

Anesthesia Use in Polio Survivors: What's New?

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Selma H. Calmes, MD, is a polio survivor and a member of PHI's board of directors.

Do we know anything new about anesthesia for polio survivors? By reviewing reports in medical journals we find that in the last two years, 2008-2010, there were five case reports (each about a single post-polio patient having anesthesia) in the medical literature and one study of a group. We will look at useful aspects of these cases and also comment on two other aspects of anesthesia care that are important.

Three of the five case reports were about regional anesthesia (RA). Regional anesthesia means that a local anesthesia drug, such as lidocaine, is injected to numb nerves in the back (spinal or epidural) or other body locations such as arms or legs (various nerve blocks). It is very safe and is preferred to general anesthesia, because it blocks the pain signals coming from the surgery site to the brain. This is very favorable for patients' well-being. However, some operations can't be done with regional anesthesia. It is often technically hard to do RA in post-polio patients with scoliosis, especially if Harrington rods are present.

There is a new tool to help place RA: portable ultrasound (US) devices that help anesthesiologists find exactly where to administer the anesthesia drug. This technique is now commonly used in the United States, especially in teaching hospitals. One of the five cases was the first to report using US to place a spinal anesthetic in a post-polio patient with Harrington rods. Another case of regional anesthesia involved severe scoliosis and reported using a computed tomography (CT) scan to look at a post-polio patient's back

anatomy before trying spinal anesthesia. Both techniques helped the anesthesiologists know where to place the needle for local anesthesia successfully and easily. The third case report on regional anesthesia was about a nerve block of the leg for postoperative pain relief after surgery on that leg.

The group study was from Brazil and reported on 123 patients having 162 operations, mostly orthopedic surgery. Mean patient age was young – 35 years, and only three patients had serious medical diseases in addition to having had polio. Regional anesthesia was used for 64 percent of patients. No significant anesthesia complications occurred. These patients were followed for 22 months postoperatively, and there was no change in neurologic status.

This study documents that young post-polio patients do well during anesthesia, especially with RA. However, American patients are much older, in their 70s and 80s, and so also have diseases of aging, such as heart disease, diabetes and hypertension, all significant for anesthesia risk.

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PHI's mission is to enhance the lives and independence of polio survivors and home mechanical ventilator users through education, advocacy, research and networking.

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WE'RE STILL HERE!, AND ...

As Post-Polio Health International embarks on its fifth WE'RE STILL HERE! week, October 9-15, 2011, I considered adding "AND" to the tag line. A survivor, who didn't like WE'RE STILL HERE!, expressed the opinion that it is asking for pity. That certainly is not our intent. PHI's aim is to counter the misconception that no one who had polio is still alive. (See Sue McAlexander's letter on page 9.)

AND, our aim is to spread the word that people with disabilities are quite capable. Even as we age, we can help ourselves and others. That is why each year we pick a focus that encourages action: write a letter to your local newspaper, encourage accessibility in one business or facility, visit a Rotary Club luncheon and tell the polio story. All of these activities help us educate the public, find other polio survivors and make the world a better place for all people with disabilities.

2011 Focus – Accessibility in Places of Worship

The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Spiritual well-being encompasses our exploration and discovery of the things that are important in life and our personal connection to them. Spiritual well-being can be associated with a specific religion but does not have to be. It is however, part of post-polio health.

Exempt from Title III (Accommodations) of the Americans with Disabilities Act (1990), places of worship are typically not required to be accessible. However, if they allow outside group use of any of their facilities, those areas need to be accessible. Religious entities all over the world have stepped up and made changes so people with disabilities are welcomed. (Links to many sites are found on post-polio.org.)

Is this true for your place of worship? Has it been more and more difficult for you to attend activities in your church, synagogue or place of worship?

PHI encourages its Members to let their places of worship know that WE'RE STILL HERE! AND that we can help make more facilities accessible for all people with disabilities.

Are you unsure of the attributes of an accessible facility? Start with the "Congregational Accessibility Network Quick Checklist" on pages 4 and 5.

Joan L. Headley, Executive Director, PHI

Anesthesia Use in Polio Survivors: What's New?

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Often, these diseases of aging are much more important than any post-polio issues. So, we still need a large group study of the U.S. polio population during anesthesia.

