

ARIZONA SUZUKI ASSOCIATION NEWSLETTER

WINTER 2022



IN THIS ISSUE

- Virtual and In-person Learning by Alice Vierra, pages 1-2
- News from Around the State, page 3
- Movement Training by Lynn Medoff, pages 4-9
- Summer camps, page 9

VIRTUAL LEARNING AND IN-PERSON LEARNING CONTINUES FOR SUZUKI TEACHERS AND THEIR STUDENTS AND FAMILIES.

By Alice Vierra, ASA Board Member and Cello Teacher Trainer

Teachers and students from Arizona were kept busy this last year, attending and teaching at summer music events, many of them Suzuki activities. Dr. Suzuki believed in life learning and Suzuki teachers continue their learning either with more training or by attending meetings or conferences. Thank you to those who told their stories of continued learning.

Laura Tagawa, Suzuki violin teacher and ASA President attended a summer institute with her son. She wrote about it below:

Our family enjoyed attending the Intermountain Suzuki String Institute in Draper, Utah. Our son attended as a cellist and enjoyed daily master classes, group performance class, chamber music and enrichment. It was wonderful to play music together again in person. Highlights included daily recitals, chamber music and an enrichment class called “bucket band.” Students in this class each had a 5 gallon bucket and a set of drum sticks. They learned a song together as an ensemble and had individual improvised solos. It was a blast!



CELLO PLAY-IN AT ISSI

Chris Dorsey, Phoenix-based Suzuki guitar teacher wrote the following:

I studied Suzuki in the Schools with Dr. Laurie Scott in an online class format this past July. The course is developed primarily for teaching orchestral strings in a classroom setting using the concepts of the Suzuki Method, and I am exploring the possibilities

of adapting this approach for teaching classical guitar in the classroom setting. Chris’s guitar student, Evan, wrote the following:



of adapting this approach for teaching classical guitar in the classroom setting.

Chris’s guitar student, Evan, wrote the following:

I attended the Guitar Foundation of America Guitar Summit, a four day program. Each day of the Guitar Summit featured two guest artists. The Guitar Summit had a wide variety of performances and topics. One of the artists, Jiji Kim from Korea, spoke about how to make a simple melody and turn it into a song using a music production software. Another guitarist, Evan Taucher, spoke about etudes and how to understand what each is trying to emphasize while playing it musically.

Performers also played a wide variety of music from contemporary music such as Danza del Cimarron to classical pieces like Bourree 996 in E minor by Bach. I learned about some new repertory and new techniques. The Guitar Summit was a great event to attend because of its broad performances and topics.

Anne Gratz, Tucson cellist, wrote about her experience below:

I am grateful for the recent opportunities to take Suzuki teacher training courses online. After taking ECC with Alice Vierra in February, 2021, I continued with Unit 1 with Shu-Yi Scott as part of the Greater Washington Suzuki Institute in June, followed by Dr. Scott's enrichment course in July. Later in July I took Tanya Carey's Unit 2 course through the American Suzuki Institute. Anne is the principal cellist of the Tucson Symphony Orchestra, Tucson Pops Orchestra, and True Concord Orchestra, and has been an active teacher in Tucson's music programs as well as her own private studio for 15 years. She is looking forward to continuing her Suzuki training, expanding her studio, and becoming more active in the Arizona Suzuki Community.

Kari Weldon, Suzuki voice teacher, joined other voice teachers online during the summer. She writes about the sessions below:

2021 marks the 35th anniversary of the Suzuki Voice Program. In celebration



DR KUKKAMÄKI AND DR SUZUKI

Suzuki Voice Teachers and Teacher Trainers from around the world met once a month to discuss Suzuki Philosophy and its connection to Voice, different ways to teach and demonstrate vocal technique, supplementary repertoire unique to each other's countries and cultures, and in-depth study of Suzuki voice repertoire. Each session has given teachers a time to reconnect and inspire each other to continue teaching the Happy Suzuki Way!

