Bodywork for the *Eyes*

How Visual Habits Can Create Body Tension

By Marybetts Sinclair

"We fix our eyes on something thousands, or even tens of thousands, of times a day, and if every time you look at something you stiffen your neck muscles even a tiny bit, if you do that for several decades, what's that going to do to your neck?" [1]

Jack Heggie, author of *Total Body Vision*

Many people have vision issues. At least 25 percent of Americans are nearsighted, and 40 percent of all seniors have at least one vision problem.[2] Because we use our eyes every moment we're awake, and our posture and movement are intimately related to how we look at the world, straining to see can create chronic tension in the face, neck, shoulders, and back.

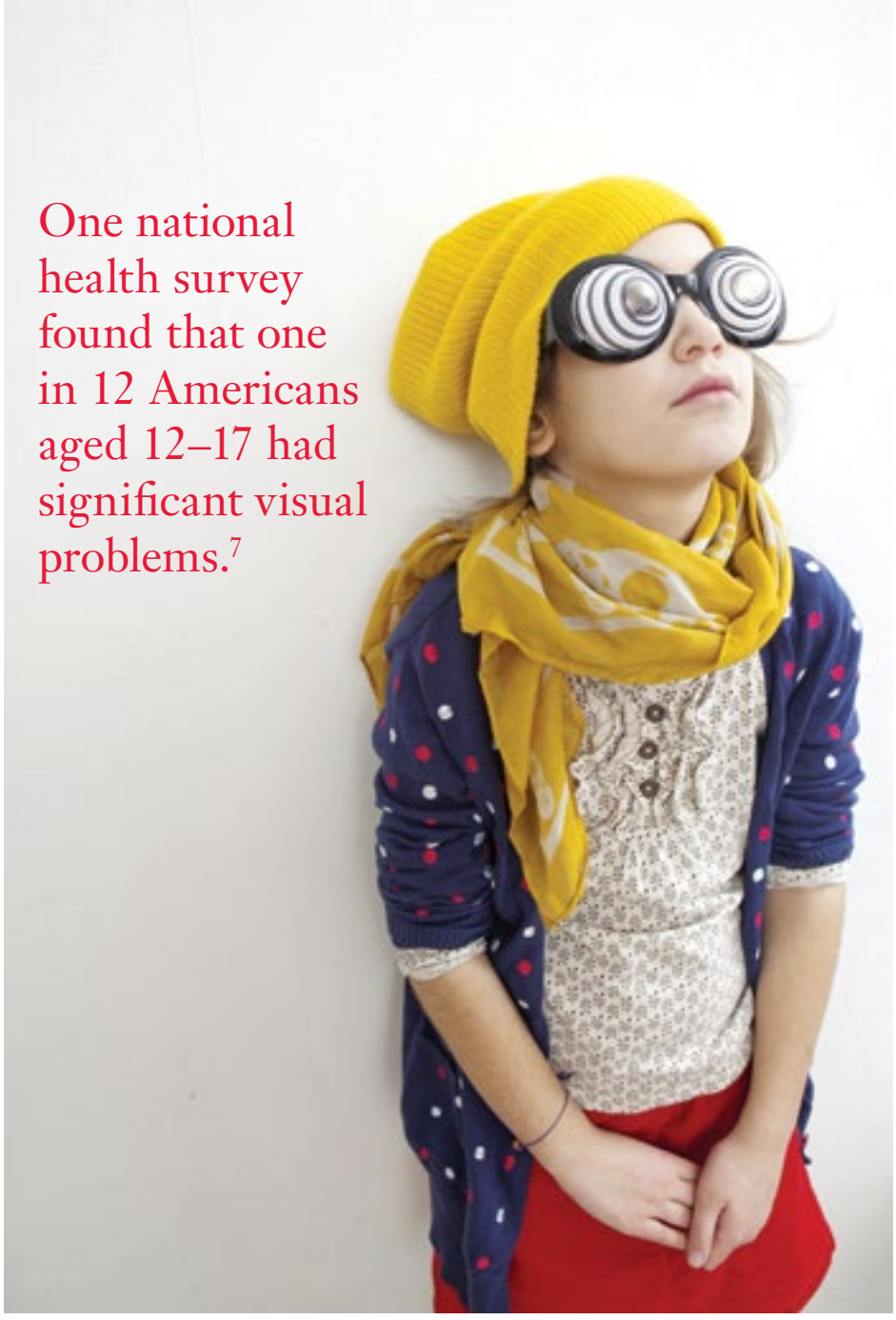
Many body-related disciplines, including Alexander Technique, Bates Method, cranial osteopathy, Feldenkrais method, and hatha yoga have noted the role that poor visual habits play in chronic body tension. Your clients may complain of eye fatigue or strain, blurred or double vision, headaches, or tension in the eyes, temples, forehead, neck, shoulders, or back—especially after visually demanding activities, such as working at a computer or reading a book. Following are a few examples of how vision affects the body.

