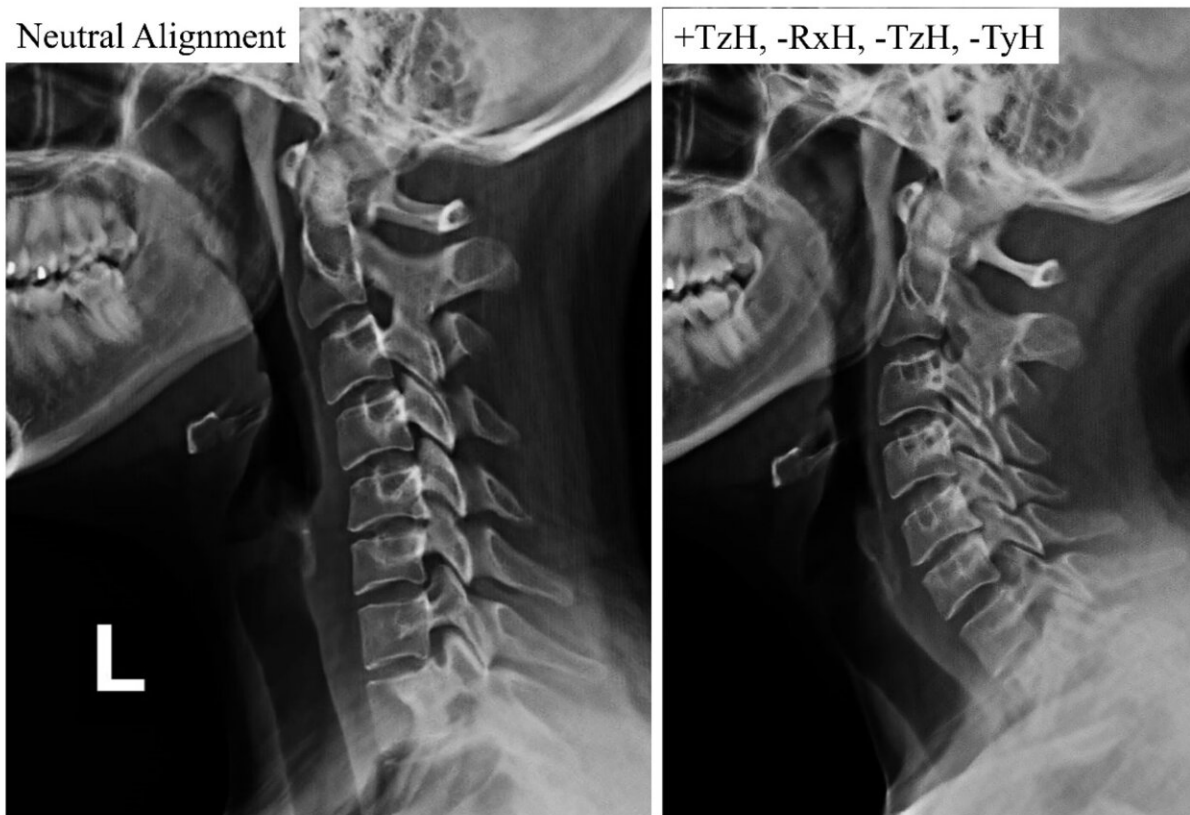


# Scientists give elderly chronic neck pain sufferers new hope

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A patient's lateral cervical x-rays are shown in neutral and after the mirror image exercise sequence (+TzH, -RxH, -TzH, -TyH) demonstrating the change in alignment from neutral with this sequence of movements: forward head posture (+TzH), upper neck/head extension (-RxH), followed by posterior head translation (-TzH) with an inferior compression component (-TyH). Images courtesy of Curtis Fedorchuk, reprinted with permission. Credit: *Journal of Clinical Medicine* (2023). DOI: 10.3390/jcm12020542

Those suffering from chronic neck pain can alleviate the symptoms on the way to full recovery if they adopt optimal posture and spinal alignment, according to a study by the University of Sharjah scientists.

[The study](#) evaluated two widely-used corrective approaches to remedy chronic non-specific [neck pain](#) caused by forward head posture (FHP) and CBP rehabilitation and traditional exercise programs.

"The CBP technique is a posture-correcting method that depends on stretching the viscous and plastic elements of the longitudinal ligament and intervertebral disks, in addition to effectively stretching the soft tissue through the entire neck area in the direction of normal head and neck postures," the researchers write in their study published in the *Journal of Clinical Medicine*.

Chronic neck pain is a prevalent issue among the [elderly population](#), affecting their [quality of life](#) and overall well-being, with FHP a common contributor to the neck muscles and discomfort. Dr. Aisha Salim Al Suwaidi and colleagues studied the problem at the University of Sharjah in their groundbreaking study titled "A Comparison of Two Forward Head Posture Corrective Approaches in Elderly with Chronic Non-Specific Neck Pain".

The study aimed to shed light on effective approaches for correcting FHP and alleviating [chronic neck pain](#) in the elderly, Dr. Al Suwaidi says, adding that the findings hold "big promise" for improving the quality of life of many older adults.