Alice Vierra, Suzuki Cello Teacher and Teacher Trainer, taught at GWSI and offered the following: I was excited and honored to be on the faculty of GWSI, the Greater Washington Suzuki Institute held at the end of June 2021. Having lived in the DC area for many years previous to coming to Tucson, I had attended GWSI to take training, my own children had attended, and I had taught in person doing teacher training for many years. The last time I was in person was in June 2019 and it was held at the beautiful Cathedral School for girls - across from the Washington National Cathedral. I wasn't sure how using Zoom, with the institute being on-line, would compare with that but it was inspirational. They invited a few nationally known artists in for master classes and worked hard to create a fun on-line environment for participants - for the kids. I enjoyed teaching Unit 2 but also learned by observing other teachers. It was all virtual - but with Suzuki spirit!



ALICE VIERRA

NEWS FROM AROUND THE STATE

EVERY CHILD CAN!

The 2022 class on Zoom with Alice Vierra has been cancelled. ASA hopes to host the class in 2023. You can find a list of upcoming ECC classes at the Suzuki Association of the Americas website:

<https://suzukiassociation.org/events/course/ecc/>



Talent Education Studios of Chandler are excited to represent Suzuki Strings and Voice at the February 12th Phoenix Suns vs. Orlando Magic basketball game. A small ensemble of 14 students will perform the National Anthem, setting the mood for an exciting night of dribbling and dunking!

On December 11, 2021, students from the Dorsey Guitar Studio, which is hosted by the Summit School of Ahwatukee, performed in the Holiday Showcase at Chandler Fashion Center.



VSSA STUDENT WORKSHOP

VALLEY OF THE SUN SUZUKI ASSOCIATION: 2022 WORKSHOP!
SAVE THE DAY: SATURDAY MARCH 26TH, 8:30 A.M. TO 3:30 P.M.
THEME: SUZUKI GOES TO THE OLYMPICS!
LOCATION: CHANDLER, ARIZONA

WE'RE SO EXCITED TO ANNOUNCE A WORKSHOP AGAIN! WE'VE BEEN WAITING A LONG TIME TO WELCOME ALL THE SMILING STUDENTS FOR A DAY OF MUSICAL FUN. PLAYING ALL TOGETHER IS ONE OF THE BEST PARTS OF BEING SUZUKI STUDENTS!

GAIL ACOSTA, FROM CALIFORNIA, WILL TEACH AT OUR WORKSHOP! WE LOOK FORWARD TO HAVING HER BACK! SHE'S ALWAYS A FAVORITE VIOLIN/VIOLA CLINICIAN. ALSO, AS A FUN BONUS, WE'LL HAVE A SUZUKI VOICE CLINICIAN FROM AUSTRALIA, TEACHING VIA ZOOM!

VIOLIN, VIOLA, CELLO AND VOICE STUDENTS WILL HAVE FOUR CLASSES EACH:

- **REPertoire**
- **A MASTERCLASS SESSION**
- **MUSIC/MOVEMENT OR ADVANCED MUSIC ACTIVITIES**
- **A LARGE-ENSEMBLE REHEARSAL FOR OUR SPECIAL SUZUKI OLYMPICS THEME MUSIC!**

THE WORKSHOP CONCLUDES WITH A BIG CONCERT PERFORMANCE FOR FAMILY AND FRIENDS.

REGISTRATION WILL OPEN AROUND FEBRUARY 20TH. THE REGISTRATION LINK WILL BE POSTED ON THE FACEBOOK PAGE FOR VALLEY OF THE SUN SUZUKI ASSOCIATION. PLAN TO REGISTER EARLY, SO YOU CAN GET THE SUZUKI OLYMPICS MUSIC AND START PRACTICING IT.

QUESTIONS? WANT MORE DETAILS? CONTACT LANI HILL, 480-688-9285 OR KRHWH@GMAIL.COM .