SEEING IS BELIEVING

Astigmatism predisposes our clients to issues ranging from migraine headaches and nearsightedness to tightness in the trapezius and sternocleidomastoid muscles, which can lead to cranial strain.[3] Clients with conditions such as a "lazy eye" or macular degeneration often try to work around their visual difficulty by tilting or twisting the head and neck. Overuse, injuries, or other problems can create trigger points in the muscles that move the eyes, which can refer pain to the head and neck and play a part in tension and migraine headaches.[4] The good news is that you can help clients deal with chronic back, neck, and shoulder tension, and help them reduce discomfort from eyestrain and vision-related headaches.

The process of seeing involves various muscle actions: our eye muscles move the eyeballs in various directions, change the shape of the lens to focus on near or far objects, and keep the eyeballs lubricated by blinking. Even simple tasks require great coordination between these muscles and our skeletal muscles. As you read this article, eye muscles constantly adjust your eyeballs internally to focus on the words, and move them back and forth horizontally across the page and down to the next line. Meanwhile, the skeletal muscles position your head and hands to keep the text at the appropriate distance in front of the eyes. The ability to smoothly coordinate these muscles develops during childhood, and this development is strongly influenced by a child's physical and emotional state, environment, and culture.[5] Healthy vision is efficient, relaxed, and comfortable for the viewer, while poor visual habits can interfere with free and easy movements and make the body chronically tense.

One national health survey found that one in 12 Americans aged 12–17 had significant visual problems.[7]



Some common vision-related bad habits include stiffening the entire neck, spine, and pelvis every time you look up, squinting and moving the head forward, stiffening all the neck muscles each time you look directly at something, or staring. For example, people wearing glasses tend to move their entire head and neck to look at something, rather than letting their eyes move first while the head and neck follow the eye movement.

HOW DO WE ACQUIRE POOR VISUAL HABITS?

There are many ways that we develop bad visual habits. From vision dysfunctions to lifestyle to injuries, many clients may be suffering the consequences of poor visual habits, without even knowing it.

Vision Dysfunctions

Children

Up to 5 percent of children are born with some kind of visual abnormality, or develop one in their first few years.[6] Straining to see often translates to holding the head in unusual positions, which leads to chronic tension in the upper-back, cervical, or facial regions.

To illustrate this dynamic, consider *strabismus*—a term for any misalignment of the eyes. In this condition, the child's eyes point in different directions. One eye may be higher than the other or roll out away from the other. Many children with this problem tilt their head or one shoulder, and often they also have poor gross motor coordination.

Other visual difficulties such as astigmatism, light sensitivity, or nearsightedness can cause children to contract muscles in the head and neck as they strain to see. Slouching and a head-forward posture lead to tightness in the pectorals, upper trapezius, levator scapulae, posterior cervical, and sternocleidomastoid muscles, and weakness in the deep neck flexors, rhomboids, and serratus anterior muscles. Some children outgrow these visual difficulties, but many do not. One national health survey found that one in 12 Americans aged 12–17 had significant visual problems.[7]

Adults

In her book *Fixing My Gaze* (Basic Books, 2009), neuroanatomist Susan Barry gives an excellent example of adults with musculoskeletal issues stemming from uncorrected childhood vision problems. A woman was born with a cataract in one eye, and even after it was corrected with a contact lens, her vision still differed in each eye. It was very difficult for her to use them together, so she developed a habit of turning her head and body sideways so her better eye faced wherever she was looking. Her left eye, left arm, and left leg came to dominate her movements; the muscles of her right side became weaker; and her right hip rotated outwardly.

A similar example was a woman born with torticollis (twisted neck); she adapted by constantly turning her head far to the left, so her nose blocked the view from her left eye. It was not until a behavioral optometrist helped her learn how to use both eyes together that her posture straightened and her neck-muscle tightness disappeared.[8]

