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Seven barriers to life span engagement:

health and well-being across generations and natural physical environments



by Randy T. Eady, MEd, NCC

Oftentimes, when I speak at a conference or present three-Bs seminars (breathing, balance and bilateral coordination), I begin with a demystification of what tai chi does to bring body, mind and spirit together in a movement meditation. All the while, I underscore why these holistic considerations are so important for both ends of the age spectrum, as well as special needs groups. Curiously, we find ourselves in a culture that simultaneously promotes and glorifies fitness while restricting access to quality physical education and good information on holistic principles.

I've dented soapboxes and traveled around the United States professing that "recreational" therapy should play more of a part in the educational and therapeutic curriculum for youngsters, older adults and others who are differently-abled. Unfortunately, barriers—frequently based on myths and as-





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Breaking down a skill into smaller increments helps a learner to master each step. Photo: Gwendolyn Rae Photography

sumptions—too often prevent this kind of engagement in physical activity and nature across the life span.

This article examines seven such barriers. It also includes some of my ideas about and experiences with addressing these barriers to suggest some potential avenues for further exploration.

Barrier I: Children 'naturally' move with an ergonomic finesse that older adults can no longer access

Did you ever notice how perfectly a "neurotypical" developing youngster can perform a squat at age four? Feet planted firmly on the ground, head aligned with the spine, knees slightly out, and torso at about a 45° angle. A child of this age can get up from the floor or out of a chair with perfect ergonomic finesse—that is, head and pelvis positioned ideally for both economic energy use and core body activation. Four years later, that child has difficulty squatting and rounds the back to pick something up off the floor. This may indicate some weaknesses in the major muscle groups, lack of trunk stability, and a few other less-than-desirable physical issues. Is this movement deficit supposed to happen? Or is there another problem? Astoundingly, across the life span, and engaging normal features in the everyday environment, most populations I train see quantitative and qualitative improvement.

Remember, movement—including strength, agility, balance, coordination, speed and endurance—is a set of skills that must be continuously taught and reinforced not only for growing children, but for mature adults as well. A comprehensive read through the available research shows a high incidence of movement deficits in people that supplant virtual activity for the real thing. Movement deficits refer to poor ability to utilize and control muscular systems. It may be evident in gait patterns (e.g., walking, navigating stairs), poor posture or trunk stability. Sedentary lifestyle patterns, which typically involve lots of sitting with little variety in physical activities and a lack of vigorous physical exercise, can exacerbate movement issues in neurotypical, aging and differently-abled populations.

Years ago, when children more frequently spent time on playgrounds, movement skills were calibrated through random and energetic play. Youngsters ensured further development (and integration) of both muscular and central nervous systems through jumping, hopping, skipping, climbing, pushing, pulling, throwing, and all variations and combinations of these patterns. Yet, in the case of older adults and special needs individuals today, vigorous physical play is often missing from the daily routine.

Physical play skills require development through teaching and practice. I base my method on the Koshare (pronounced ko-sha-rey) Pueblo Indian Therapeutic Clown technique, which uses a system of role-reversals to show children how to reacquaint elders with "play." Children, in essence, learn new abilities to reinitiate physical playtime with elders.

Take rising from and lowering into a chair, for example. I show older adults how to practically leap from a chair by leading with their head and to *demonstrate* that movement to wee ones. Then, coached by youngsters, elders *learn* how to settle back into a chair avoiding armrests (so as not to misappropriate muscles from the back to the upper arm), reaching between their legs to contact the chair seat for security. This exercise puts both groups on a confidence-building path to intergenerational physical engagement.

Barrier 2: Sport delivers plenty of fitness, so why do other physical activities?

Fitness is general, and can be applied to many different areas and situations in life—from daily tasks to athletic endeavors. In contrast, sports are highly specified and the skill sets within them do not generalize or "cross over" much to other activities.

Most of my continuum-of-movement participants aren't playing sports. Nor do they want to. Why? Ever watched a little league baseball game? Kids stand in the field, bat three or four times, sit on the bench, and maybe throw the ball five times (and that's if they're in the infield). Even individual sports such as martial arts, yoga and tennis, which are good for fitness, are highly specific endeavors.

Think of sports (individual or team) as branches that reflect the roots on a tree. The roots are general fitness and the trunk of the tree is overall physical activity performance.