The Importance of Movement Education in the Training of Young Violinists (Part 3 of 3)

By Lynn E. Medoff, M.A., M.P.T., Guest columnist

Lynn Medoff is a classically trained dancer and physical therapist. She owns and operates Lynn Medoff Physical Therapy in Flagstaff, Arizona. She specializes in the treatment of performing artists and has published and taught in this field. Lynn Medoff holds an MA in dance from the University of Illinois and an MPT from Northern Arizona University.

Babies instinctively understand how to balance as they move through the stages of sitting, crawling, standing, and walking. Humans generally lose this ability as they age and fall into slumped, inefficient postures. This may be due to the enormous task of maintaining the upright posture, misconceptions about proper posture, and/or the adaptation of a sedentary life. Most people vacillate between two postures, the “strain and the slouch,” in an attempt to win the fight against gravity. The former posture has too much tension, the latter not enough. Both postures are inefficient.

The following “balanced posture” images based on Sweigard’s “lines-of movement” are designed to aid visualization of good body posture. 20

Balanced Alignment

Balanced Sitting Posture

- The pelvis is vertical and balanced on the center of the two rounded bones at its bottom. It is neither tilted forward, causing the lower back to sway, nor tilted back, causing the buttocks to tuck under.
- The lumbar curve assumes a forward curve.
- The rib cage hangs down toward the pelvis,
- The shoulder girdle rests on top of the rib cage and the shoulders are relaxed. The chest floats up and the upper body widens.
- To position the head properly, the spinal column lengthens upward through the center of the neck as the head floats up to balance on top of it.

Balanced Standing Posture

- The feet are placed directly under the thigh sockets (about 6 inches apart) with the toes facing approximately straight ahead.
- The knees are relaxed and in line with the thigh and the ankle joints.
- The pelvis rests on top of the thighs and is neither pushed forward nor tilted back.
- The trunk is balanced as in the sitting posture.
- The arms hang long at the sides.

Balance, once achieved, must be maintained. This is accomplished via “centering”.

“Centering” is the ability to maintain equilibrium by balancing the external compressive and internal tensile forces acting upon the body. Irmgard Bartenieff was a dancer and physical therapist who applied Laban’s philosophies to her work. She describes “centering” as “being able to connect with the source of one’s strength (support) even when in motion so that balance is maintained in all activities”¹⁶ (p.108). For Bartenieff, as Laban, centering is crucial for the maintenance of dynamic alignment.

The body’s anatomical center of gravity is located within the pelvis, Sweigard likens the pelvis to the hub of a wheel. The upper and lower extremities are the spokes of the wheel. The legs are attached directly to the pelvis at the thigh sockets and the arms are attached indirectly to the pelvis through muscle and fascial connective sheaths. Like the hub, the pelvis is the center of

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<https://azsuzuki.org/asa-membership-form/>

control for movement. When stabilized properly, the pelvis initiates and controls movement. 20 Bartenieff states that movement takes on form when it is initiated from the center and its shape is maintained if the central point of reference remains strong. 16 Alignment, which is centered and balanced, allows movement to be realized without overexertion and stress.

POSTURAL FAULTS IN VIOLINISTS

Many biomechanical faults of the upper body are due to improper alignment of the lower body, particularly the pelvis. However, violin teachers often ignore the lower body while focusing correction on upper-body position. The shoulder girdle is the supportive framework for the upper extremities. It must be balanced to ensure fluid, efficient arm movement. Its balance is dependent upon good trunk alignment, which occurs only when the pelvis is positioned properly. Pelvic position, in turn, is influenced by the placement of the legs. Thus, lower-body alignment should always be addressed when correcting upper-body posture and mechanics, e.g., a left elbow that is shoved too far forward may be due to a posteriorly tilted pelvis (hips swayed forward). The following corrections are often necessary to change postural faults common to adolescent and young adult violinists (Fig. 2).