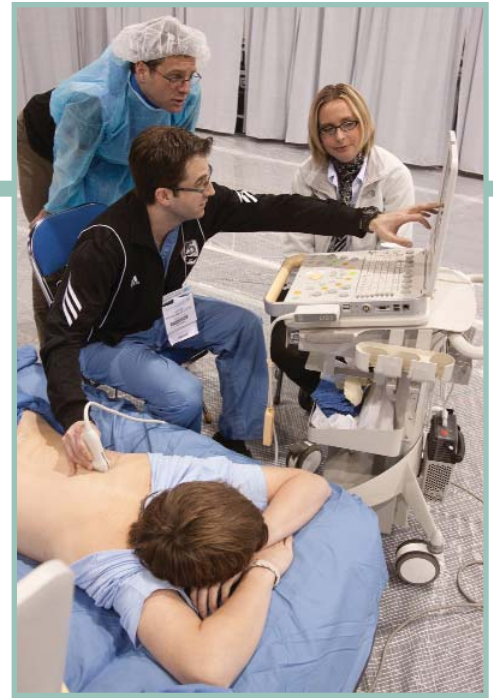
What do we learn from these reports? First, this is increasing evidence that RA can be safely used in post-polio patients. And, so far, there is no evidence that PPS gets worse after RA. (This had been a concern after inflammatory proteins were found in the spinal fluid of some post-polio patients.) Technical difficulties can be overcome by using US or CT imaging. Also, regional anesthesia can safely be used for postop pain relief. So polio patients can experience the many benefits of modern anesthesia care!

The importance of two other aspects of anesthesia care for post-polio patients is becoming clearer: the need for preoperative pulmonary function tests and sleep apnea issues. Respiratory muscle function gets worse as we age, especially for those who had polio. It is important to know what a particular patient's pulmonary status is before most operations, especially upper abdominal or chest operations. This is measured with pulmonary function tests (PFTs) by a pulmonary physician. Those who used iron lungs should definitely have preop PFTs, because they seem to be at higher risk for postop respiratory failure. Lung function should be optimized by treating any infection, controlling bronchospasm and assisting coughing before high-risk patients have major surgery, and a pulmonolo-

gist needs to be involved in the postop care.

Sleep apnea is common in post-polio patients, and many need CPAP/BiPAP devices. Sleep apnea is well-documented to be a risk factor for anesthesia incidents, both at the beginning of anesthesia and, especially, at the end of the case as patients begin to breathe on their own. Useful guidelines are in place to improve safety during anesthesia. Patients with sleep apnea, especially those on CPAP/BiPAP, should let the surgeons know this early in the surgery scheduling process, so they can alert everyone on the surgical team. Patients should bring their CPAP devices to the hospital and, after the breathing tube is removed, CPAP should begin. This requires someone to set up the machine, usually a respiratory therapist. If regional anesthesia is used, the CPAP device can even be used during the procedure, although not all anesthesiologists are comfortable with this.

Should we make any changes in the present recommendations for anesthesia for polio survivors? Regional anesthesia appears to be safe for post-polio patients, and the benefits – in terms of pain relief and anesthesia safety – are worth a possible small risk. So, the recommendations stand as is. It is essential to realize that the recommendations are not based on actual data; there is no significant data yet about how polio patients actually do during anesthesia. See the sidebar for other resources about anesthesia. ▲



Anesthesiologists at their annual meeting learn how to use ultrasound to place a nerve block of the arm or shoulder.

Photo by Steve Donisch courtesy of the American Society of Anesthesiologists

For more information on anesthesia:

Recommendations: www.post-polio.org/edu/hpros/sum-anes.html

Anesthesia update. Separating fact from fear: www.post-polio.org/net/10thConfAnesthesiaCalmes.pdf

Sleep apnea issues: www.post-polio.org/edu/pphnews/pph22-1.html

Lambert DA et al. Postpolio syndrome and anesthesia. *Anesthesiology* 2005; 103:638-644

WE'RE STILL HERE! Improving Accessibility in Places of Worship

Joan L. Headley, Executive Director, PHI, director@post-polio.org

Polio survivors have advocated for years to assure that the world is more open to us. The effort was helped by the passage of the Americans with Disabilities Act (1990), *but do we really know what makes a facility accessible – accessible in the broadest sense of the word?*

As polio survivors who are aging, we are experiencing hearing loss and problems with our eye sight just like the rest of the population, in addition to new physical and mobility problems. Post-polio health also includes our spiritual well-being, and the ability to attend and participate in activities to fulfill that need is important. Some may find that listening to a beautiful symphony or meditating in a quiet spot outside close to nature fulfills a spiritual need, while others may find attending and participating in a religious worship service spiritually satisfying. Because there are frequently more barriers to accessibility, our focus here is on the latter.

