ALPS

SERVING NORTHERN POLIO ECHO, INC. AND SOUTHERN ARIZONA, POLIO EPIC, INC.

Arizona
League of
Polio
Survivors

Polio Echo, Inc. & Polio Epic, Inc.
Established 1985

Feb & Mar 2013

Volume 2, Issue 2

Table of Contents

President's Note POLIO ECHO – Tom Ringhofer

Thank you for electing me president again for the year 2013. I hope to get it right this time. I'm looking forward to a fun, productive year for Polio Echo. We're possibly in a year of change for the organization and I promise you it will not be done without great thoughtfulness and due consideration. This organization has continued to serve polio survivors for over a quarter- century and should continue as long as there are those who benefit from our togetherness. We have more than our conquering of illness in common. We have a courage and usefulness, unusual in nature. As I surveyed the crowd at our annual seasonal gathering, I felt I was amidst a group of exceptionally courageous, caring individuals.

Nearly everyone in that room endured with an extraordinary degree of effort, just to get dressed, slide into their struggle buggies and

President's Note POLIO EPIC – Cece Axton

As they say, it seems as though time is flying by and here we are in January, 2013, starting a new year. I want to wish all of you a Happy New Year. We have been receiving positive feedback regarding our December Holiday Luncheon. The opinion seems to be that changing to Hilton East Tucson was a good decision. Holiday Luncheon guests seemed to enjoy the hotel, the accessibility, the parking, the food, and the entertainment. We are planning to use Hilton East Tucson for next our Holiday Luncheon. We will be working closely with the hotel staff in an effort to improve upon our event.

Continued on Page – 8 -

The opinions expressed in this publication are those of the individual writers and do not necessarily constitute an endorsement or approval by POLIO ECHO OR POLIO

Editors Note: The following article is from a well known medical journal. This is a great overview of Post Polio Syndrome, and because it is a recognized medical journal, will be a good handout for your physician or other medical professionals!

POST-POLIO SYNDROME A RISING HEALTH PROBLEM FACING WOMEN

Amy F. Keever, PhD, RN, WHNP-BC; Judith M. Young, MSN RNC; & Patricia Dunphy Suplee, PhD, RNC-OB

Reprinted with Permission: The American Journal for Nurse Practitioners September/October 2012 Vol 16 No. 9/10

Post-polio syndrome (PPS), a progressive neuromuscular syndrome that primarily affects women, occurs 10-40 years after recovery from an acute polio infection. Risk for developing this syndrome depends on initial damage to motor neurons during the polio infection, which can lead to neurologic damage, muscle atrophy, pain, weakness, and respiratory and speech impairments. Management of women with PPS requires a multidisciplinary approach that entails both pharmacologic and non-pharmacologic therapies. Nurse practitioners may not have learned about this disease during their educational years, or they may have learned about it many years ago, and therefore require up-to-date information about the clinical presentation of PPS in order to lead a team that will manage these patients' care and treatment plans. The authors provide an overview of PPS with regard to pathophysiology; clinical manifestations, diagnosis, and treatment.

Post-polio syndrome (PPS) is a clinical progressive neuromuscular syndrome characterized by muscle weakness, fatigue, and musculoskeletal pain.[2,3] PPS is challenging to practitioners because of its insidious onset and symptomalogy, which tend to complicate making an accurate and timely diagnosis.[2-4] Approximately 775,000 persons in the United States are survivors of acute poliomyelitis (polio)[3] Worldwide statistics suggest that 12-20 million persons suffer from PPS.[6] These numbers may underestimate PPS prevalence; under-reporting and misdiagnosis are common.[2,7] PPS is more common in women than in men, usually occurs 10-40 years after acute infection, and affects functional performance, role status, and quality of life (QOL).[6,9] The last group of polio survivors with PPS are about 55 years old now, but NPs can expect to see PPS sufferers in the sixth and seventh decades of life as well.[8-11]