Correction of Standing Posture

- **Foot placement:** the left foot is turned out slightly so the toes point in the direction of the scroll instead of pointing straight ahead. Body weight is over the toes instead of the heels to facilitate weight transfer.
- **Knee position:** The knees are relaxed and flexible instead of locked and rigid.
- **Pelvic position:** The pelvis (the body's center) hangs under the rib cage and balances on top of the legs. It is stabilized by a lengthened contraction of the abdominal muscles to prevent the most common positional fault of swaying the hips forward.
- **Low back:** The lumbar spine assumes a slight forward curve when the pelvis is positioned properly. When the pelvis tips forward into an anterior tilt, the lumbar curve becomes exaggerated; when it tips back into a posterior tilt, the curve becomes flattened.
- **Chest, upper back, and rib cage:** The chest and upper back are open and broad instead of sunken and rounded forward, causing the rib cage, sternum, and clavicle to sink. This should not be achieved by pinching the scapulae together.
- **Shoulders:** There is width between the shoulders, which are relaxed to allow weight to drop into the elbows. They should not be elevated or pulled forward.
- **Scapulae:** The scapulae relax downward on the back; their inner borders are neither pulled inward toward the spine nor allowed to migrate too far forward on the rib cage, as often happens with rounded shoulders and a sunken chest.
- **Head and neck:** The neck is lengthened and the head floats upward to balance on top of the spine, instead of hanging forward.
- **The arms:** When the pelvis, rib cage and shoulder girdle are relaxed and balanced, weight falls easily from the shoulder girdle to the arms. The elbows are weighted and move freely. The left elbow should not lock into forward position and the right elbow should not be held too high.

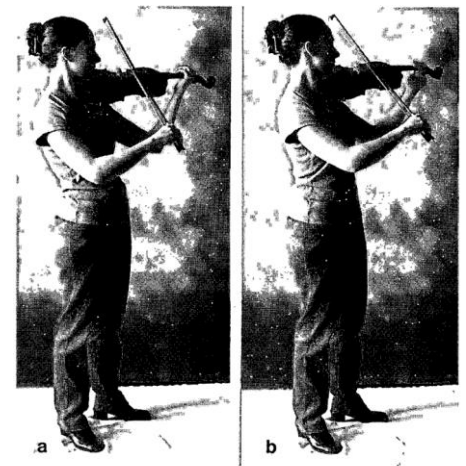


FIGURE 2. Postural faults in violinists. Note the subtle differences between postures a and b. Postural faults present in a: knees are hyperextended, hips are swayed forward, lower back is hollowed out, shoulders are behind pelvis, left elbow is too close to body, and chin is forcibly tucked in to compensate for forward head posture; b: corrected posture.

Additional problems occur in sitting. The violinist must position himself or herself properly in respect to the music stand and the conductor. In addition, the chair is often uncomfortable and not conducive to good posture. Correct sitting posture is best achieved by sitting forward on the chair instead of depending on the back of the chair for support.

Correction of Sitting Posture

- **Chair placement:** If possible the chair should be placed so that the scroll points toward the conductor.
- **Foot placement:** Feet are placed firmly on the ground, instead of wrapping around the chair legs. Their position should accommodate the placement of the scroll instead of facing straight ahead. The right foot can be positioned behind the left.
- **Pelvic position:** Pelvic weight is centered on the bottom of the rocker-like ischial tuberosities. The pelvis is not tipped forward or back and the right hip should not be pulled back. Weight should be distributed evenly on both pelvic bones.

- Low back: The lumbar spine maintains its forward curve but is not exaggerated.
- Upper/mid back and rib cage: The thoracic curve is long and supple and not stiffened into a flattened or rounded position. The rib cage hangs down toward the pelvis, instead of thrusting forward.
- Head and neck: The head and neck are balanced and lengthened upward. Straining the head forward to read the music or watch the conductor should be avoided.