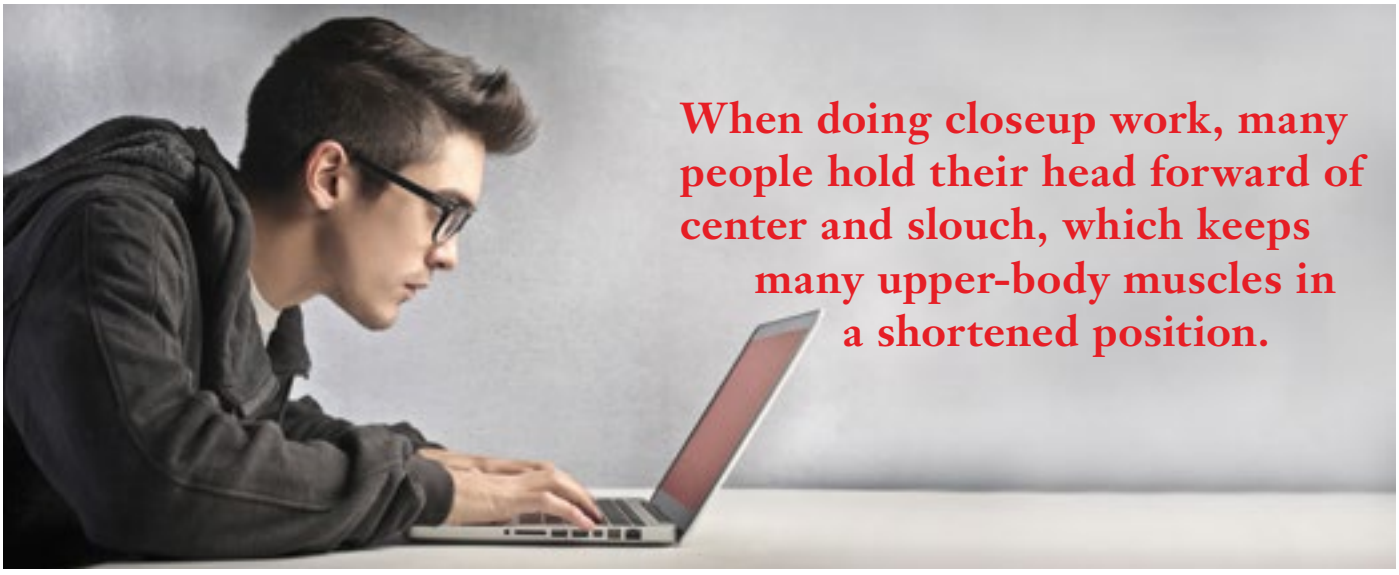
Elderly

Understanding the visual habits of seniors can be key to dealing with their chronic body tension. As a group, 40 percent of all people over 40 years old have at least one vision problem, including blurring, blind spots in the visual field, double vision, impaired night vision, loss of peripheral vision, or changes in color perception.[9] Seniors with these difficulties often hold their head in odd positions, squint, furrow their brow, stare fixedly, or avoid looking at things altogether, all of which can cause chronic tension in the face, neck, and spine. Many seniors also wear corrective lenses, leading to the effects discussed later in this article.

Emotional and Mental Stress

Emotional states can affect vision and visual habits. Stress may cause chronic tension in the muscles inside the eye (those which change the shape of the lens and the size of the pupil), or in the external muscles that move the eyeballs, close the eyelids, squint, or furrow the brows. With poor vision, the shoulders and neck may become chronically tense as well.

Vision may deteriorate due to stress caused by trauma, illness, fear, trouble at work or home, or other situations. This deterioration can manifest as blurred vision, smaller visual



When doing closeup work, many people hold their head forward of center and slouch, which keeps many upper-body muscles in a shortened position.

fields, changes in color perception, or reduced depth perception.[10]

Injuries to the Eyes or Head

As with other parts of the body, local trauma can have lasting effects on soft tissues. Birth injuries, falls, motor vehicle accidents, and sports or work injuries are common causes of trauma to the eye and its surrounding structures.

Trauma can activate trigger points in the muscles of the eyes or other nearby muscles, or lead to fascial restriction or cranial strain.[11] Injuries such as blows to the forehead or whiplash injuries can shift the position of the cranial bones.[12] According to Kenneth Frey, director of the Institute of Physical Therapy, craniosacral dysfunctions are commonly associated with a variety of visual problems, including strabismus, imbalances of the extraocular muscles, and problems with visual perception.[13]

Culture and Lifestyle

Because early humans needed keen, responsive vision to find and pursue their prey and to escape from predators, our eyes are primarily designed for detecting motion and for distance vision in natural light.[14] People living an outdoor hunter-gatherer lifestyle see more clearly than city dwellers, and children who get more outdoor exercise see better than children who get less. The enormous increase in rates of myopia—from 23 percent in 1971 to 42 percent in 2004—is now thought to be caused by our changing lifestyle, as we spend more time doing closeup work and less time outdoors. Myopia increases when we live in small spaces that restrict our vision and in intense academic environments that require a great deal of studying.[15] When doing closeup work, many people hold their head forward of center and slouch, which keeps many upper-body muscles in a shortened position: visual habits are now creating whole-body strain.