Where to start.

The Congregational Accessibility Network (CAN) recommends that congregations start with a quick checklist, parts of which we have included here. The complete checklist, a more extensive survey and other helpful ideas are located on CAN's website www.accessibilitynetwork.net/Home.

The site includes links to many faith groups, e.g. Christianity and Judaism,

which have developed excellent materials for their congregations. The CAN site also includes information about Islam, its customs and its perspective of disability. Links are also on PHI's homepage (post-polio.org).

CAN Quick Checklist

- Parking:** Accessible parking spaces clearly marked with an upright sign with the universal accessibility symbol.
- Van Accessible with 8-foot wide aisle – at least one for parking lots of 400 spaces or less.
- Car Accessible with 5-foot wide aisle – 1 for each 25 spaces up to 100, then for each 50 spaces up to 200, then each 100 spaces up to 400.
- An additional Van Accessible space is added above 400. Above 500 total spaces, calculate 2% with 1/8 of those Van Accessible rounded up to the next whole number and the rest Car Accessible.

Resources:

The Congregational Accessibility Network, a network of individuals, families, congregations, denominations and organizations to promote accessibility and inclusion of persons with disabilities in faith communities, is also available to assist congregations. Contact them at Congregational Accessibility Network, 1406 S. 14th Street, Goshen, Indiana 46526-4544 United States, Phone: 574-383-9398, Fax: 206-426-0258, info@accessibilitynetwork.net, www.accessibilitynetwork.net/Home.

Ginny Thornburgh is Director of the American Association of People with Disabilities Interfaith Initiative, whose mission is to support people with disabilities and their families as they seek spiritual and religious access. She welcomes your emails and phone calls. If you have questions, contact Thornburgh at gthornburgh@aapd.com or 202-521-4311.

Entrance: At least 36 inches wide via ground level, a ramp (maximum incline of 1:12), or an elevator or lift (certified) from a smooth, level accessible path from an accessible parking space.

- A covered drop off area to discharge passengers.
- Platform with at least a 5-foot level turning radius at the entrance.
- Handrails on ramps.
- Elevator or lift large enough to accommodate a power wheelchair along with a standing attendant.
- Automatic doors wherever possible and easy-to-open manual doors, e.g., with one hand without the need for tight grasping, pinching or twisting wrist.

Interior hallways: Level or have an incline of no more than 1:12 with a barrier-free width of at least 48 inches. At least one section of coat racks low enough to be accessible. Carpets and rugs 1/2-inch thick or less. Lever type door handles.

Restrooms: At least one restroom stall and sink accessible to users of wheelchairs within the standard facilities for each gender or a family/single user restroom (highly recommended). Accessible family/single user restrooms meet the following criteria among others:

- Clearly marked with the universal accessible sign.
- Entrance doors at least 32 inches wide that swing into the hallway and have lever door handles that do not require tight grasping, pinching or twisting wrist to operate.

- Have at least a 5-foot wide turning radius.
- Wall-mounted grab bars 33-36 inches high next to and at the back of the commode.
- The toilet seat 17-19 inches high.
- Sink counter no more than 34 inches high, with a knee clearance of at least 27 inches high, 30 inches wide and 19 inches deep, and hot and cold handles that do not require tight grasping, pinching or twisting wrist to operate.

Worship Area: Seating provided (preferably scattered site cutouts), so that a wheelchair user can sit beside family members. The platform and podium accessible to persons with mobility problems.

Classrooms: At least one classroom accessible to wheelchair users.

Fellowship/Gathering Area: Accessible to wheelchair users.

Don't forget other important accessibility accommodations.

The checklist includes reminders about the importance of accommodating for hearing loss by providing aids such as Assistive Listening Devices (ALD), a clear audible sound system and sign language interpretation.

Visual aids include adequate lighting, large print (at least 14-point type) written materials, descriptive verbal announcements, and Braille materials.

Congregations can support inclusion in mission statements by

addressing the intention to provide access to, and inclusion of, persons with disabilities.

