High Vibrations and Children's Voices

Eve Kodiak, New Hampshire, U.S.A.

The upper registers of our voices help our vestibular systems to unfold. These frequencies affect the development of our vision, hearing, muscle tone, coordination, and balance, our reading, writing, and musical skills — even our ability to feel joy. Let's sing these high vibrations back into our lives!

Recently, I was introduced to six preschoolers bunched at the corner of the class rug.

"Let's make a circle!" I suggested. They looked at me as if I had just arrived from Mars. Then they wiggled themselves into a line.

Eve Kodiak

Sitting in a circle on the floor is not a simple operation for children of preschool age, and I'm accustomed to watching them form various amoeba-like shapes. But I'd never before encountered a group that seemed to have no idea what a circle is.

I began to sing in the octave above middle C–the appropriate range for young children. A chorus of croaks surrounded me. "Let's make some high sounds!" I said, and demonstrated. A few game little frogs strained their voices to try.

What Has Happened to Children's Voices?

This situation is not normal, but it is becoming the norm. Modern culture has made war on the natural high frequencies of the human voice: Here's how:

• Excessive volume: Noise from airplanes, machinery, and music played at high volume can actually erode our ability to hear high frequencies. Listening to loud music creates a vicious cycle, in which the increasingly impaired listener keeps turning up the volume.

• Electronic cacophony: Telephones, CDs, and television compress the range of frequencies we hear. Experiencing an oversupply of electronically reproduced sound, children don't develop the ability to distinguish different musical pitches, or the high frequencies responsible for syllables like "S" and "K." This is one of the major factors for those challenged with dyslexia or who "can't carry a tune."

• Absence of natural sounds: Because our world is filled with electronic voices, we use fewer words with one another. Living in a constant buzz, we tune out noise, rather than tuning in sound. We sing less. We listen less to birds and wind and silence.

Cultural Fallacies about the Voice

1. Only professionals should sing. In "the olden days" we entertained ourselves by participating in sports, song, dance, and play. Now we have become a culture that relies upon experts to entertain us. The message is: "If you're not professional, don't." Children learn by modeling. If the people around them don't sing, they won't sing, either. They probably won't even know how.

2. High (feminine) is weak, low (masculine) is powerful. The actress Lauren Bacall artificially lowered her voice to get a part in a movie. She blew her first audition, because Hollywood had no place for "girls with voices like Minnie Mouse."

I was once chided in a workshop for encouraging people to speak in a higher vocal range, because, I was told, "In a business setting, women who speak in high voices are not taken seriously." And many children today grow up without the high, cheerful, stimulating sounds of baby talk.

3. Singing is embarrassing. How many of us grew up believing that singing is only for wobbly church sopranos? Dr. Seuss has enshrined this prejudice in his book *Hop on Pop,* where we meet "Thing," a character with long hair and a sheaf of music in one hand.

THING THING What is that thing?
THING SING That thing can sing!
SONG LONG A long, long song.
Good-by, Thing. You sing too long

By modeling low voices to children, by being too embarrassed or too busy to sing with them, by feeding them electronic substitutes for the human voice, and by shushing the peals of their play, we deprive children of their natural voices. In this way, without intending to, we literally take away their power.

Why Are High Frequencies Essential for Our Development?

Current scientific research suggests that the neurochemical activities of the body are, in fact, governed by vibration. In the world of physics, particle accelerators have changed our understanding of matter itself, revealing that the spaces between atomic particles account for 99.9999 percent of the atom! And these atomic particles, under close scrutiny, have been proven

Eve Kodiak with preschool children in a circle

not to be matter at all, but vibrational interference patterns. Skin, bone, body, mind, spirit—we are made of vibrations.

Why high vibrations? Interesting information is coming from the field of cymatics, which studies the effects of tone on matter. There is speculation in the scientific community that sound may orchestrate the formation of our very cells, and be key in the development of embryos.

