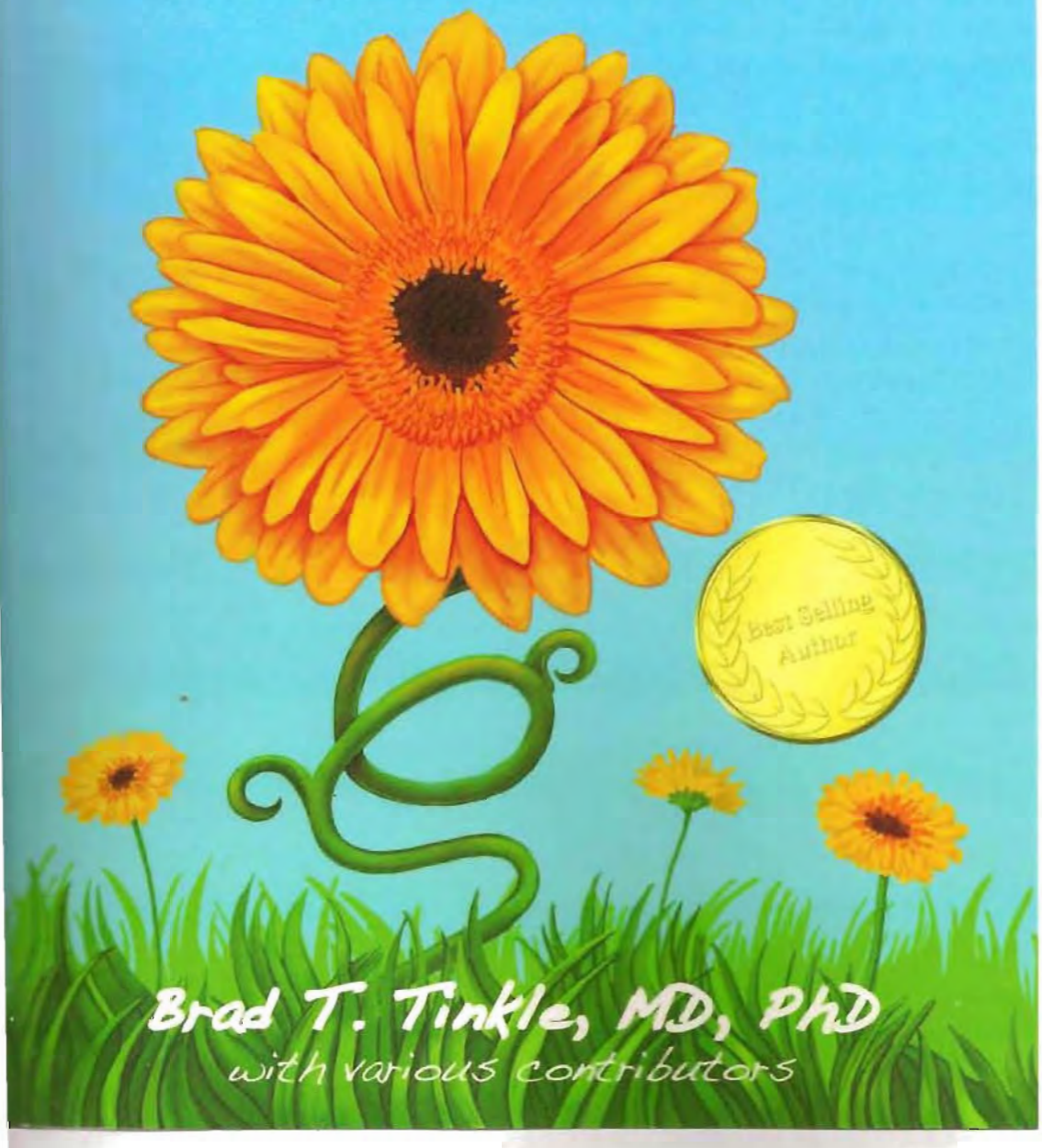
Joint Hypermobility Handbook

A Guide for the Issues & Management of Ehlers-Danlos Syndrome Hypermobility Type and the Hypermobility Syndrome