A partial list of possibilities congregations can offer include:

- Awareness, education and training activities, such as disabilities or mental health awareness Sundays, sermons and events.
- Individual and Family Needs Questionnaire (available from CAN).
- Library resources.
- Special education services through classroom integration, special education classes and/or Individual Spiritual Formation Plans (ISFP).
- Referrals to counseling professionals and appropriate agencies in the community.
- Individual and family support, such as a benevolence fund, respite care and support groups.
- Special diets, (e.g. diabetic, gluten-free) considered when food is served.

WE'RE STILL HERE ... AND!

Polio survivors can continue to improve our world, by being the instigators in our local areas. Share the check list with a friend and together observe your place of worship. If it "passes," find out who should be complimented. If it doesn't, find more interested friends and begin.

PHI Members who do not have internet access may call PHI at 314-534-0475 to find the phone number for the accessibility contact of your denomination. ▲



Rhoda Olkin, PhD

Promoting Positive Solutions

QUESTION: *People in my support group are always trying to get me to talk about the past. I was in an iron lung and remember a little, but, frankly, I don't want to remember it all. I would rather live in the present. Is this OK?*

Dr. Rhoda Olkin is a Distinguished Professor of Clinical Psychology at the California School of Professional Psychology in San Francisco, as well as the Executive Director of the Institute on Disability and Health Psychology. She is a polio survivor and single mother of two grown children.

Response from Rhoda Olkin, PhD:

When is it important to talk about the past? The bottom line is that this question can only be answered by you. What works for someone else is irrelevant. I cannot help noticing how many people feel qualified to tell other people how they should do things (e.g., how to properly mourn or how to be less anxious or how to load the dishwasher!). Giving advice can be helpful to the receiver, but only if the advice is based on a thorough knowledge of you and what makes you tick, rather than on what has worked for them.

So, since you have to decide, ask yourself some hard questions:

(a) Are you having symptoms of depression or anxiety? Are these symptoms new, or recurring, or long standing?

(b) Are there areas in which you feel you are functioning below par, such as socially or with family?

(c) How would you rate your overall life satisfaction? Are you reasonably content? Do you constantly feel like something is missing?

(d) When you tally up the things that are important in life – family, intimacy, work, accomplishment, community, home, meaning – do you generally feel a sense of satisfaction, or a sense of disappointment?

(e) Are there people from your past that you still feel angry at or estranged from? Are there lingering feelings of animosity that you are having trouble letting go of that seep out occasionally?

(f) Do you have trouble with emotion? Do you veer away from any emotional topics? Can you cry, or do you feel like crying and cannot cry, or never cry? Can you tell people who are important in your life “I love you?” Do you blow up suddenly and feel like there is a well of rage inside you? Do you find yourself in many battles, large and small?

These are questions that can help you figure how your past might be affecting you now. If your answers to these six areas seem to indicate that you are a well-functioning, predominantly content person with good relationships, then it would imply that the past is past and can keep its distance. But if your answers show areas of difficulty, *and* these are areas in which you would like to see change, it might be worth dredging up past memories so that they can be laid to rest.

The purpose of talking about the past is to get through it. Think of it like a big muddy puddle too big to skirt around. If the puddle is behind you, move on. If it's in front of you, then sometimes there is no way to move forward without slogging through the giant puddle; pack snacks.

Response from Stephanie T. Machell, PsyD:

Like everything, it depends.

You have a choice about whether or not to remember what happened to you, as well as whether or not to talk about it. You have a right not to talk about or remember what happened to you and to decide to live in the pres-

Please send questions for Drs. Olkin and Machell to info@post-polio.org.

ent. No one has the right to force you to do otherwise. And especially if your memories aren't causing you problems, not talking about them may be the wisest course of action.

If you don't want to talk about your polio experience, doing so because others pressure you won't be helpful. They may be pressuring you because they know that talking about their experiences has been helpful to them, and certainly research and clinical experience both show that talking about difficult experiences in a support group setting can be helpful. When others can relate and identify with what you have been through, you feel less alone – and feeling alone and unable to communicate was a key part of the polio experience for many people.

But doing this doesn't help everyone and can even be harmful, especially when something is shared that the person regrets, or new and more painful memories are evoked but not addressed, or the response of the support group is less than empathic. Repeatedly telling and hearing stories of traumatic experiences can itself be re-traumatizing. And because a support group isn't meant to be therapy, there is usually no one present who can help if a negative experience occurs.