BACKGROUND INFORMATION: Polio was first described by Michael Underwood in 1789, although the first outbreak in the According to the World Health Organization, polio is almost extinct, yet for many individuals, the reality of the disease and their suffering is still present.[12] Polio, once termed summer plague, was epidemic in the United States for 40 years, beginning in 1916 and ending with the advent of the Salk vaccine in 1955. During this 40-year period, about 1.6 million Americans were infected with the polio virus. Eradication of the polio epidemic in 1955 was celebrated as one of the greatest achievements in the history of US medicine, but for millions of survivors, the sequelae of polio persist to this day. It was not until the last decade that PPS was identified and criteria for diagnosing and treatment were established.[13]

Children were the primary victims of the polio epidemic, leading to the coining of the term *infantile paralysis*. Many children were left with partial and complete paralysis, upper and lower extremity weakness, chronic respiratory insufficiency, and asthma. Polio survivors spent weeks or months hospitalized during the acute phase of the illness and then went to long-term rehabilitation facilities for intensive physical, occupational, and speech therapies.[2] In an effort to control the spread of

polio, family members of polio victims were quarantined and unable to visit their hospitalized loved ones. They were ostracized by friends and neighbors who feared contracting the viral infection. Physicians and nurses used antiquated practices of asepsis, and infectious disease processes were implemented in the hospital to control the spreading epidemic. Practitioners at the time did not know enough about transmission of the polio virus.[19]

Outbreaks of polio are still being reported in 30 countries in South Asia and West and Central Africa.[13-14] In many countries, imported polio occurs in the absence of routine vaccination practices. The United States and other polio-free countries are at risk for a resurgence of the disease because of the large number of refugees and undocumented immigrants.[15]

PATHOPHYSIOLOGY OF POLIO –

Polio, an enterovirus, enters the body orally through direct or indirect contact with contaminated food, water, or other sources.[14-15] The virus replicates in the lymphoid tissue of the oropharynx and intestinal tract, remaining active for 1-6 weeks. The virus targets the motor neurons of the anterior horn of the spinal column and brainstem, and replicates rapidly. [16-17] Four types of poliomyelitis—sub-clinical, abortive, non-paralytic, and paralytic-exist. [18]

Subclinical polio presents as a mild flu-like illness without evidence of central nervous system (CNS) symptoms. Subclinical polio resolves in a few days, leaving patients without CNS or peripheral nerve sequelae; in many cases, the disease is never diagnosed. *Abortive polio* signs and symptoms (S/S) include low-grade fevers, malaise, mild CNS involvement with frontal headaches, and CNS irritability. S/S last a few days, with complete recovery and return to a healthy state.[14] *Non-paralytic polio* presents with a multitude of S/S, including high fevers, frontal headaches, CNS irritability, lethargy, and muscle spasms of the back and lower extremities. Patients with non-paralytic polio present with the cardinal symptom of a stiff neck. *Paralytic polio*, the most common type of polio, affects 80%-90% of patients with polio and manifests with the same S/S as non-paralytic polio. However, paralytic polio rapidly progresses, with additional S/S including spinal stiffness, hypertension, and lower-extremity paralysis. *Bulbar polio* is a rare complication of paralytic polio affecting 5%-35% of patients.[14] This complication arises from invasion of the virus into the brainstem and medulla, causing deregulation of the diaphragmatic muscle and respiratory arrest.[14-15] Many survivors of bulbar polio have residual neuromuscular difficulties with swallowing, breathing, and speech.[14]

DEVELOPMENT OF POST-POLIO SYNDROME –

Post-polio syndrome presents 10-40 years after the initial acute infection and is characterized by a sudden or slow progression of neuromuscular weakness, pain and fatigue.[4] The *overuse syndrome theory* is most often used to explain the etiology of PPS. Once patients recover from the acute phase of polio, they experience a period of functional neurologic stability, When healthy motor neuron axons sprout and assume function of the damaged motor neurons.[19] Motor neuron units previously affected by the virus are impaired; adjacent healthy motor neurons compensate for them. Electrophysiologic studies have supported this theory and have confirmed that the giant motor neuron units that develop during recovery cannot sustain the additional metabolic demands and RNA/DNA synthesis, leading to motor neuron deterioration and failure.[20] This process results in neuromuscular stress, fatigue, and function failure, which leads to a recurrence of neuromuscular weakness, pain, and fatigue, primarily in the area previously affected by the initial infection.[19]