The study was a [randomized controlled trial](#) involving elderly participants who suffered from chronic non-specific neck pain. The scientists' primary objective was to compare the efficacy of two

different approaches for correcting FHP and alleviating neck pain.

The study involved 66 elderly participants with an FHP. They were randomly assigned to either the chiropractic biophysics (CBP) group or the Standard Group. Both groups underwent 18 treatment sessions over a 6-week period, with a follow-up assessment conducted three months after the completion of treatment.

The scientists found the Chiropractic Biophysics (CBP), a spine and posture correcting method that incorporates a mathematical approach, to be the most effective technique for patients with forward head posture (FHP).

A common postural displacement wherein a patient looks like they're leaning their head forward, FHP has been found to afflict 66% of the patient population, the study reveals.

"On the other hand, exercise programs that aim to correct the FHP misalignment towards an ideal posture using a combination of strengthening and stretching exercises are commonplace for physical interventions provided to correct FHP," says the study.

The study's primary outcome is the craniovertebral angle (CVA), which measures the alignment of the head and neck. Secondary outcomes include pain intensity, Berg balance score (BBS), head repositioning accuracy (HRA), and cervical range of motion (CROM).

The Berg Balance Scale (BBS) score is 0 to 20 scale. Any person falling within this range will probably require a wheelchair. Persons within 21 to 40 range on the scale mean they are in need of a cane or a walker to walk steadily.

Ibrahim M. Moustafa, Professor of Physiotherapy at the University of

Sharjah and a co-author, says that following 18 sessions, the CBP group showed significant improvement in the CVA, indicating a successful correction of FHP. In contrast, he adds, the exercise group did not experience a notable change in CVA, despite both groups showing improved functional measurements and pain intensity.

Chronic neck pain is a persistent pain that does not go away months following affliction. It usually defies medication or other forms of treatment. It is a common medical complaint among the elderly, both women and men.

[A host of factors](#) can cause chronic pain, but spending long hours hunched over new electronic gadgets is commonly cited as one of the main reasons. Other most common factors are improper lifting of heavy loads, like using one side of the body, or carrying heavy material over on one shoulder, using wrong sleep postures, or positioning pillows without sufficient support.

The scientists indicate in their study that CBP intervention had a more pronounced and sustained positive impact on FHP, pain intensity, functional outcomes, and neck range of motion compared to the Standard Group. This suggests that the choice of chiropractic correction technique plays a significant role in influencing the extent of improvement in neck pain and related functional outcomes, adds Prof. Moustafa.

Dr. Al Suwaidi says the outcomes could also pave the way for improved functional capabilities and an overall enhanced quality of life in the elderly population.

Dr. Al Suwaidi points to the forward head posture as not only the main source of neck pain, but also the reason behind various spine-related discomforts and biomechanically driven disorders, including

compromised respiratory efficiency, abnormal balance, and restricted cervical range of motion.

Addressing this postural issue is crucial as it can significantly impact the well-being and functional abilities of the elderly," emphasizes Dr. Al Suwaidi.

The study's most promising finding came during the three-month post-treatment follow-up. At this stage, without any further interventions, the CBP group maintained their improved conditions in all areas, including CVA, pain intensity, BBS, HRA, and CROM. In contrast, the exercise experienced regression, with their initial improvements reversing.

This posture displacement can "significantly affect the quality of life and functional abilities of the elderly," according to Prof. Moustafa.

The researchers suggest that the correction of FHP through CBP interventions played a crucial role in maintaining superior and lasting pain relief and functional improvements.

The study stands out as being a fresh attempt by scientists to evaluate two widely used approaches for FHP correction in the elderly population, an age group often neglected in related research. These results provide valuable insights for [health care professionals](#) in designing effective rehabilitation programs for [elderly patients](#) with FHP and non-specific neck pain, notes Prof. Moustafa.

They likewise hold the potential to shape the development of policies and guidelines governing neck pain management among elderly individuals, Prof. Moustafa points out.

He goes on to say that the insights can inform health care organizations and professional bodies in crafting evidence-based guidelines for health

care practitioners to promote standardized care for elderly patients with chronic non-specific neck pain.

For elderly patients, the results of the study could pave the way to improved functional abilities and ultimately an enhanced quality of life, Prof. Moustafa explains.

FHP is also generally associated with several types of spine pain and biomechanically driven disorders such as respiratory efficiency, abnormal balance, and cervical range of motion. This posture displacement can "significantly affect the quality of life and functional abilities of the elderly," Prof. Moustafa says.

**More information:** Aisha Salim Al Suwaidi et al, A Comparison of Two Forward Head Posture Corrective Approaches in Elderly with Chronic Non-Specific Neck Pain: A Randomized Controlled Study, *Journal of Clinical Medicine* (2023). [DOI: 10.3390/jcm12020542](https://doi.org/10.3390/jcm12020542)

Provided by University of Sharjah

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