Paradoxically, sometimes you have to remember what happened to you in order to live fully in the present. People with post-traumatic stress disorder are stuck in time and unable to move forward until they have processed what happened to them. If you find that your memories of being in an iron lung intrude when you would rather they didn't, or if you find that you are fearful of remembering rather than preferring not to do so, you may need to talk with a mental health professional to determine whether not

remembering what happened is the best course of action for you.

In my practice, I see many polio survivors who were traumatized by what happened to them. It has been helpful for them to work on remembering what happened and on making meaning out of it in order to move on. I have been told that doing this work has improved their PPS symptoms, especially fatigue. I believe that this is so because holding memories out of awareness takes energy, and people with PPS can ill afford to waste energy.

People who experienced polio often lost privacy and the right to determine their own needs. Deciding whether and where to talk about your polio experience is part of regaining those. ▲



Stephanie T. Machell, PsyD

Dr. Stephanie T. Machell

is a psychologist in independent practice in the Greater Boston area and consultant to the International Rehabilitation Center for Polio, Spaulding-Framingham Outpatient Center, Framingham, Massachusetts. Her father was a polio survivor.

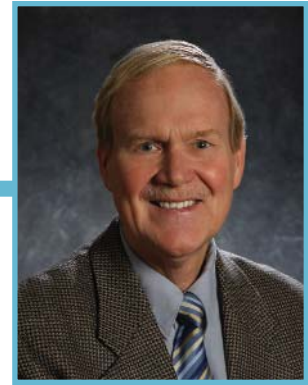
A Reader Responds:

The answers to the question in the Post-Polio Health (Vol. 27, No. 1, Winter 2011) column "Promoting Positive Solutions" were well-written and I agree with all the authors said. I would, however, offer one more answer. The family reported that the father had been in an iron lung. I suggest his unwillingness to get out of bed each morning may be related to his respiratory muscle weakness and resulting under-ventilation. I suggest he be seen by a pulmonologist who understands breathing problems in people with neuromuscular conditions. PHI (post-polio.org) and its affiliate organization, International Ventilator Users Network (ventusers.org) have published extensively on this topic.

Norma M.T. Braun, MD, FACP, FCCP
New York, NY

Drs. Olkin and Machell Respond:

Thank you for taking the time to write. Medical problems that can mimic depression should always be ruled out. Assessment of sleep apnea or other breathing problems is a good idea, since lack of sufficient air could directly account for both depression and lethargy.



Frederick M. Maynard, MD

Question: *I've asked my doctors in the past about PPS, and they indicate that at my age – 65 – it is highly unlikely that I could develop PPS since it has been so many years since I contracted polio. Do you have any statistics on PPS occurring 60 years after having polio?*

A: I am unaware of any statistics on the average age when a diagnosis of PPS is made using the 2001 March of Dimes criteria for this diagnosis. Many studies have described the age at first onset of “symptoms” and generally this has been 25 to 35 years after the (acute) polio.

The average interval of years since polio to onset of new symptoms has been reported as longer for the symptom of new weakness in previously unaffected muscles (42.6 years) compared to previously affected muscles (34.4 years). But among polio survivors not hospitalized at the time of polio onset, the average age of new weakness was 59.3, ± 4.7 years, and 55.8, ± 10 years, for muscles previously unaffected or affected respectively (see Halstead et al, in Late Effects of Poliomyelitis, Symposia Foundation, 1985). Therefore having the onset of PPS symptoms 60 years after polio certainly can occur.

Probably most medical experts on PPS believe some new weakness is inevitable among aging polio survivors. What may be unusual is for someone to reach age 80 or more without already recognizing some new weakness AND without another non-polio-related health condition that produces new weakness. The three greatest risk factors for developing PPS are severe initial involvement, greatest amount

of recovery and chronological age (older) – none of which can be altered. This is why education about EARLY recognition of symptoms and prompt management of them (including rehabilitation interventions) are the best way to slow progression and maintain functional abilities needed for a high quality of life.

Question: *My physician retired, and my new primary care doctor is “re-evaluating” everything. I am nervous because he is questioning my medications, and I am not sure he understands my history. Can you help me understand his approach and offer assuring advice as he and I get to know each other? I am especially concerned about my new doctor's making me reduce the pain medications I need.*

A: For a new primary care physician to want to “re-evaluate everything” about your health is a good thing because it means he/she cares enough about you to try and understand all your past and current medical problems and to gain a sufficient level of certainty that current conditions and symptoms are being optimally managed. I would encourage you to look forward to a re-evaluation as a chance for you also to review and possibly learn more about your own conditions – and to possibly teach another physician about the late effects of polio.