SIGNS AND SYMPTOMS OF POST-POLIO SYNDROME –

Post polio syndrome is considered a lower motor neuron disorder; S/S present as

neuromuscular weakness, pain, and fatigue.[11] Seventy-five percent of paralytic polio survivors, and 40% of non paralytic polio survivors, experience S/ S of PPS. Complaints range from marked fatigue with minimal activity, limited muscle reserve, rapid muscle tiring with total body exhaustion, and flu like aches to respiratory or swallowing difficulty.[6,21] Some patients experience S/S gradually, whereas others experience a sudden return to their previous polio symptomalogy. In many cases, patients arrive at a practitioner's office after they have had a series of falls, sudden or gradual difficulty walking, a need for assistance with lifting items, or increased difficulty with activities of daily living (ADLs).[22]

The most common complaint is progressive muscular weakness, which affects up to 60% of PPS sufferers.[22,29] Patients who had been afflicted with polio of the lower spine manifest S/S of PPS that include weakness and pain in the lower legs, hips, and back. Patients afflicted with polio in the upper spine may experience S/S of PPS such as muscular weakness of the upper extremities, dysphasia, and respiratory complications.[22,24]

Fatigue appears to be the most life disrupting complaint, and is reported by 90% of patients with PPS. Central fatigue manifesting as somnolence and difficulty concentrating is thought to be attributed to sleep apnea or depression, which is common among survivors. Peripheral fatigue is manifested by muscular weakness. Extent of the weakness appears to correlate with severity and scope of recovery from the initial polio infection.[11,20,22] Patients report feeling energized in the morning but exhausted as the day progresses, requiring increased sleep and regular rest periods. As fatigue increases, patients experience increased difficulty concentrating, depression, and disruption of personal and professional life and role function.[22]

Pain manifests in the joints and muscles in 40%- 80% of all patients with PPS.[22] Type I pain is characterized as notable joint and muscle pain after light exercise.[20] Patients describe the pain as deep and burning, and similar to the pain they experienced during the acute infection. Some PPS sufferers are misdiagnosed with fibromyalgia because of the initial clinical presentation of deep muscle pain with multiple tender pressure points. As PPS progresses, patients manifest type II pain, which includes bursitis, tendinitis, and myalgias. Type III pain is characterized by arthralgias from osteo arthritis and degenerative joint disease, as well as neuropathic pain from spinal nerve compression syndromes.[20]

Respiratory S/S occur in 40% of patients with PPS, and usually result from the original treatment with negative pressure ventilators and iron lungs. Additional contributory factors include structural restrictive changes of the chest wall related to scoliosis, kyphosis, altered diaphragmatic function, and sleep apnea. Patients have decreased strength and tone in the upper airways, leading to poor and incomplete inspiratory and expiratory effort. Less frequent, but notable, S/ S include dysphasia and dysphasia "related to bulbar polio.[20,22]

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS -

Making a diagnosis of PPS is challenging because many practitioners in the United States have never seen or treated a patient with polio and are unfamiliar with the syndrome and/or symptomatology. Primary care NPs are often the first persons to evaluate patients, and are responsible for making appropriate referrals. When obtaining a history from a patient with suspected PPS, NPs need to obtain a careful health history and perform a thorough physical examination, and assess physical status and functional lifestyle f“ Diagnosis of PPS is one of exclusion; no specific test is available to confirm it. These criteria are essential in terms of establishing a diagnosis of PPS.[29]

- *Previous diagnosis of polio:* A patient with PPS usually acquired polio at age ≥ 10

years. Findings on history and physical examination confirm that the patient had polio.