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Play is 'desperately missing' from fitness, says Randy Eady. A program's critical goals are to get people to move well and enjoy it. Photo: Gwendolyn Rae Photography

Barrier 3: Older adults are inclined not to be active, which means they require more motivation

This barrier assumes we aren't learning as we age. Yet, as we mature, we generally begin to slant away from things that we are not really good at or have little experience with. For example, it took me about a dozen times of trying to ski before I decided it wasn't for me. Consider how many variations of physical fitness most elders (or, for that matter, differently-abled children) typically have access to. Maybe sports? A machine-based weight-training program?

Many older adults may present an aversive barrier to or gravitate away from vigorous physical activity because:

- They resist new activities and task demands that are out of the routine.
- Motor deficits can make many of these activities difficult, especially when improperly taught.
- Movement has never been introduced in a way that is fun or meets the needs of the individual.
- An exercise program has not been paired with reinforcement, including behavior-specific praise or secondary

reinforcers (e.g., music, access to preferred activities).

Any of the above could be factors. My intergenerational participants find physical activity fun and reinforcing because they are presented with new, dynamic options for regular fitness and exercise in a creative and stimulating way.

As a "generations consultant" in 2008– 2010, I was asked to build bridges across generations and facilitate a better understanding of the diverse makeup of an active adult living community. Taking the challenge head on, I designed a miniature golf barefoot course next door to the senior living center in a small resort village in Germany, allowing grandparents and grandchildren to interact in the outdoors—barefoot, naturally. This had a twofold benefit of establishing a more playful atmosphere and increasing both spatial awareness and balance sensitivity.

I was able to supply the community's staff with data from a study published in the *Journal of the American Geriatrics Society* reinforcing that walking "barefoot in the park" for 30 minutes could reduce blood pressure and improve balance.¹ It also helped that Dr. Dieter Breithecker, head of Germany's Federal Institute for Posture and Mobilization, announced that his German Health office endorsed walking barefoot in the great outdoors as a simple, natural way to increase foot health.²

As a result, we made sure that each round of mini golf lasted for at least 30 minutes by creating a simple scavenger hunt for the multigenerational teams.

Barrier 4: Some kids (young and old) just can't learn to exercise

Saying someone can't exercise is akin to saying that some people deserve a higher likelihood of Alzheimer's disease or Type 2 diabetes. Breaking any skill down to smaller increments helps the learner to master each step. Similar to math, science, reading, or any other cognitively based skill set, movement requires planning and appropriate implementation. I've had students learn sophisticated tai chi movements by breaking the exercise down into four discrete steps. While mastering each step, the participant is growing stronger and more confident. Most often, the environment is less than conducive to a person's success when a would-be athlete "fails" or quits.

In my intergenerational tai chi program, we do animal movements, kick and throw balls, catch and pop bubbles, and balance things on our heads, hands and feet. The key is addressing the major movement patterns (pushing, pulling, bending, rotation, locomotion) and finding a way to teach students while they have fun.

Often, behavioral and cognitive issues have to be addressed with individual students. I've started fitness programs for older adults and children that include a 20-second "exercise" period followed by five minutes of reinforcing activity. Over

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Programs can address major movement patterns in creative ways. A tai chi program can include such things as throwing balls and catching bubbles, for example. Photo: Gwendolyn Rae Photography

time, as tolerance for the new activities increases, we engage in fitness longer and more regularly.

Barrier 5: An exercise program needs to be highly structured, with costly equipment

The play aspect of fitness is desperately missing, both in youth and adult fitness. There really should not be much difference—other than volume and intensity—between physical activity programs for these groups. For instance, with my participants across the age and ability spectrum, we perform the same movement patterns I would include in my own training/play sessions. Many physical education and fitness programs are far too rigid, without accomplishing the most critical goals of getting people to move well and enjoy doing so. Teaching in a structured manner is important for developing the prerequisite and basic movement skills. But movement exploration and discovery is the ultimate goal.

Video gaming systems are excellent for enlivening the multigenerational environment, but are recreational at best. The vast majority of equipment I use is inexpensive, fits in the trunk of a car, and provides real fitness benefits. A short list includes cobblestone walkways, varied-terrain balance enhancement pads, rope, soap bubbles, slacklines, exercise and medicine balls, and inexpensive minimalist-style shoes.