Reviewing all your medications taken with any regularity, especially those

requiring the new doctor to authorize by prescription, is an essential part of this review. Medication use can be considered in four general categories: 1) *Required*, as necessary to treat a serious (potentially life-threatening) condition; 2) *Recommended*, as probably helpful to treat a serious condition; 3) *Useful*, to prevent recurrent symptoms (non-life-threatening); and 4) *Useful*, to treat/reduce episodic symptoms (written as *prn – pro re nata* – meaning use as needed).

Patients are frequently anxious about having unfamiliar new medical providers change medication use in the last two categories, and yet these are the categories where there is the most misuse of medications and the greatest potential to make beneficial changes. Frequently, medications for a non-serious condition, such as persistent heartburn, are continued for years although the condition is not usually a lifelong, permanent or persistent problem and there are many lifestyle changes possible to prevent the symptoms.

Your concerns about changes in pain medication prescriptions is understandable since only you experience your pain – it can not be seen or measured by others. Nevertheless, regular pain medication use does lead to physical and psychological dependence and sometimes addiction. Pain medications also all have some negative health side effects, and it is important that they are regularly reviewed – by both familiar and new providers.

Post-polio pain problems are often complex, greatly varied in causation

and rarely life-threatening. They can be treated, managed and prevented in many different ways and, therefore, are ideal for periodic review in the hope of finding new, more-effective and/or safer methods. In my opinion it is almost always preferable for a person's long-term health to use non-pharmacological methods of pain control and especially to avoid the use of opioids, the most habituating pain medications, for non-malignant pain problems. Please try your best to embrace your new physician's re-evaluation for what may be "new thinking" about your "old problems" that may lead to better solutions. ▲

SEND YOUR QUESTIONS
FOR DR. MAYNARD TO
INFO@POST-POLIO.ORG.

Letter to the Editor

I just want to thank you for the work you do to help polio survivors. I was stricken with polio in 1943 at age 3. I started in an iron lung, and with surgeries and God's help, I was able to walk with braces and then on my own.

I am now 70 years old. I have survived cancer, blood clots, weakened and failed muscles. Along with most polio survivors, we never say "I can't." When something quits, we say "OK" and find another way to continue on.

I so enjoy reading others' stories and solutions and wish I could find doctors as informed as those who contribute to the newsletters. My doctors seem to think it's unusual to find a 70-year-old polio survivor.

I wish I could send more support, but a yearly subscription is all I can do, and I'm thankful to get so much information for so little. May God bless you all for what you do to help keep us informed.

Sue McAlexander

Send Letters to Editor by email to info@post-polio.org or by mail to the Post-Polio Health International mailing address. All letters are subject to editing.

Aging Well with Post-Polio Syndrome: Don't Let Fall Prevention Fall through the Cracks

Researchers at the University of Washington's Aging Rehabilitation Research and Training Center, agerrtc@uw.edu

Falling in older adults is a big public health problem. Injuries that result from falling in older adults are serious, life-changing, costly, potentially fatal. In the United States, deaths from falls is the leading cause of injury-related deaths in adults over the age of 65.¹ In 2000, the incidence of falling injuries was estimated to be 10,300 for fatal and 2.6 million for non-fatal injuries in adults over the age of 65.² Both fatal and non-fatal injuries from falling increase with age among older adults.³ The direct medical care costs of treating injuries from falling in the elderly is estimated to be \$0.2 billion for fatal injuries and \$19 billion for non-fatal injuries.² The economic cost for rehabilitation after falling is even greater when stays in a nursing home, assistive devices (canes, walkers, etc.) and physical therapy are considered. Once an initial fall occurs, it can lead to a fear-of-falling, which is associated with avoiding daily activities as well as physical activity.⁴ This, in turn, becomes a troubled cycle as lack of physical activity increases the risk of falling.⁵



Polio survivors have a variety of symptoms that are known risk factors for falls in older adults and people with neuromuscular diseases such as muscle weakness, joint pain and fatigue. One study showed that the rate of polio survivors who fell at least once in the past year was four times that of other adults over 55.⁶ This study also found polio survivors report falling more often in the afternoon and inside the home.⁶ Three important predictors of falling were identified for polio survivors – a) Problems maintaining balance, b) Weakness in knee extension in the weakest leg, “knee buckling” and c) Fear of falling.⁶

Polio Survivor Data from our Survey

Many Post-Polio Health International readers participated in our survey that asked some questions about falling. Here are the responses of people with post polio syndrome:

- 242 (54%) reported a fall within the last 6 months.
- 385 (86%) are concerned about falling.
- 366 (82%) reported not doing things because of fear of falling.