- *Electromagraphy:* EMG confirms that the patient has anterior horn disease.
- *Long Interval of recovery:* S/S of PPS typically arise 10-40 years after acute infection.[5]
- *Gradual onset:* The patient reports a gradual onset of weakness that may not be noticed until it interferes with ADLs.
- *Exclusion of other Neuromuscular Disorders:* The patient has undergone a comprehensive laboratory and imaging workup to rule out other progressive neuromuscular degenerative diseases such as Parkinson's disease (PD), multiple sclerosis (MS), and amyotrophic lateral sclerosis (ALS).

Evaluation - In addition to performing a complete health history and physical examination, NPs need to focus on the neurologic and musculoskeletal systems, looking for unilateral or bilateral weakness, assessing cranial and peripheral nerves, and asking about pain sites. NPs need to ascertain patients' previously affected area of polio, the return of neuromuscular weakness, and any associated restricted or loss of mobility, including recent falls.[16-19] NPs should pay particular attention to patients' swallowing function and any past or new history of respiratory insufficiency or asthma episodes.[16] Preliminary laboratory evaluation includes complete blood cell count with differential, chemistry panel, liver function tests, and measurements of thyroid stimulating hormone, erythrocyte sedimentation rate, antinuclear anti body, lupus anticoagulant, rheumatoid factor, and fasting blood glucose. Additional studies include EMG, electroencephalography, and magnetic resonance imaging (MRI) of the brain, spinal cord, and any other areas affected by the polio virus.[19]

DIFFERENTIAL DIAGNOSIS - When a patient presents for evaluation of neuromuscular pain, fatigue, and weakness, NPs need to rule out chronic disease processes such as hypothyroidism, hyperthyroidism, autoimmune illnesses (eg, inflammatory arthritis), type l or type II Diabetes Mellitus, PD, MS, ALS, and myasthenia gravis. NPs order the laboratory tests and preliminary imaging tests, including EMG or MRI, prior to referral to the appropriate specialist(s).[16]

TREATMENT

No single specific treatment for PPS exists. The goal of treatment is S/S management to decrease neuromuscular pain, reduce fatigue, and increase muscular strength, and to optimize patients' functional level and QOL.[19] After the initial assessment and preliminary diagnostic evaluation, patients are referred to an appropriate specialist or team based on PPS symptomatology. The team may include physiatrists; pulmonologists; psychologists; psychiatrists; orthopedists; physical, occupational, and speech therapists; and a social worker.[11,16,25]

Neuromuscular Weakness --Treatment for neuromuscular weakness includes physical therapy (PT) and exercises to relieve pain. Data on muscle strengthening exercises are conflicting, but reports confirm that the intensity of the exercises is a key factor in preventing exacerbation of the overuse syndrome.[16] Therefore, a comprehensive patient education program that balances use and overuse of muscles is suggested. A balanced exercise program developed by a physiatrist and PT team incorporates strength training as the focus, but also takes the patient's functional status, fatigue, and pain level into consideration. Studies have shown that patients who maintain an exercise program have decreased pain, decreased fatigue, and increased musculoskeletal strength.[11,25] Use of coenzyme Q10 with a strength training program has shown some favorable results in patients with PPS.[11]

However, further studies are needed to confirm whether coenzyme Q10 use alone has any impact on neuromuscular strength.[26]

Fatigue -- The goal for managing fatigue is energy conservation. Patients with PPS need to pace their physical activities and balance them with frequent periods of rest.[19] The most important management principle with regard to fatigue is lifestyle change and modification through patient education. Some patients take pyridostigmine bromide 30 mg, increased to 60 mg as needed, to limit fatigue.[25] Side effects of this medication, a cholinesterase inhibitor that is the mainstay of treatment for myasthenia gravis, may include muscle twitching, nausea, loose stools, frequent urination, headaches, and facial flushing.[25]

Pain -- Pain management for PPS depends on the area affected, the severity and extent of PPS, and the type(s) of pain involved. Many PPS sufferers are placed on a pain management regimen that includes a non-steroidal anti-inflammatory drug, an antidepressant, and/or an opioid analgesic, the lattermost of which requires strict monitoring. Many patients with PPS have a co-diagnosis of fibromyalgia and may be prescribed pregabalin 300-450 mg/day.[19] Use of non-pharmacologic interventions such as electrical stimulation, biofeedback, trigger point injections, and acupuncture is recommended to ease myofascial pain.[11,25]

Respiratory Insufficiency-- patients with PPS require pulmonary management for chronic obstructive pulmonary disease and asthma.[25] These patients should be referred to a pulmonologist to determine the extent of decreased respiratory function and to guide treatment.