Water droplets actually change shape when frequencies around them change. High frequencies produce more elaborate patterns than low frequencies. Our bodies are largely composed of water. My preschoolers could neither sing in higher frequencies, nor create a circle. Is there a correlation?

Our ears do a lot more than just hear sounds. At nine weeks in utero, our semicircular canals are perfectly formed to take in the gurgles of the mother's digestive system, the beat of her heart, and the high frequency of her voice. Our ears control our spatial orientation, providing the feedback we need to know where "up" is, and also affect our posture and muscle tone. They interpret motor and auditory information, and control both our ability to speak and the quality of our voice.

Hearing, Learning, and Depression

Learning difficulties usually go hand in hand with hearing difficulties. Children may not be able to distinguish certain consonant or vowel sounds. They may find listening to certain frequencies painful, or have a history of middle ear infections. When they really can't hear something, they can't understand it or reproduce it.

"Feeling high" may be a literal description of joy. The French hearing expert, Dr. Alfred Tomatis, was once called to investigate depression among factory workers. He discovered that the loud whir of a new machine was destroying the workers' ability to hear high frequencies. Investigating an epidemic of depression in a monastery, Dr. Tomatis found that a new abbot had decided that singing Gregorian chant in the resonant chapel was a waste of time. The monks were missing their daily dose of high vibrations.

Current scientific research suggests that the neurochemical activities of the body are, in fact, governed by vibration.

So, the next time you're about to call, "Keep it down!"—think twice. The children may be making the high sounds that create and maintain their sense of joy.

Some Practical Ways to Bring the "High" Back into Our Lives

Experiment with the techniques. Most can be made appropriate for any age group by tweaking the presentation and imagery.

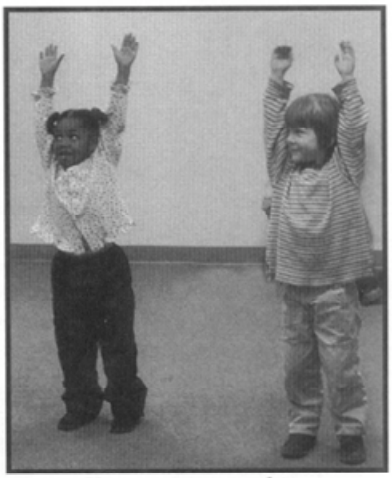
For young children, be simple and concrete. For example, say, "Close your mouth and make a sound high up in your head like a mouse!" Then model it for them. Older children and adults may also enjoy a more technical kind of noticing as they explore. For example, say, "Hum as high as you can. Where do you feel it vibrating?" Don't forget that adults need models, too.

Humming

When you hum, your mouth is closed, and your vocal chords can vibrate naturally, without pushing. Notice which part of your face is vibrating, feeling the sounds move up from your jaw to your nose to your forehead; Get the sound vibrating right to the top of your head.

Elevator

Move the hum from your chest up to the top of your head, marking different "floors" as you go. For example, the chest can be the basement, the throat can be the first floor, and so on. Because each person's voice may vibrate on a different note in each of these areas, don't assign particular pitches to the floors. This exercise is for noticing the way vibrations feel in your own body. You can enhance the game by calling out, "First floor!... Penthouse!" and participants can take turns being the "elevator operator." (I've adapted the elevator image to a song in *Rappin' on the Reflexes*, my CD and Guide to sensory integration through music and movement (editor's Note: See the review of Eve's CD and Guide on page 15.)



Youngsters reaching for high notes

Animals

You can help children to make a sound like a squeaky mouse or a puppy that wants to come in. If they keep their mouths closed, they won't push and strain their vocal chords.

Sirens

In my preschool class, one little boy immediately saw the potential of the hum. "I want to be a fire truck!" he declared. Sirens are a great way to vibrate the entire vocal range, and you can even drive a truck at the same time!