What can you do to prevent falls?

Knowledge is half the battle. Falls inside the home have been linked to stairs with four or more steps, slippery floors, sliding rugs, low lighting levels, missing handrails, uneven flooring and obstructive walkways. Falls outdoors are often linked to walking on uneven or cracked sidewalks, curbs or streets. Other fall prevention tips include:

- Have your vision and hearing checked regularly.

- Talk to your doctor about side effects of medication that could affect coordination and balance or increase weakness.
- Wear rubber-soled and low-heeled shoes that fit well and fully support your feet, and replace worn cane and crutch tips.
- Avoid wearing socks when walking inside on hardwood or linoleum flooring. Socks with the grippers on the bottom or wearing Crocs while inside help prevent indoor falls.
- Be careful when walking outdoors on wet or icy sidewalks. Carry your cell phone on walks. Try to anticipate fatigue and bring what you might need for more support (cane, walker, etc.) or even a friend or family member.
- Ask your doctor what exercises you can do regularly to maintain strong bones, strength and flexibility. Exercise that improves bal-

ance and coordination (Tai Chi or Yoga) are most helpful.

- Keep your home safe – remove things you can trip over (shoes, papers, books, clothes) from stairs and high traffic areas. Keep clutter down!
- Install handrails or grab bars in your bathroom or other frequently used areas where you may need extra support (stairs and hallways).
- Improve the lighting in your home. As you age, you need brighter lights to see well.

The U.S. Centers for Disease Control and Prevention has produced brochures titled “*What YOU can do to prevent falls*” and “*Check for Safety: A Home Falls Prevention Checklist for Older Adults*” available in English, Spanish and Chinese. www.cdc.gov/ncipc/duip/spotlite/falls.htm

Thank you

For recognizing your friends and loved ones with contributions to support the unique mission of PHI and IVUN. PHI strives to publish an accurate list. Please contact us if we made an error.

Contributions to PHI's education, advocacy and networking activities ...

In Memory of

Carol Allmendinger's sister, Ellen Mort Rubenstein
Sue Cheney Arthur P. Siegfried, Esq.
Jean DeJong Lawrence Turilli
Catherine "Kay" McMullin

In Honor of

Buzz Zucker

Contributions to The Research Fund ...

In Memory of

Jean DeJong
Virginia L. Harris
Lawrence Turilli

Contributions to the Gilbert Goldenhersh Memorial Tribute Fund ...

Marcia & Howard Denenholz's brother-in-law, Jack

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Submit An Artifact

Polio Place (polioplacel.org), PHI's website for medical and practical information, historical records and artifacts for the worldwide post-polio community, is looking for historical artifacts: equipment, letters, newspaper articles, medical records, photos, etc. Please visit the website, and tell us about yourself and your artifact. Here is one of the many stories we've heard from polio survivors around the world. We'd like to hear yours.

Swiss Army Knife

by Gary Presley, Bolivar, Missouri

I looked for this knife when I came home from the March of Dimes rehabilitation center in Omaha, Nebraska in the summer of 1960. I hung it on part of the leg support assembly of the ugly green E&J wheelchair sent home with me. The knife was given to me for my birthday in 1952, which I celebrated in Verdun, France. It is one of the original Swiss Army knives, spare and solid. It was a talisman, a reminder of the places we'd lived and the places I would probably never see again, both a connection to all that had been and a reminder of how much had changed. The knife dangled from the chair as I rolled through anger, frustration and self-pity.

One day, after I began working at an office job, I noticed I had broken the circle clasp from which the knife hung when I ran into a file cabinet. I took it home that night and put it away in a box of keepsakes. Whenever I hold it now, I think of all it represents in my life – a gift from a parent, a reminder of visits to exotic places as an Army brat, the useless weight of carrying resentment over what cannot be changed. It is only a knife, but I hold it, and I remember the iron lung, the rehabilitation center, the years of resentment, and now at last, all that polio took away from me. And eventually gave back. ▲