Ambulation Difficulties – Gait abnormalities, walking difficulty, and a series of falls require that patients incorporate ambulatory aids into the treatment protocol. Knee and ankle instability, with additional foot drop, necessitates that patients use assistive devices such as canes, walkers, braces, wheelchairs, or scooters.[19] A comprehensive evaluation by a physiatrist and a physical therapist allows for proper assistive device utilization. Evaluation by an occupational therapist can provide assistive devices and rehabilitation for the upper extremities and for hand joint and shoulder joint abnormalities. Evaluation by a speech therapist may be needed for patients with swallowing and/or breathing difficulties.[25]

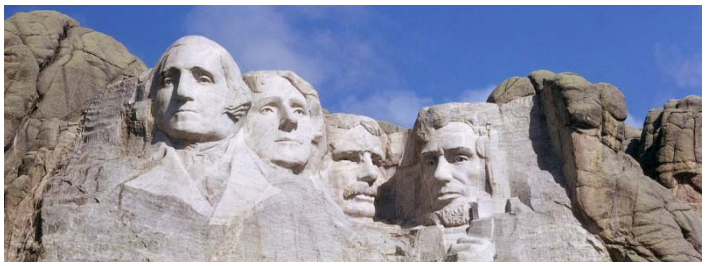
CONCLUSION

Post-polio syndrome is a multifaceted, degenerative, neuromuscular syndrome with complex S/S. Presentation of PPS can be non-specific, and diagnosis is often made based on patient history and a comprehensive physical examination.[27] Most NPs practicing in the United States have not seen a case of polio, so they may not be familiar with the diagnostic criteria, assessment skills, or treatment for the S/S of PPS.[7] Polio has not been completely eradicated in all parts of the world; therefore, NPs need to become proficient in the diagnosis and treatment of the acute infection and teach patients what the future may hold for them regarding the possible recurrence of some of the S/S later in life. Educating NPs and other healthcare practitioners about PPS will enhance the number of appropriate referrals that are made in order to form the multidisciplinary healthcare team required to provide comprehensive care to patients with PPS. NPs are in a unique position to oversee such a team.

Amy E. McKeever is an assistant professor at Villanova University in Villanova Pennsylvania. Judith M. Young is a nursing education and practice consultant at Judith M. Young Associates in Chalfont, Pennsylvania. Patricia Dunphy Suplee is an assistant professor at Rutgers University in Camden, New Jersey. The authors state that they do not have a financial interest in or other relationship with any commercial product named in this article.

