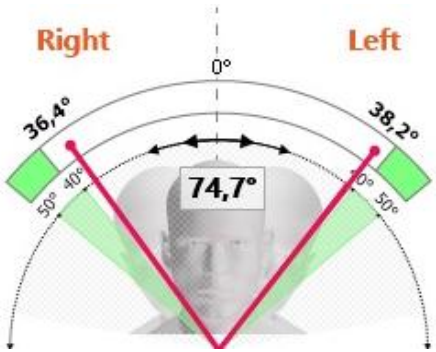
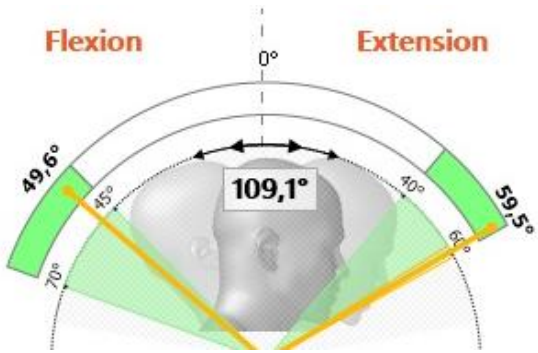


# Results for Control Group

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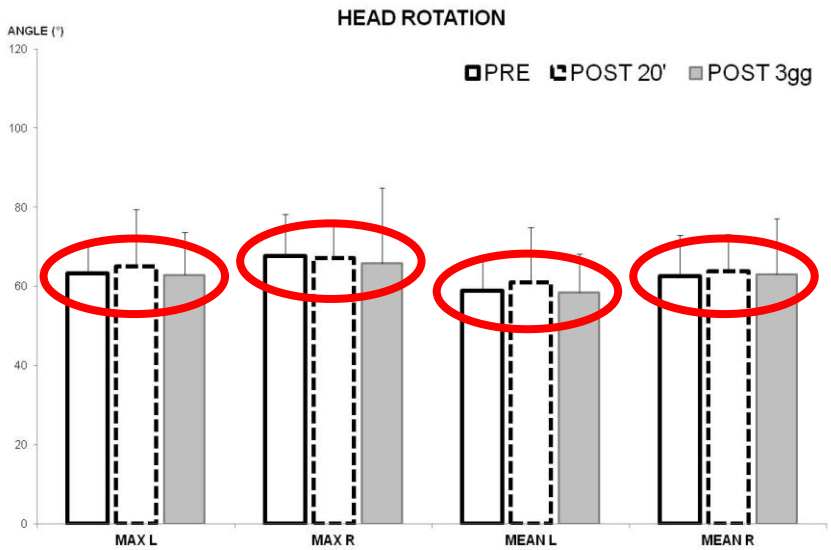
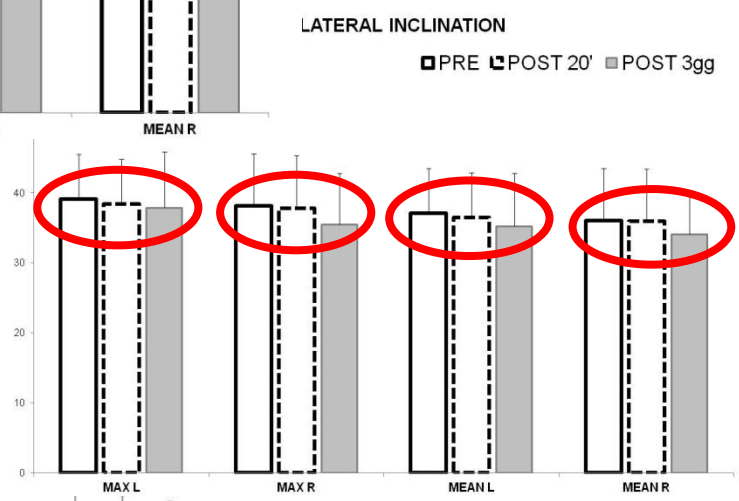
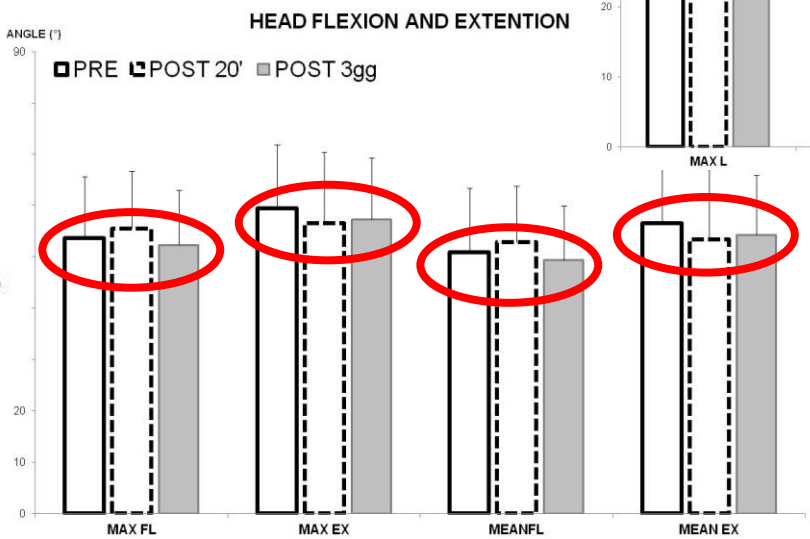
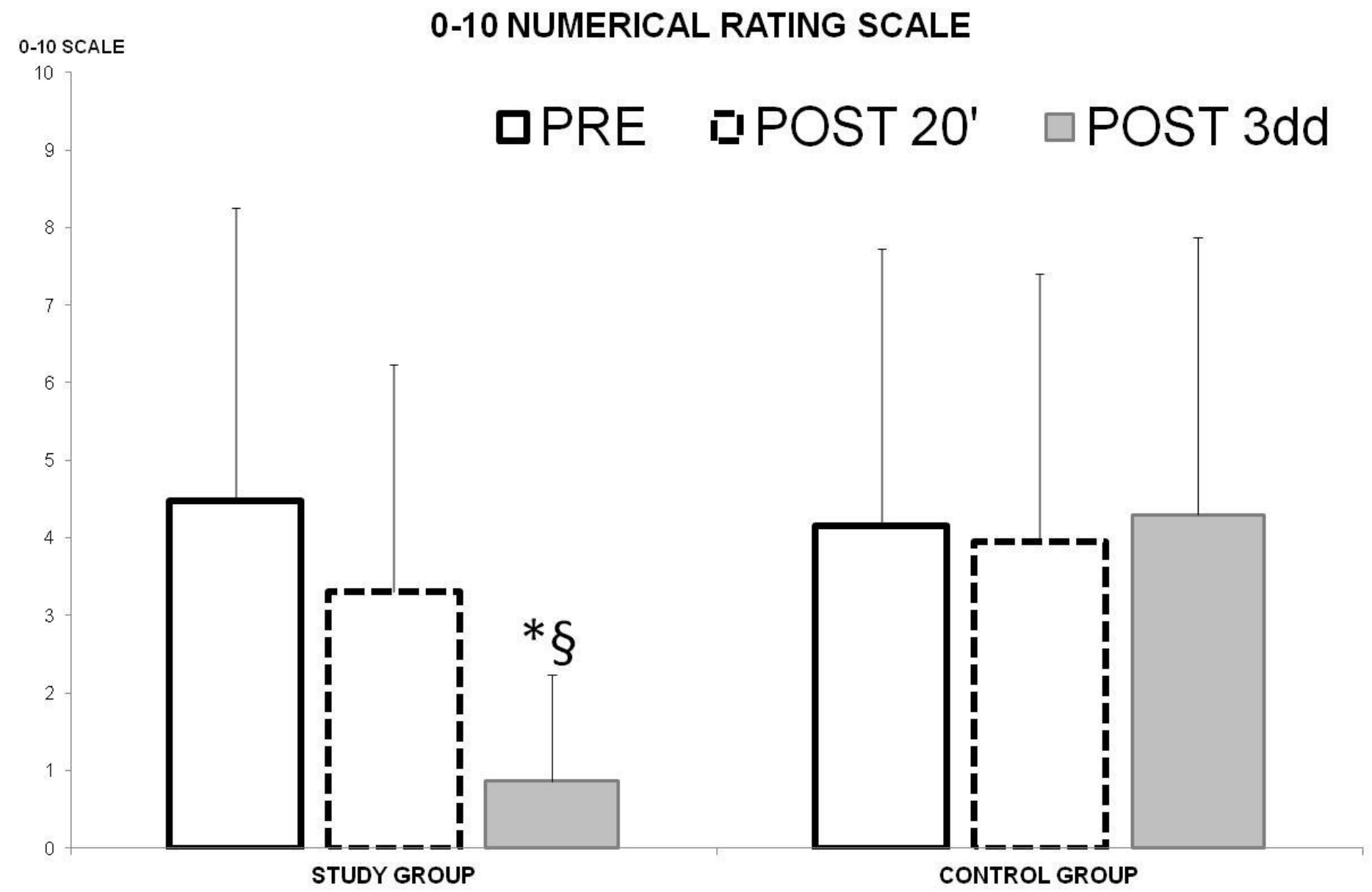



***NO SIGNIFICANT DIFFERENCES***

# Results for SG and CG



# Discussion

3 days of elastic taping application improve “good feeling” and comfort of the neck compared to controls

The ACROM  does not change immediately after the elastic taping application

3 days of elastic taping application improve ACROM on all movement planes compared to controls

# Conclusion

Elastic taping application on neck can be used to improve Range of Motion also in healthy and sporty subjects with the aim to enhance the freedom degrees where are required in order to reduce the stress on neck and to prevent cervical spine disorders

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