Barrier 6: A program of physical inclusion in the outdoors for older adults or differently-abled individuals is complicated or ineffectual "We don't stop playing because we grow

old; we grow old because we grow ing," said the late playwright George Bernard Shaw. I would add the word "outside" to the end of that sentence.

A recent report from researchers in the Interdisciplinary Centre for Environment and Society, Department of Biological Sciences at the University of Essex, England, asks the question: "What is the best dose of nature and green exercise for improving mental health?"³ Evidence from this multistudy analysis shows green exercise (activity in the presence of nature) clearly leads to positive short and long-term health outcomes. This analysis assessed the best regime of dose(s) of acute exposure to green exercise required to improve selfesteem and mood, which are indicators of mental health. As the report notes, "there are plenty of types of nature and green spaces in both rural and urban areas ranging from very extensive wilderness to green belt" amid urban space; all can lend to people's health and quality of life. A "typology of engagement with nature" framework is posted on the researchers' website at www.greenexercise. org/Methods_of_Analysis.html.

It is intriguing to overlay this typology framework with the Elusive Landscape art installation at the Vizcaya Gardens in Miami, Florida. Mixed media artist Dinorah de Jesús Rodriguez designed Elusive Landscape ostensibly to promote environmental awareness and celebrate Miami's lush urban green spaces. The artist's multiple hand-crafted, 16 mm

films depicted the forms and colors of natural images of Miami projected into foliage, trees and other surfaces at the Gardens. The installation encouraged these natural experiences to help participants get a better handle on an educational curriculum that defines the health-deriving benefits of exposure to nature. People moved through several layers of the typology at the same time as they experienced physical contact with nature in a way they might not have imagined possible.

In the maze projection, for instance, two projectors streamed light to a center pole-like edifice from nearly a 90° angle. The children in attendance appeared to delight in the discovery of new impressions, as they constantly ran to different areas of the maze. It reminded me of a movement therapy technique called infinite walking, which, ironically, I describe to children as a game of "How many things can you do at once?" This technique allows use of the body as an instant biofeedback system and easily inspires interest.

For those of us interested in *engaging multigenerations in outdoor activities,* the conclusions of the University of Essex report and art installation dovetail. These findings confirm that the environment does, indeed, provide "an important health service."

Barrier 7: 'Medicalization' creates dis-ease with activity in nature

I often refer to my intergenerational and inclusive movement program as "O-2-B-4 Again" in order to define it both broadly and simply. In part it is to get the attention of people who think of physical activity as a grim business. Yet, what happens when most four-year-olds (and often 84-year-olds) of differing abilities are introduced to rhythmic sounds? They dance. That's because movement plus rhythm tends to create an anxiety-reducing state. It stands to reason: Our bodies and our lives are ordered by rhythms great and small, so rhythm both feels and does us good.⁴

Parkinson's disease (PD) is one of the best examples to depict how rhythmic response can either throw off or balance the body's physical activity needs. PD is a form of accelerated aging. Shaking, tremors, imbalanced neurotransmitters (chemicals that transmit brain signals), and many other conditions of PD lead to declining efficiency and function in the body. This decline often results in a lack of confidence and security in movement ability, and can continue into a cycle of declining health and further breakdown in the body. Unfortunately, a great many problems of PD accelerate this entire process of declining efficiency and function. One major PD problem that I work with is tremors and shakes. These symptoms result from depleted muscle fiber firing in an unregulated and out-ofcontrol, spastic way.5

Several approaches can calm the nerves and the muscles, which is where natural forms help encourage engagement. In my movement class, the students walk in slowly, some rigidly or with a bit of a tremor, and take their places-not at a ballet barre or on the dance floor, but perched on chairs. As the music starts, they flutter their fingers and point their toes along the ground. Limbs loosen and start to flow. And perhaps something even more important happens: laughter. According to the Mayo Clinic, laughing causes people to take deeper breaths, which helps stimulate the heart, lungs and muscles; it also reduces stress and promotes a relaxed feeling.6 The movement class provides a safe context for participants to experiment with mobility and laugh.