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Chapter 55
Workplace Accommodations

by
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The findings and conclusions in this report are those of the author(s) and do not necessarily represent the views of the National Institute for Occupational Safety and Health

The Americans with Disabilities Act (ADA) of 1990 was enacted to prevent discrimination and enable individuals with disabilities to fully participate in all aspect of life including having equal employment opportunities. The ADA applies to individuals who have a physical or mental impairment that would substantially limit one or more life activity. The Americans With Disabilities Act Amendments Act of 2008 expands the definition of major life activity to include, but is not limited to: caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working. Individuals with joint hypermobility, due to their unique physical constraints, may find that they are at a disadvantage in the performance of certain job tasks. If that is the case, the individual may request that their employer make an adjustment, modification or "reasonable accommodation" to enable the employee to perform the task more easily.

Ergonomic Interventions. There are several risk factors associated with the workplace that may result in the development of musculoskeletal disorders among the general working population. These risk factors include heavy lifting, tool use, awkward or static postures or joint angles, high repetition, contact stresses and fast paced tasks. Exposure to these occupational risk factors may result in conditions such as low back pain, carpal tunnel syndrome, tendonitis, and neck and shoulder pain or discomfort. Those individuals with joint hypermobility that are exposed to such risk factors should be even more aware of the consequences of these workplace exposures.

In the field of occupational safety and health, controlling exposure to risk is the primary means of protecting the worker. The application of ergonomic guidelines is often used to address exposure to the workplace risk factors where there is a mismatch between the capabilities of the worker and the requirements of the work tasks. Ergonomics tries to match the physical and mental abilities of the worker to the job tasks demanded by making changes to the tools, equipment, work methods or the task itself. The same principles that are used to accommodate the general working population can be used to develop similar workplace accommodations for those with joint hypermobility.

Lifting or Manual Material Handling. Under absolutely optimal conditions, the National Institute for Occupational Safety and Health (NIOSH) recommends the most weight for any one individual to lift is 51 lbs. This amount is considered to be acceptable to at least 75% of female workers and 90% of males workers based on psychophysical

criteria (one's own perception of effort required). This amount is reduced: 1) if the load is below knee or over shoulder level, 2) if the load is large and the hands are forced away from the body, 3) if the item location causes the individual to twist during the lift, 4) if the lift distance is large, or 5) if the frequency of lifting is high. The amount of the load may have to be further reduced for individuals with joint hypermobility especially over the shoulder or involving any twisting. It is interesting to note that certain occupations or occupational exposures for men (repetitive heavy lifting) and women (nursing) have been "recommended against" for those with joint hypermobility [Child, 1989].

There are numerous and varied lifting aids and devices to ease the burden of manual material handling. Hand trucks, drum dollies, carts, scissors lifts, and turntables are readily available to modify lifting tasks and lessen exposure to the associated risk factors.

Tool Use. In general, the best hand tool to use is one which is appropriate to the tasks to be performed and the space in which it is to be used, minimizes the forces you need to exert and fits your hand. Hand tools are available in two major categories: non-powered and powered. Non-powered hand tools include hammers, screwdrivers, and pliers. Powered tools include electric drills and pneumatic nail guns.

Tools should be chosen based on the task to be performed rather than merely on availability. For example, both a large and a small screwdriver may take a screw out of a workpiece, but generally one will work better than the other based on the size and location of the screw. The tool length and tool handle angle should be chosen to keep the wrist as straight as possible for the given task. The tool handle should have a non-slip, soft coating with no finger grooves to minimize contact stresses and be of appropriate diameter for the task (power versus precision). The tool should be designed for use by your dominant hand or for either hand. Two-handled tools such as pliers should be long enough to span the width of your palm and yet only open wide enough for easy gripping and use (grip span) with one hand. By using a hand tool with the appropriate handle for the given task, one can minimize exposure to a variety of risk factors.