Orchestra Conductor

Stand in a circle. Participants take turns being the conductor, or part of the orchestra. The conductor moves arms up for high sounds, and down for low ones. The orchestra follows with arms and voice. Use different speeds, and explore the middle range of the music, too.

The Ma Ma Song

After humming, the next step is to open and close your mouth. "Mmmmm" opens to "Ahhhhh," over and over again. The word "mama" is a great way to bring the ease of humming into singing with an open mouth. Exaggerate a loose jaw Exaggerate a loose jaw. Make up tunes, or sing "ma ma" to any familiar tune. "Twinkle, Twinkle, Little Star" is usually a good start.

(CONTINUED ON PAGE 13)

High Vibrations and Children's Voices

(CONTINUED FROM PAGE 7)

Vowel Singing

"Mama" can move on to "mo mo" and "moo moo," or to "meh meh" and "mee mee." Notice how your mouth and jaw change shape as you create new vowel sounds. (Vowel play appears in *Rappin' on the Reflexes* as "Coyote Vowels.")

Weird Mouth Sounds

Experiment: click your tongue; roll "r-r-r-r-r" with your tongue; vocalize through vibrating lips on "b-b-b-b-b." Create your own compositions from these sounds that you cause to vibrate in your head.

Breathing

Sometimes singing is inhibited by an inability to breathe. When asked to take a deep breath, people often gulp in air that stops at chest level. Instead, instruct them to place their hands on their bellies and blow out all of their air. Make a game of counting as long as you possibly can without taking a breath. Then, just open your mouth and let the air rush in to the vacuum you've created. This way, the air gets all the way down to the diaphragm. This is a good preliminary to singing. (This game appears in *Rappin' on the Reflexes* as "Blow, Wind, Blow.")

Brain Gym for High Vibrations

Thinking Cap, in which you gently "uncurl" your ears all the way from the top to the earlobe, helps to wake up the hearing mechanism. *Belly Breathing* helps to get your air flowing naturally.

Two Brain Gym animal activities that stimulate the vestibular system and help to integrate head-righting reflexes are the Owl and the Elephant. In the Owl, grab one shoulder with the opposite hand, turn your chin in that direction, and slowly move it all the way across your chest to the other side, hooting as you go. In the Elephant, bring one arm to the side of your head as a trunk. Then move your head and arm together in a Lazy 8 pattern. Don't forget to trumpet!

Physioballs

Balls big enough to roll on are helpful for stimulating the vestibular system and integrating head-righting reflexes. Vocalize, and notice the changes in sound as you roll.

Instruments

Many simple instruments create beautiful high frequencies. A favorite of mine are two little brass circles that you can dangle from each hand, called finger cymbals. Chime them together, bring one each toward each ear, and move them up and down. You can hear the pitch changing quite dramatically. Pairs of smooth hardwood sticks called claves also create high frequencies of a different timbre. These can get quite loud in a classroom, so use them with caution. Recorders, guitars, violins...all acoustic instruments make good listening.

Musical Arrangements

For young children: Here's a simple symphony based on the nursery rhyme "Hickory, Dickory, Dock." First get the children running their little "mice" (fingers) all over their bodies. You can then call out the body parts: "Up your cheeks and into your hair! Down your arms! Around your belly!" This light tapping energizes the system, stimulating the growth of new neural pathways. The little mice squeak as they run.

Next, make the clock. Tongue clicks make a "tick tock" sound. Rocking the head makes a pendulum. This stimulates the hearing mechanism through the vestibular system and creates a steady beat.

Now keep the beat going, hum the starting note, and sing:

Hickory, dickory, dock,
The mouse ran up the clock.
The clock struck one.
The mouse ran down.
Hickory, dickory, dock.

You can act out the song. Run the mouse up your body, clap on the word "one," and run the mouse down. When the words are done, go back to the clock noises, and rock to center for a stop. This is a good way to wind down to a quiet time. If you prefer a high-energy ending, run the squeaking mouse back up your body and out through the top of your head.