I frequently lead students in movements inspired by winged insects and birds. Noting that a stooping stance often occurs with a combination of insecure walking and walker use, I reference hummingbird and butterfly movements that students first learn while sitting in chairs, then standing, then moving across the floor, building on each movement until they have an entire routine.

Simple movements such as walking sometimes feel very unpredictable for those with PD, and they may end up shuffling. Things go more smoothly when they focus on the sensations of their feet and start moving arms and legs in a coordinated, conscious fashion.

Benefits of intergenerational programs for young and old

Research shows that engagement in physical activity can extend older adults' years of active independent life, reduce morbidity and mortality, and lower healthcare costs. Many programs that increase levels of physical activity have been shown to enhance quality of life for these individuals.⁷ Mixing children with elders magnifies the benefits for both groups.

Cultural anthropologist Mary Catherine Bateson sees aging as an "improvisational art form calling for imagination and willingness to learn,"8 and affirms this when talking about opening the door to physical activity and learning about the importance of "nature as an engager" from her parents (Margaret Mead and Gregory Bateson). In her book Composing a Further Life, Bateson expands on the idea of lives as an artistic creation. Referring to a second type of adulthood where new meaning and ways to craft life patterns are expressed, she concludes: "Adulthood II" can be a life stage of unprecedented vital, intergenerational health and interaction.

For example:

- Young people learn about the skills and physical capabilities of older adults, and an understanding of their diversity and individuality.
- Youngsters gain positive role models in aging adults.



Dr. Angela Wensley fights Parkinson's disease with a regimen that includes intense physical exercise. Photo: Wendi Kaiser

Exercise and Parkinson's disease: an individual engagement

Dr. Angela Wensley, a 63-year-old engineer, was diagnosed with Parkinson's disease (PD) in 2007. PD slowly destroys the neurons (or nerve cells) in the brain that produce dopamine, a chemical that facilitates movement. However, there is plenty of published evidence that vigorous physical exercise helps protect neurons. Examining the disease from this bigger perspective helps to reframe PD as a positive engagement in Wensley's now more physically active life.

Discussing the "medicalization" of those diagnosed with neurodegenerative and autoimmune disorders, Wensley mentioned that she is actually "more physically engaged and feels more vitality" today than a score of years ago. She made the personal choice to refrain from PD medication 28 days after starting to take it, she says, and has remained free of this prescription medication for over three years. Her symptom-retarding regimen includes intense physical exercise such as "tennis therapy," kickboxing, regular gym visits, cardio work, weights, stretching and working with a personal trainer to stay honest. She also goes to a local park weekly for a one-hour walking/jogging/exercise circuit.

- Children gain not just new knowledge, but also a sense of perspective that develops as part of the aging process.
- Old and young share the experience of learning from both mistakes and triumphs.
- Elders make a meaningful connection with younger generations.
- Older adults can develop new childrearing skills to use with their own grandchildren.
- Making new friends of any age with common interests lifts people out of isolation and helps to combat loneliness.

Well-organized, supervised programs in city parks are a great way for young and old to explore the joys and benefits of the intergenerational connection. One of the easiest ways to bring inclusiveness into a program is to schedule a 20-minute excursion/walk/tour with a child, an elder or a special needs individual. A lot can be absorbed related to living and learning in the earliest, latest and most challenged facets of life.

Seeing firsthand life span differences and what it means to always have to look for the access ramp or to peer at the world from a three-foot vantage point—can open eyes when embarking on natural encounters of the physical kind.

Randy Eady, MEd, NCC, has 16-plus years' experience in patient advocacy/clinical contact related to balance and movement disorders. Eady served at the United States Air Force Academy in the Department of Behavioral Sciences (assistant professor, 1992–97), and created Ko~Sha~Rey Rhythms (KR) Therapeutics during his tenure. He currently teaches tai chi programs at the ACTS continuing care retirement community in Boca Raton, Florida. In addition, KR Therapeutics has worked with the Governor of Florida to reduce the cost of healthcare in the state via mentor facilitation and legacy-elder training in outdoor settings. Eady has a number of programs that work with all ages, but in particular with two target populations: young children and "experienced" older adults with respect to improving safety and security in mobility and balance. He is also on the Editorial Advisory Board of Garden Design. Eady can be reached by email at randy@koshareyrhythms.com.

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Images courtesy of Ko~Sha~Rey Rhythms Therapeutics