NEUROMUSCULAR RETRAINING OF POSTURE AND MOVEMENT

The retraining process developed by the author to accomplish tension-free balanced alignments and movement consists of five elements. The violinist learns to improve body awareness through exercises that begin on the floor and are later applied to sitting, standing, moving, and playing the violin. The quality of movements experienced in the exercises enhances the quality of movement desired in the musician's playing.

1. Relaxation and Diaphragmatic Breathing

Inability of the muscles to relax is a symptom of muscular overuse, often due to faulty posture and poor breathing mechanics. Muscles fatigue as they work to support static postures and off-balance units of weight. The smooth reciprocal action of muscles fibers within a muscle and the synergy of muscles within a functional group are lost. Sweigard states, "The body's response to poor structural alignment, regardless of cause, is to develop patterns of greater muscle activity to cope with the added workload required to maintain equilibrium in an unbalanced structure" 20 (p.184). Chronic tension results, which adversely affects muscle action and coordination. It most often first presents proximally in the back, neck, and shoulders and, if untreated, eventually moves distally to the arms and hands. When proximal stability fails, the muscles of the forearms and hands tighten and lose their ability to relax as they overwork to stabilize the instrument as well as produce music.

Muscle tension also interferes with the proper breathing mechanics. It interferes with diaphragm descent and prevents expansion of the rib cage by decreasing the flexibility of the thoracic spine and ribs. In essence, the breath is held in the chest, encouraging overuse of the accessory inspiratory muscles of respiration.

Posture, breathing, and movement patterns are difficult to change when the body is tense. For this reason, the process of retraining begins with relaxation exercises. Anatomy-based imagery exercises teach the musician to release tension while in a supine hook-lying position on the floor (Sweigard's constructive rest position) (Fig. 3). The musician is then taught efficient diaphragm breathing through centered breathing exercises that encourage full vertical descent of the diaphragm during inhalation without neck and shoulder tension. During exhalation the musician learns how to engage the deep transversus abdominis (Fig. 3). These muscles are important stabilizers of the spine and trunk during movement and maintenance of static postures.^{24,25} Functional training of this muscle is discussed further in the centering section.

2. Skeletal Balance and Movement Coordination

Imagined movement exercises developed by Sweigard and presented in her book, *Human Movement Potential, Its Ideokinetic Facilitation*, are employed to change poor postural and movement habits. Images are correlated with lines-of movement, 20 which are designed to improve the relative position of skeletal parts and bring them into better alignment. They are based on the premise that the central nervous system subcortically plans the most efficient muscle action to achieve the visualized goal of movement if voluntary movement is not imposed. Overemphasis of volitional muscular action impedes efficient motor learning. It is ineffective to instruct someone to isolate a certain body part of tighten a particular muscle. A more effective approach "directs" the individual to integrate movement patterns through visualization of the desired movement. The nervous system will then take care of "how" the movement is to be accomplished.

Relaxation Imagery

- The back of your body melts into the surface that supports it.
- The back of your head melts down.
- Droplets of water on the back of your neck drip down.
- The area beyond your shoulders melts down. The area between your shoulder blades is jelly-like as it softens down.
- The long area behind your rib cage melts down.
- The area behind your pelvis broadens and melts down.
- Visualize your legs hung by a rod under your knees.

- Watch your thigh bones slide deep down into the center of your pelvis.

Breathing Imagery

- Notice the rhythmic flow of breath in and out of your body.
- Visualize the breath traveling down and up a long central axis through your torso.
- Inhale through your nose and watch the breath travel down the long central axis to your pelvis.
- Visualize a balloon in your pelvis filling up with air as you inhale.
- Exhale through rounded lips and watch the abdominal muscles on the front of your pelvis pulling in and up to compress the balloon and send the air back up the long central axis and out the mouth.
- Watch the inhalations grow deeper and longer as your abdomen expands.
- Watch the exhalations grow longer as your abdominal muscles pull in and up.