For older children and adults: Call and response is an age-old way to sing with a group. You will find many work songs in the folk repertoire, from the Anglo-Celtic sea chanteys to African-American field hollers. You can also create your own.

Get a beat going in the body (hand claps or finger snaps, rocking, bouncing, etc.) and sing something to the group. They sing it back. Continue the dialogue.

You can extend leadership to different members of the group

A Brain Gym Warm-up

Get ready to sing with Brain Gym movements!

1. **The Thinking Cap** wakes up the ears for listening.

2. **Earth Buttons** and **Space Buttons** locate your inner resonating chambers. Begin **Earth Buttons** with your eyes on the floor, slowly moving them up, then down, the vertical plane. Begin **Space Buttons** with your eyes on the ceiling.

3. **The Grounder** helps you feel—well, grounded! It locates the diaphragm and releases stress.

4. **Belly Breathing** moves the breath comfortably and efficiently for singing.

5. **The Elephant and Lazy 8s** activate the vestibular system for hearing and reproducing sound. As your "trunk" moves in **Lazy 8s** patterns, vocalize elephant sounds.

6. **The Owl** releases the throat and shoulders, creating freedom in breathing and singing. Make long "Who-o-o-o-s" as you drop your chin and swing your head slowly from side to side.

7. **The Homolateral Crawl** releases old information and opens you to receive the new. Stop movement completely with each new crawl, and count as you go: "Five—stop, four—stop, three—stop, two—stop, one—stop."

8. **The Cross Crawl** gets you ready to integrate new learning, and energizes you to do your best.

by singing their names. For example, the leader starts, "Call on Jean, the best you've ever seen!" and the group echoes. Then Jean sings, "Call on Joe, ho ho ho," or whatever words come to mind. The rhyme is for sound and fun, not for meaning.

Epilogue

When my son was a baby, sometimes I'd inadvertently start my lullabies too low. "A little higher," I'd say out loud, and begin again. Driving the car one afternoon when my son was two and a half, I heard the beginnings of "Twinkle, Twinkle, Little Star" coming from his car seat behind me. Then his voice stopped. "A little higher," I heard him say — and he began to sing in a higher key.

Now he's eight, and his favorite song is Tom Chapin's "Gonna Go to Borneo." It's about two boys who journey around the world with the help of funny relatives and fantastic vehicles.

One day, while I was washing the dishes and hearing this song for the hundredth time, my son called out to me, "They're singing in a higher key!" When he replayed the song, I heard that he was right. As the boys reach their destination, the song modulates up a half step.

"They're singing in a higher key," he said again.

"Why, do you think?"

He grinned. "Because they're happy."

References:

Chapin, Tom. "Gonna Go to Borneo." From the album *Around the World and Back Again*. New York: Sony Music, 1996.

Dennison, Paul E., and Gail E. Dennison. *Brain Gym® Teacher's Edition.* Ventura, Calif.: Edu-Kinesthetics, Inc., 1989.

Dr. Seuss. *Hop on Pop*. New York: Beginner Books/Random House, 1963, pp. 34-37.

Hannaford, Carla, and Ahti Mohala. *The Balance and Power of Resonance Handbook*. Captain Cook, Hawaii: Jamilla Nur Publishing, 2002.

Pert, Candace B. *Molecules of Emotion: The Science Behind Mind-Body Medicine.* New York: Simon and Schuster, 1987.

Eve Kodiak, M.M., is a licensed Brain Gym Consultant and professional musician. Her current project is Sound Intelligence™, a new approach to learning combining music and developmental movement. Rappin' on the Reflexes, *her CD, songbook, and guide, is reviewed in this issue. Eve Kodiak lives and practices in southern New Hampshire. She can be reached on the Web at www.evekodiak.com or eve@evekodiak.com.* ▲