References
1. Bruno RL. The Polio Paradox: Uncovering the Hidden History of Polio to Understand and Treat Postpolio Syndrome and Chronic Fatigue. New York, NY: Warner Books, lnc.; 2002.
2. Bruno RL. Post-Polio Sequelae. Advance for Nurses website. April ll, 2005. http://nursing. advanceweb.com/Article/PosbPolio-Sequelae-2.aspx
3. Willén C, Thorén-Iénsson A, Gunnar G, Sunnerhagen KS. Disability in a 4-year follow-up study of people with post-polio syndrome. I Rehnbil Med. 2o07;39(2);175-180.
4. Bouza C, Munoz A, Amate IM. Post polio syndrome: a challenge to the health-care system. Health Policy, 2005;71[1):97-106.
5. Post-Polio Health Intemational. Post-Polio Syndrome: Questions & Answers. 2011. http:// www.post-polio.org/edu/hpros/task/quesl .html
6. Post-Polio Health lnternational. Definitions. 2011. http://www.polioplace.org/living-With-polio/definitions
7. Bridgens R. Postpolio syndrome: "we aren't dead yet". BM. 2005;330(7503):13l 8-1319.
8. Nollet F, de Visser M. Postpolio syndrome. Arch Neural. 2004;61(7):1l42-1144.
9. Ahlstrorn G, Karlsson U. Disability and quality of life in individuals with postpolio syndrome. Dimbil Relmbil. 2000;2Z(9)I416-422.
10. 1-label M. Decades later—post-polio syndrome. Nurse.com website. 2011. http://ce.nurse.com/ce450/decades-later-postpolio-syndrome]
11. Gonzales H, Olsson T, Borg Kristian. Management of postpolio syndrome. Lancet Neurol. 2010;9(6):634-642.
12. Williams CG. Poliomyelitis: extinct by year 2000—but not over. AAOHN I, 2000;48(l):25-31.
13. Milka M. Aging brings new challenges for polio survivors. /AMA. 2006;296(14):1718-l719.
14. Saxon DP. Another look at polio and post polio syndrome. Onhop Nurse. 2001;20(4):17-29.
15. Howard RS. Poliomyelitis and the postpolio syndrome BM]. 2005;330(7503):1314-1318.
16. Halbritter T. Management of a patient with post polio syndrome. I Am Acnd Nurse Pruct. 2001; 13(l2):555-559.
17. Sharrna U, Kumar V, Waclhwa S, Jagannathan R]. in vivo (31)P MRS study of skeletal muscle metabolism in patients with postpolio residual paralysis. Magi: Reson Imaging. 2007;25(2):244-249.
18. Huycke L. Post polio syndrome-—care in the workplace.AAOHN I. 2005;53(11):472-476.
19. Headley IL. What is Post-Polio Syndrome? 2011 http://rotarypoliosurvivors.com/content/other/postpolio.asp
20. Lambert DA, Ciannouli E, Schmidt B. Postpolio syndrome and anesthesia. Anesthesiology. 2005;lO3(3):63S-643.
21. Lund ML, Lexell I. Relationship between participation in life situations and life satisfaction in persons with late effects of polio. Drsabil Rehabil. 2009;31(19);r592-1597.
22. Trojan DA, Cashman NR. Post-poliomyelitis syndrome. Muscle Nerve. 2005;31(1):6-19.
23. Pueppka E. Coming of age: diagnosing and treating older polio survivors. AARC Times. 2005;22-23.
24. Silver IK, Aiello DD. What internists need to know about post polio syndrome. Cleve Clirr I Med. 2002.-69(9);704-712.
25. Thorensteinsson G. Subspecialty clinics: physical medicine and rehabilitation. Mayo Clin Proc. 1997;72:627-638.
26. Boyer F.C, Tiffreau I, Rapin A, er al. Postpolio syndrome: pathophysiological hypotheses, diagnosis criteria, medication therapeutics. Arm PhysMed Relmbil. 2009;53(1):34-41.
27. Lin K, Lim YW.Post-poliomyelitis syndrome:case report and review of the literature.ArmAcadMed Singapore. 2O05;34(7):447-41-19

If you want to receive our newsletter via email, be sure to add your email to the dues form.
For Phoenix members of Polio Echo, add Roger's email to your address book **rogerbuel@cox.net** and for Tucson members of Polio Epic, add Micki's email to your address book **Mickiminner@msn.com**.
Sending the newsletter by e-mail can give you a lot of advantages! You can see all the colors, you can read it at your convenience, without having to print it out, and it is environmentally friendly. **However, the largest reason for asking for your newsletter by e-mail, is to save money for your support group**. We can save money, by not printing so many issues to send through the regular mail. Please consider receiving your newsletter via e-mail.
Remember this newsletter cannot be forwarded by the Postal Service, so get your changes into your membership coordinator!



Polio Echo *President's Notes Continued from front Page*

These are not ordinary people. These, friends of mine, are particularly strong of character and generous with their time and limited energy. These women and men know the importance of caring and sharing. They did not tax their strength just to enjoy the company of kinfolk. They pushed through the pain and fatigue to give their friendship and concern to those who need it.
I have belonged to many organizations in my lifetime, but none that provide the unselfish affection and assistance as Polio Echo. I am proud to serve as the Chairman of the Board for this coming year.