This is the basis for Sweigard's *Ideokinetic* facilitation of posture and movement. For instance, to correct head posture, it is more effective to imagine the head floating upward than to tuck the chin and stretch the back of the neck. The latter image creates unnecessary muscular tension that interferes with balanced posture; the former image allows the head position to be achieved with minimal effort, while achieving "lift" through the entire body. Janda states that, "Central motor nervous influence is too often ignored as an integral part of the motor system." He states that balanced muscle coordination is the best way to protect our joints and that good movement habits are dependent upon the functional efficiency of the central nervous system. Janda bases this premise upon many factors: (1) the presence of reflexive mechanisms that control our posture (labyrinthine, tonic neck, and lumbar reflexes), (2) postural and movement patterns common to the painful orthopedic and neurologically impaired patient, and (3) electromyography studies by Belenki et al. (1967) and Bousset and Zattara (1981) that document evidence of anticipatory postural muscle action prior to and during voluntary movement.

Examples of imagined movement used to improve alignment without tension are presented in the descriptions of balanced standing and sitting posture, e.g., the shoulders widen, a string lifts the sternum upward, a string through the top of the head lengthens the head upward, the scapulae hang downward on the rib cage (Fig. 3).

3. Centering

Signe Brunnstrom defines the center of gravity of a body in *Clinical Kinesiology* as "a point about which the mass of the body is equally distributed and if one were to support the body at this point, it would be equilibrium." 22 She further defines the center of gravity of the human body in erect standing to be "located in the upper sacral region, somewhat above the halfway mark between the soles of the feet and the summit of the head" 22 (p. 274). According to Todd and Sweigard, the pelvis is uniquely positioned because the line of gravity and the positioning determines the three major functions of the pelvis as related to movement and posture:

- Weight support and weight transfer. The spinal column carries the weight of the trunk, head, and upper extremities to the pelvis, its supportive base. The pelvis then transmits this weight to the lower limbs.
- Movement initiation and movement control. Todd states that organized movement in the body is initiated at the base of the upright column. Attached to the pelvis are fifty seven muscles that run in every direction, connecting the head, thorax, and upper and lower extremities, to the pelvis. 23 Movement involving the coordination of proximal, distal, and opposing segments from the head to the toes are integrated at the pelvis.
- Stabilization of posture. In order to function properly in the above-stated roles, the pelvis must be stable. This stability is influenced by the many muscles that attach directly or indirectly to the pelvis via fascia (connective tissue sheaths). Of prime importance are the abdominal muscles, which should be functionally trained to maintain pelvic stability and to integrate movement. As we age, functional strength of the abdominal muscles decline due to poor posture, deconditioning, and sedentary habits. Common abdominal strengthening exercises that utilize the "crunch" with or without the aid of exercise contraptions do not build functional strength. Rather, they compress the trunk by over-engaging the superficial rectus abdominal. 24 The "crunch" creates tensions in the upper body, head, neck, and back and encourages a compressed, rounded-shoulder, forward head posture. Properly trained abdominal muscles lengthen

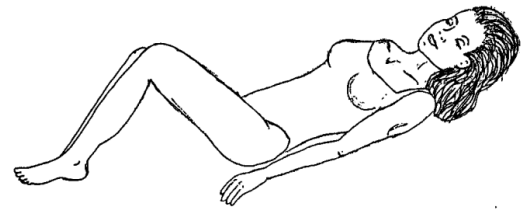


FIGURE 3. Constructive rest position (CRP). CRP is performed on a padded, supportive surface. The head is aligned with the spine. The knees are bent at 90 degrees and aligned with the hips, knees, and ankles. The arms are placed at the sides, on the lower abdomen, across the chest or overhead.

the trunk as they support it in a firm cylindrical shape. The transversus abdominis locally stabilizes the lumbar spine, 24,25 while the rectus abdominis, external oblique, and internal oblique muscles maintain their length on the front and sides of the trunk. This action of the abdominal muscles allows the pelvis to assume a centered, balanced position at the base of the spinal column, which enables it to function effectively in the three aforementioned roles of weight support and weight transfer, movement initiation and control, and posture stabilization. In this manner the abdominal muscles promote balanced, dynamic posture during all functional movements and discourage static holding of the muscles.

