

Deborah Alperovitch Najenson, Arch Med 2019, Volume 11
DOI: 10.21767/1989-5216-C1-007

Occupational ergonomic risk factors for neck pain: Review

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Workers such as office workers, ultra sonographers, dental hygienists and professional drivers are documented in the literature as suffering primarily from neck pain. Forward head posture, weekly computer usage of 6-9 or more hours, sustained sitting associated with computer use, dissatisfaction with the computer work station, inappropriate placement of computer devices such as monitor, keyboard and mouse and close keyboard position to the body have been linked to the prevalence and incidence of neck pain in office workers. An uncomfortable steering wheel, seat and back support were associated with a higher prevalence of neck pain in professional urban bus drivers. Driving with trunk bent or twisted was associated with neck pain. Sonographers with the screen on their left had more neck pain significantly. In the general population, combination of sustained/repeated arm abduction with high physical perceived exertion was the strongest risk factor for neck pain in women, and prolonged forward head flexion was associated with a higher incidence of neck pain in men. Few explanations of the ergonomic causes of neck pain have been found in the literature. When working with hands and fingers, the muscles in the proximal areas as neck and shoulders must act as stabilizers. This static contraction of the muscles

is expressed more strongly when neck rotation or forward head bending happen as a result. For example a computer screen is placed to the side of the worker and continuous rotation of the neck throughout the working day might cause neck pain. Drivers also maintain static awkward body postures for prolonged periods of time, causing mechanical stress upon the spine and surrounding soft structures, which ultimately cause neck pain. Neck pain risk factors include the entire body in its environment. Ergonomic adjustment of the surrounding furniture and equipment to the anthropometry of the worker is warranted.

Biography

Deborah Alperovitch Najenson is a Physical Therapist. Her expertise is in Ergonomics. She has completed her PhD from the Faculty of Medicine, Tel Aviv University and Post-doctoral studies from School of Physical Therapy, Ben Gurion University of the Negev, Israel. She Lectures in the Department of Physical Therapy at the same University and in the Department of Environmental and Occupational Health, Tel Aviv University, Israel. She does research in the field of ergonomics and guides students in their thesis. She also directs a physical therapy department in a large geriatric hospital.

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