We will find new ways to communicate in 2013, beginning with a survey of the membership. We will try to develop a chat room, for those who enjoy Internet interaction. We will energize the Sunshine activity with greater assistance to the members who volunteer to provide that service. And we will assist the local chapters in their monthly local gatherings.

Thank you all for being a member of Polio Echo. I wish you a healthy and Happy New Year.

Tom Ringhofer

Polio Epic *President's Notes Continued from front page*

We members of the Board invite your feedback on Polio Epic activities. Thank you to our guests for attending our Holiday Luncheon because it would not be a success without all of you. Thanks to those of you who generously provided a door prize. A heartfelt thank you to all of our Board members for helping to execute this event as it requires a collective effort. A very special thank you is due to Nannoe Westbrook, Treasurer, who always puts in the most hours on this event.

We are excited about our February 9th, "Bring a Friend to a General Membership Meeting". We are looking forward to meeting your guest(s). If you cannot bring a guest, please come anyway as it will be an educational and special share day meeting. The March 9th, meeting will be another share day.

Cece Axton

Polio Epic Holiday Party

Please thank the following vendors for contributing to our Holiday Party in Tucson, by supporting them and their business!

Arizona-Sonora Desert Museum
Casa del Rio Mexican Restaurant
Precision Inc. (Honda & Acura Specialist)
Terry's Hideaway Hair Salon
SNV Disability Services
Susan Wenberg

And many thanks for all the members who donated wonderful prizes!!

The Gatekeepers were GREAT entertainment for the party, and we asked them to return next year

Bobbi Harmon and Hank Testa
Hank is our webmaster!

Lorna Kenney and Marty Baldwin

Brad and Linda Dowden from Phoenix

Janet Holman and Sonya Scott with their husbands!

Barbara Stough manning the gift tables!

Cece Axton, our President of Polio Epic

Peter and Wallis Ann Anelli

Polio Echo News
serving Arizona Polio Survivors since 1985

POLIO ECHO BOARD MEETINGS
All meetings are open to the public. Anyone wishing be on the agenda should notify President Tom Ringhofer, in advance.

BOARD MEETINGS:
Are normally held the third Tuesday of each month at the Disability Empowerment Center, located at 5025 E. Washington Street, Phoenix 85094. Meetings start at 11:30 am and conclude around 1:30 pm.

2013 MEETING SCHEDULE

East Side Chapter:

Feb 20 - Black Bear - 1809 E. Baseline Rd., Gilbert, AZ

March 20 - Joe's Crab Shack - 1604 E. Southern Ave., Mesa. N.W. corner of McClintock & Southern.

POLIOEPIC, INC.

All meetings are open to the public. Anyone wishing be on the agenda should notify any board member in advance.

BOARD MEETINGS:
Board meetings are normally held the first Thursday of each month at the DIRECT Center at 1023 N. Tyndall Ave., in Tucson.

GENERAL MEMBERSHIP MEETINGS:
General membership meetings are held at 10:00a.m. on the second Saturday of each month. They are held in the
Education room, at Healthsouth Rehabilitation Hospital at 2650 N. Wyatt Rd in Tucson

February 9th -- SPECIAL!

BRING FRIEND OR FAMILY DAY!

Have you ever wanted to have someone in your family or circle of friends understand about Post Polio? Do you want a way to help them understand what you go through? Then bring them to this SPECIAL Meeting, where we will be going over the basics of Post Polio for those that don't understand, or would like to know more!