4. Lengthening

The concept of lengthening is used in the retraining process to achieve two goals: (1) a “lift” through the body to counter the force of gravity and (2) optimal resting length and length-tension properties of the muscles. Resting length is defined as the length as would occur when the skeleton is well aligned in standing. 20 Length-tension refers to the most effective length at which a muscle can exert tension to contract. 26

Even when balanced, the skeleton cannot maintain its upright alignment unless the fall of weight through its bones is countered. Todd states that the bones are compression members that carry weight downward in accordance with the law of gravity and that this weight fall is countered by the upward tensile force provided by the muscles. 23 As already discussed the abdominal muscles are of prime importance in this role. Images to optimize a “lift” through the body include: the head floats up to a position itself on top of the spine, the chest floats up, and the abdominal muscles lengthen the front of the body. Images must be carefully chosen so as not to create muscular tension. Words such as tighten and hold should be avoided. (Fig. 4).

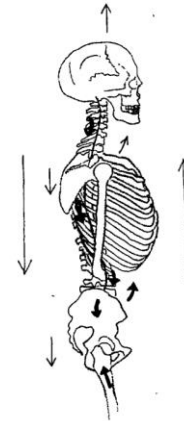


FIGURE 4. The balance of compressive and tensile forces. When the head and the units of weight of the trunk are balanced, the downward flow of weight through the skeleton is balanced by upward tensile forces: The femur thrusts upward into the acetabulum; the abdominal wall lifts the front of the body; the sternum floats upward; a string lifts the top of the head upward.

When the skeleton is balanced and stabilized, muscles function is most efficient, as the muscles acting upon and supporting the joints are balanced and resting at their most optimal length. Resting length and the length-tension properties of the muscles are adversely affected when the muscles struggle to support a poorly aligned skeleton. In several papers written between 1969 and 1974, Janda states the muscle dysfunction plays an important role in the development of painful conditions resulting from postural defects. He points out that certain muscles develop tightness in the presence of postural defects, e.g., the abdominal and gluteal muscles, whereas other muscles weaken, e.g., the spinal erectors and the hamstrings. 21 In their text, *Muscles, Testing and Function*, Kendall and McCreary state, “Muscle weakness or shortness may cause faulty alignment, and faulty alignment may give rise to *stretching weakness* or *adaptive shortening* of muscles. For example, weakness of the muscles that hold the scapulae toward the rib cage and spine may cause the shoulders to round forward and the pectoral muscles of the chest to tighten. 27 Janda states that clinical experience supports Sherrington’s laws of reciprocal innervation that: tight muscles act in an inhibitory way on their antagonists” 21 (p.32). He thus concludes that it is better to stretch tight muscles before strengthening weak muscles and that it is not uncommon for inhibited weak muscles to regain strength after their antagonists are stretched. 21 Sahrman states that tight muscles pull the bones they are attached to into faulty alignment. Releasing the tight muscles corrects this alignment and restores a more efficient resting position of the antagonistic muscle, allowing it to contract more efficiently. 28 Good muscle function cannot be restored until the bones are properly aligned and the muscles are in their most efficient resting length. Thus, strength training is not begun until this is achieved.

5. Strengthening

Movement patterns are smoother, stronger, and more energy-efficient when the body is well aligned and centered and muscle tone is balanced. Thus, strengthening is most effectively implemented once the violinist has internalized the four concepts discussed above: relaxation, centering, lengthening, and balance. Increasing muscle strength through traditional conditioning does not necessarily decrease painful symptoms or improve playing endurance and quality. In addition, musicians often mistrust traditional strengthening exercises for fear they will adversely affect technique and artistic expression. An effective strengthening program is sensitive to the needs of the performing artist. It addresses the musician’s posture and movement mechanics and helps the violinist develop the type of strength and endurance needed for extended violin playing. It must be kept in mind that movement and postural patterns practiced during exercise transfer to violin playing. Thus, the manner in which the violinist performs the exercises is extremely important. If body mechanics are faulty, they must be corrected. This can