Extensive use of some powered hand tools may lead to the development of a condition known as Hand-Arm Vibration Syndrome which can result in a numbness and tingling in the hands, leading to damage to the blood vessels in the fingers and, ultimately, to gangrene. Individuals with vascular EDS should be particularly cautious of long-term extensive powered hand tool use.

Computer Workstations. Many individuals now spend a large portion of the work day (or their leisure time) at computers. The workstation should be set up to minimize exposures to risk factors associated with strains of the arm joints, neck and back [Figure 55.1]. In general, sitting postures should allow for the head to be held upright, shoulders back, and feet on the floor. Upper arms should be positioned comfortably along the side of the torso; forearms positioned directly in front of body. Keyboard and mouse (or input device) should be within easy reach and allow the wrist to remain straight during use. Some individuals are more comfortable using a split keyboard and/or one set at a negative (back slightly lower than front) angle. Monitors should be placed so

that the user does not have to tilt his/her head to read the screen depending on the person's vision requirements.

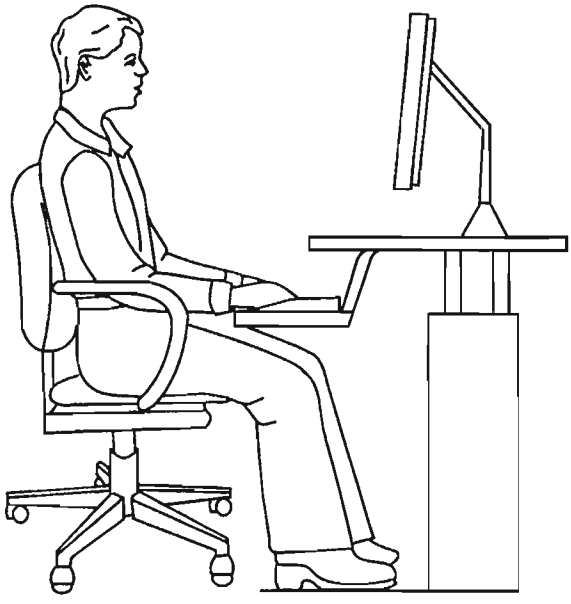

Figure 55.1. Propering positioning at a computer workstation to avoid repetitive strain injuries.

Awkward/Static Postures/Angles. Any individual who remains in one posture for any length of time will begin to feel muscle fatigue and soreness in their joints. Those individuals with joint hypermobility may be more susceptible to these conditions. Such individuals should minimize the amount of time in any one posture and modify the work area when possible so that both sitting and standing postures may be used over the course of the day. Simple changes in postures and the associated "microbreaks" (frequent small breaks) may actually increase a person's productivity over the course of the day.

Notes:
Adopt a flexible schedule where possible.

Consider work at home from a computer or by telecommuting.

Have a quiet place to rest.

Have access to a chair in case of dizziness.

Occupational therapist may be of benefit to advise on workplace accommodations.

Resources:

"Americans with Disabilities Act Amendments Act of 2008,"
www.eeoc.gov/policy/adaaa.html

"Applications Manual for the Revised NIOSH Lifting Equation,"
www.cdc.gov/niosh/docs/94-110/pdfs/94-110.pdf

"Ergonomic Guidelines for Manual Material Handling,"
www.cdc.gov/niosh/docs/2007-131/pdfs/2007-131.pdf

"Easy Ergonomics: A Guide to Selecting Non-Powered Hand Tools,"
www.cdc.gov/niosh/docs/2004-164/pdfs/2004-164.pdf

"Proceedings of the First American Conference on Human Vibration,"
www.cdc.gov/niosh/docs/2006-140/pdfs/2006-140.pdf

"Computer Workstations," www.osha.gov/SLTC/etools/computerworkstations/index.html