INVITE AS MANY

POLIO ECHO OR ***POLIO EPIC***

MEMBERSHIP FORM

Type: Renewal ☐ New ☐ **Has your address changed? No ☐ Yes ☐**

Name_____Spouse/Partner_____Date_____

Address_____ Phone (_____)_____

City_____State_____Zip_____-_____

If you want The newsletter via email**:**_____

(Please print EMAIL ADDRESS clearly)

_____I am UNABLE TO PAY dues at this time, but wish to continue my membership and receive the newsletter.

_____Please remove my name from the mailing list. I no longer wish to receive the newsletter

_____Check here if you do not want your name, address, phone number and email listed in the **POLIO DIRECTORY**

Enclosed is membership fee of $10.00 per person for one calendar year (2012-2013)

Amount enclosed for membership $_____

Amount enclosed for charitable donation $_____

Total enclosed $_____

Check MAILING label on your newsletter –
PHX =Phoenix, Polio Echo, Inc. P.O. Box 61024, Phoenix, AZ 85082-1024
TUS = Tucson, Polio Epic, Inc. P.O. Box 17556, Tucson, AZ 85731-7556
Please make check payable to ***appropriate*** Polio Support group and send to address listed above.
THANK YOU FOR YOUR SUPPORT!

HO Officers, Board of Directors and Staff		
President, Tom Ringhofer	ringhofer@aol.com	
Vice President, Pam Harper	pharper@cox.net	
Secretary, Kathy Bollinger	kbollinger3@cox.net	
Treasurer, Roger Buel	rogerbuel@cox.net	(602) 493-7242
Past President, Brad Dowden	dowdenbrad@yahoo.com	(480) 370-8986
Scottsdale Chapter, Eleanor Coup	elacoupe@cox.net	(480) 874-1534
East Valley Chapter, Joan DeRenzis	jderen1713@aol.com	
Phoenix Chapter, Pam Harper	pharper@cox.net	(602) 281-2840
Director,Nancy Burkhart	lloydnancy3@cox.net	
Director,Karen Spencer	kalenahawaii@hotmail.com	
Director,Penelope Anderson	penelope55pj@hotmail.com	
Membership Services Coordinator, Jane Crawford	janwec94@earthlink.net	(480) 899-5857
POLIO EPIC Officers, Board of Directors		
President, Cece Axton	axton@cox.net	520-495-5122
Vice President, Dave Marsh	Davidmarsh519@yahoo.com	520-327-3252
Secretary, Lorna Kenney	kc7wxy60@yahoo.com	520-744-7435
Treasurer, Nannoe Westbrook	Nannoe1@aol.com	520-797-6898
Marty Baldwin	martybaldwin86@gmail.com	520-795-6157
Frank Frisina	shinybear@msn.com	520-327-3252
Virginia Hanson	vrhanson36@yahoo.com	520-292-0652
Kay Mason	520-270-1751	520-270-1751
Micki Minner	Mickiminner@msn.com	520-743-1556
Barbara Stough	chasbarstough@comcast.net	520-887-4731
Joanne Yager	artist3jy6@hotmail.com	520-296-1471

Polio Epic had a great program on how to prepare for an unseen EMERGENCY!
Because of our individual situations and polio survivors, we need to really think about we may need to do in case of an emergency.
It is very important for each individual takes three (3) simple steps to prepare for and respond to potential emergencies, including natural disasters and terrorist attacks.

1. **GET A KIT** – emergency supplies that will last at least 3 days, (72 hours)
2. **MAKE a PLAN –** for what you will do in an emergency
3. **BE INFORMED –** about what might happen

To start your Emergency Kit – make sure you have:

- One gallon of water per person (for drinking and sanitation
- Non-perishable food and a can opener
- Battery powered or hand crank radio and a NOAA Weather Radio
- Flashlight with extra batteries and a whistle to signal for help
- Dust mask to help filter any contaminated air and plastic sheeting and duct tape
- Moist towelettes, garbage bags & plastic ties for personal sanitation

Additional items to consider to your Emergency Supply Kit:
✓Medications, medical supplies, a copy of all your prescriptions and glasses
✓Pet food, extra water and supplies for your pet or service animal
✓Extra cash and change
✓Family documents, such as insurance cards, picture ID, bank records and a waterproof container
✓Sleeping bag and/or warm blankets along with matches in a waterproof container.
✓Complete change of clothes – appropriate for the type of climate you live in.
✓Include other items, such as personal hygiene items, paper products, plastic utensils, paper & pencil, books and games.
For more information regarding this important issue - go to: **www.ready.gov** and **www.fema.gov**