be accomplished only by addressing the central nervous system, which controls and coordinates posture and movement. Movement, weight, and body position are perceived from within via the proprioceptive system of the nervous system, which is responsible for three different types of sensations. Movement sense or “kinesthesia” comes from the muscles and bones; positional sense is derived from the labyrinthine system of the inner ear; and visceral sensations are perceived through the internal organs. Todd states, “The ability to improve a pattern of support and movement for the reduction of mechanical stresses comes, not through the development of bulk and power in individual muscles, but from the study and appreciation of the human body as a weight-bearing and weight-moving structure”²³ (p. 33). Thus, the primary goal of strength training should be reeducation of the neuromuscular system. Balanced alignment and proximal strength, stability, and control should be emphasized to encourage the development of integrated movement patterns that allow the violinist to move with fluidity and ease. Once these concepts are understood, strengthening can proceed in a manner that improves movement function without increasing tension.

EFFECTIVENESS OF TREATMENT

The effectiveness of the five-component neuromuscular retraining program was investigated via a two-year outcomes study of musicians treated for repetitive stress injuries. Forty five injured musicians were treated by the author at the Northern Arizona University Therapy Clinic from 1996 to 1998. Of those, 23 (51%) were treated for overuse injuries. Musicians whose injuries were complicated by the following factors were not included in the study: focal dystonic symptoms, symptoms primarily due to psychological issues, and symptoms of many years of duration, previously treated via several interventions. Seventeen patients were female, and six were male. Instruments included: strings (n= 13), woodwinds (n=6), brass (n= 2), and keyboard (n= 2). Musicians were treated for an average of nine visits. The number of total visits varied according to age. Those aged 12-24 years were treated an average of five times and those aged 27- 44 years were treated an average of fifteen times. All musicians, regardless of age, returned to their pre-injury levels of playing within five to eight visits. They were not all symptom-free; however, all could manage their symptoms through strategies learned in physical therapy.

CONCLUSION

The majority of injuries sustained by violinists can be classified as repetitive stress injuries of the musculoskeletal system, a primary cause of which is improper posture and poor movement mechanics. Young adult and teenaged violinists are especially prone to overuse injuries when increasing their playing time and intensity after entering a strings university or conservatory program. I have proposed that many injuries among this population can be prevented by training young musicians to have correct body mechanics via supplemental movement education and/or movement training integrated into violin technique lessons. Ideally, movement education should begin before children begin to play an instrument. It should then continue, to some degree, throughout their musical training. It is especially important that children be accustomed to movement before they enter the typically insecure preteen years when awkward habits become ingrained. I also propose that music teachers learn how to address postural and movement faults before they lead to injury. Finally, since the central nervous system controls and coordinates postural and movement mechanics, treatment protocol of injured musicians must include neuromuscular retraining to be effective.

ACKNOWLEDGMENT

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THE COMPLETE ARTICLE, INCLUDING A LIST OF REFERENCE MATERIALS IS AVAILABLE AT THE ASA WEBSITE, [HTTPS://AZSUZUKI.ORG/NEWSLETTERS/](https://azsuzuki.org/newsletters/)

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Summer Camps

The NAU String Quartet Camp is May 30-June 4.
Contact Jacquelyn.Schwandt@NAU.edu

Southwest String Quartet Chamber Music
Workshop, June 13-17 (Tucson).
<http://southweststringquartet.com/workshop.html>

West Valley Youth Orchestra Summer Chamber
Music Camp, June 20-24 (Phoenix). WVYO.org

Suzuki Summer Institutes

Check the Suzuki Association of the Americas for a
listing of summer institutes, both in-person and on-line.
<https://suzukiassociation.org/events/institutes/>