Computer users tend to blink very little and stare straight ahead, not using their peripheral vision.[16] The greater the glare, the smaller the font size, and the lower the screen resolution, the more likely it is that the person will strain to see and risk developing myofascial trigger points in the upper trapezius.[17] Prolonged twisting of the head, such as when looking at a computer screen with the head turned at an angle, may activate trigger points in the splenii muscles or promote astigmatism.[18] Trigger points in the extraocular muscles can result from prolonged periods of staring straight ahead and may play an important role in both migraine and tension-type headaches.[19]

Wearing Corrective Lenses

Corrective lenses are not human eyes, and they can have an impact on visual habits and the body. Moshe Feldenkrais claimed that because glasses change eye and neck movement in profound ways, he could feel the back of someone's neck with his eyes closed and determine whether or not the person wore glasses and how strong the prescription was in each eye.[20]

Many people wear glasses that are poorly fitted. Lenses with a too-short focal length cause the person to tilt the head in sustained flexion in order to read or do other closeup work. Frames that are too high or too low on the bridge of the nose cause the person to flex the head forward or tilt the head back in order to look through the lenses, which can activate trigger points in the suboccipital, semispinalis capitis, semispinalis cervicis, and multifidi muscles. Reading

glasses that slide down the nose tend to create an anterior head tilt, and ear pieces that are too tight can restrict the motion of the temporal bones.

According to Jack Holladay, clinical professor of ophthalmology at Baylor College of Medicine, it is very difficult to arrive at the correct eyeglass prescription, and optometrist Stephen Gallop believes most prescriptions are too strong, which leads to chronic tension around the eyes and head.[21]

Bifocals and trifocals can further affect posture. Half-frame and bifocal glasses force the wearer to pull the head up and backward to look through the lower part of the lens. Trifocals can lead to painful and stiff posterior cervical muscles when the person has to continually adjust the neck position to see through the middle portion.[22]

Cocking the head to avoid the reflection of overhead lights in the eyeglasses can chronically strain the sternocleidomastoid and suboccipital muscles, and contact-lens wearers may develop painful and stiff posterior cervical muscles from holding the head in a cocked position to avoid glare.[23]

Most people will avoid rolling their eyes away from the optical center so they don't have to see their eyeglass frame. This fixation or locking of the eyes tends to tense the extraocular muscles, and—according to Thomas Myers, developer of Anatomy Trains—freeze the suboccipital muscles into hyperextension and thereby create a posterior head tilt.[24]

HELPING CLIENTS WITH VISION-RELATED CHALLENGES

The first step in helping a client whose visual habits are causing chronic tension or discomfort in the eyes, face, neck, shoulders, or spine is to make him or her aware that this could be an issue.

Step 1. Include vision-related questions in your intake form.

- "Do you have chronic neck and shoulder tension?"
- "Do you wear glasses?"
- "Do they feel comfortable for you?"
- "Do you have any of the following: trouble seeing, eyestrain at work, discomfort after working on a computer, vision problems, light sensitivity, dry eyes, or headaches?"

Step 2. Check for tension. Everyone wearing glasses should be checked for tension in the eyes, neck, and spine. Try testing the range of motion in your client's neck, both with and without glasses.

Step 3. Address tension during a session. Begin the session by helping the client relax the eyes. Consider drawing curtains or dimming the room lights. This is often very soothing for someone with light sensitivity or an eye condition, such as macular degeneration. Cover the eyes with a warm or cold eye pillow, a warmed towel, or a hot and cold contrast treatment. Begin by having the client consciously relax the eyes. For example, ask the client to inhale and squeeze the muscles surrounding the eyes tightly, hold for a few moments, then exhale and relax the muscles completely. Repeat two more times. Ask the client to stretch the eyes by looking in different directions. Then, add more specific massage techniques with work around the eyes during the first few minutes of the session. Some excellent massage techniques include:

- Face tapping/tapotement on the forehead and around the eyes.
- Acupressure around the eye orbits. Classic acupressure points for eye tension are on the back of the neck (the Bladder 10 points).
- Swedish massage on the posterior neck.
- Trigger-point work on the rectus capitis posterior muscles, which counteracts the fixing of the suboccipitals.
- Craniosacral therapy.

Step 4. Provide guidance for self-treatment. Show clients how to treat their eye and neck tension at home with warm and cool packs for the eyes, eye muscle stretches, and self-massage.

Step 5. Encourage clients to check their workstations. Ergonomics at work and home are crucial. For example, to avoid chronic strain in the posterior cervical muscles, the

computer monitor may need to be raised or moved farther away, or reading and work materials may need to be at a different angle or height.[25]

Step 6. Be ready to refer your client to a vision professional. For some clients to see clearly with their heads held in an upright, balanced position, without chronic tightness in their posterior cervical muscles, they may need to change their eyeglass prescription, use lenses with a longer focal length, get larger bifocal inserts, or have their eyeglass frames adjusted.[26]

Step 7. Consider referring your client to a professional who can help her improve her visual habits, such as a Feldenkrais or Alexander Method practitioner, a Natural Vision Improvement (Bates Method) teacher, or a behavioral optometrist. **m&b**

Notes

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