

# Comparison between Evolution Chair and Standard High Back Chair with Arm Rests

Written by David Marcarian, MA  
 NASA Trained SEMG Researcher & Designer of MyoVision  
 Equipment Used: MyoVision 8000 SEMG System  
 Date: May 26th, 2005

Individual sat comfortably and naturally in both chairs. With standard high back chair, subject sat back comfortably with arms on arm rests.

With evolution chair, subject sat comfortably and naturally, with arms resting on legs.

Interpretation by David Marcarian:

1. The big surprise was that the Evolution chair was significantly better for the cervical spine as indicated by the static SEMG tests.

You note the following with regards to the static SEMG:

Lower overall MyoVision readings in the cervical spine. The Evolution chair promotes proper posture, thus reducing the “head forward” position, and providing proper position for cervical posture. MyoVision readings were significantly higher with the standard chair.

MyoVision Dynamic SEMG Results:

Overall more balance between abdominals and lumbar paraspinals in the Evolution chair vs. the Standard Chair, promoting better posture, and utilizing muscles in a manner which develops the “core” strength well known as important in reducing back injuries.

	Standard Chair	Evolution Chair
Average Abdominal MyoVision Dynamic Values (Microvolts)	4.2 microvolts	9.5 microvolts
Average Lumbar MyoVision Dynamic SEMG Values (Microvolts)	9.9 microvolts	14.5 microvolts
Ratio of Abdominal To Lumbar activity (balance)	Lumbar fires 2.3 times more than abdominal	Lumbar fires 1.5 times more than lumbar, providing significantly greater balance between lumbar and abdominal muscle tension promoting better posture, and strengthening important core muscles
Muscle Activity		Muscles fire with just under twice the level of activity with the evolution chair, providing a form of passive exercise while sitting at chair.

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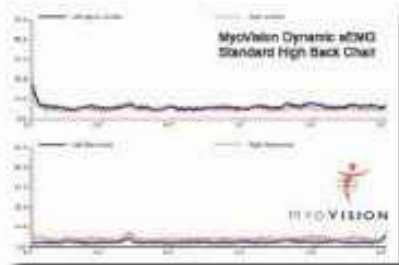
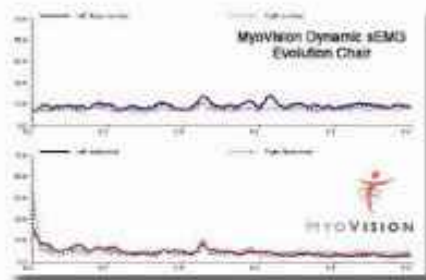
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**According David Marcarian, MA, the world's leading expert on sEMG and designer of the MyoVision:**

### Under Dynamic SEMG

MyoVision Dynamic sEMG scan shows clearly that Evolution Chair;

1. Promotes more balanced muscle activity between abdominals and lumbar muscles.
2. Nearly doubles muscle activity, providing passive isometric exercise.
3. Supports development of "core" muscles promoting healthier spine.



### Under Static Scans:

MyoVision Cervical Static sEMG Scan shows how evolution chair reduces muscle activity in the cervical spine, as it promotes healthy posture and reduces head forward position caused by standard chairs. MyoVision readings were significantly higher with the standard chair.

