Consumers’ Guide to Lab Results

Steve Plogsted, PharmD, BCNSP

One of the many challenges home parenteral and enteral (HPEN) consumers confront is trying to understand the meaning of the tests performed on them. One such set of tests is laboratory values. In HPEN consumers, lab values are frequently used to determine the body’s overall response to artificial nutrition or the effect of a particular disease or condition. Here we will discuss a few of the things an HPEN health care provider might want measured in a blood test: several electrolytes, nutritional markers, and some liver-function indicators.

Before discussing the labs, it is worthwhile to note that lab values can change depending on how and when blood samples are collected and how they are handled. For example, the results of labs drawn during the infusion of parenteral nutrition (PN) could be different from the results of labs drawn just prior to starting the infusion. The most appropriate way to deal with this issue is to consult your physician on the timing of the lab draws. Once a schedule is decided upon, you should follow it consistently in order to obtain the best results. The lab values most affected by the timing are the electrolyte values.

Additionally, the “normal” ranges for each of these tests depend on many factors, such as the age of the patient and the lab where the tests are performed. Labs may have different standards depending on the equipment they use. You need to look at the lab report to determine what those ranges are. When considering the results of the labs, the value may not be as important as how the labs are trending. In other words, if a consumer has an abnormal lab value but it is improving compared to a previous result, the physician may choose not to make changes. It is a good idea to save your lab value reports.

Lab Values, cont. pg. 2 ☛

A.S.P.E.N. and Oley Invite You to Las Vegas!

Join us at a major workshop to further your understanding of the therapies that sustain you and the related issues. Reserve from midday Sunday, February 7, through Monday, February 8, to listen to the experts cover topics such as surgical options for SBS, motility disorders, quality of life, bacterial overgrowth, transitioning from PN to tube feedings, the role of growth hormone, tissue engineering, and plenty more. We’ll also make sure there is a program planned to address enteral/tube feeding issues and concerns. Call us, write us, or check www.oley.org for more information.

Then extend your stay and help staff an Oley booth at Clinical Nutrition Week, the American Society for Parenteral and Enteral Nutrition’s (A.S.P.E.N.’s) annual conference. Spend some time distributing Oley Nutrition Week, cont. pg. 13 ☛

Collective Wisdom

Compiled by Lisa Metzger

This autumn I had the good fortune to participate in a teleconference between three Oley members — Ann DeBarbieri, Don Young, and Liz Tucker — who have each been on nutrition therapy (HPEN) for many years. We were initially discussing the value of support groups for another Oley project, but when I finished the transcript of this conversation, several readers were impressed by the dialogue and felt it could be of value to the entire Oley membership. These members talked about coping, work, family, surviving — key topics to most of us. We welcome your feedback.

Coming Home on HPN

Lisa Metzger: Can you tell us how your needs now are different from the needs you had at the start, and where you’ve found support when you’ve felt you needed it?

Don Young: Both professional people and friends and neighbors were very supportive when I first came home on PN. The difference though, was that friends and neighbors didn’t know what to do. If I had broken...
Electrolytes

Electrolytes are the salts in the body. They are found both inside of cells (called intracellular salts) and outside of cells (called extracellular salts). Each electrolyte serves a specific role in the body, though often one electrolyte will work in conjunction with other electrolytes to maintain normal body functions, such as muscle tone, heart rate, nerve activity, or even blood pressure. Electrolytes are even involved in maintaining the proper pressure inside of the veins and arteries. When electrolytes go out of balance you may experience symptoms such as fatigue or muscle weakness, low or high blood pressure, headaches, and a variety of other symptoms. Among the major electrolytes are sodium, potassium, calcium, phosphorus, and magnesium.

Sodium

Sodium is the most abundant extracellular electrolyte in the body. It is mainly responsible for maintaining the proper water balance between various areas or compartments in the body. Ideally, the body maintains sodium levels within a relatively narrow range; at some labs this range is between 135 and 145 mEq/liter of fluid. At these labs, hyponatremia, or low blood sodium, occurs when the value falls below 135 mEq/liter; hypernatremia, or high blood sodium, occurs when the value rises above 145 mEq/liter.

Although many medical conditions can affect sodium balance, the lab values you see are often a reflection of overall body fluid status. High sodium values often mean there is too little body fluid, and low sodium values can mean there is too much body fluid. For example, someone who has had an increase in ostomy output might be losing more water than sodium, causing the sodium value to be elevated. Other causes of low body water status include prolonged fever, a tube feeding or hypernatremia, or high blood sodium, occurs when the value rises above 145 mEq/liter.

Lab Values, cont. pg. 11

Potassium

Potassium, meanwhile, is the most abundant intracellular electrolyte in the body. Potassium plays a number of important roles in the body. It is involved in maintaining proper heart rate, the conduction of nerve impulses, and muscle contraction. Because potassium is found mainly inside of the cells, blood levels do not adequately reflect total body potassium. By the time your lab values drop noticeably, you may have lost a significant amount of potassium. However, even though blood measurements don’t accurately reflect the body stores, it is extremely important to measure potassium in order to identify trends in the blood. Blood levels are associated with different body responses and can help identify problems occurring in the body. Potassium is eliminated from the body in the urine.

A low blood potassium level (or hypokalemia) occurs in over 20 percent of hospitalized patients and is a common electrolyte abnormality in other clinical practice. Mild hypokalemia is generally not considered a major problem in otherwise healthy individuals, but it can pose significant problems to sicker individuals, such as those with heart disease or those who receive digoxin, a heart medication often used in heart failure. Some consequences of low potassium include generalized weakness, constipation or decreased bowel function, and — if the blood level is low enough — paralysis. Hypokalemia is usually due to abnormal losses, such as those associated with the use of certain medications (diuretics) and increased intestinal fluid output. Low magnesium levels can also result in hypokalemia.

Hyperkalemia (or high blood potassium level) can also occur with the use of certain drugs, and with decreased kidney function. This may occur, for example, after a consumer experiences a large increase in fluid output with inadequate fluid intake. The kidney attempts to regulate the losses by decreasing urine output; this decreases the normal loss of potassium, resulting in high blood potassium. Other causes include the use of certain medications and disturbances of the body’s acid-base status. Some signs associated with high potassium include decreased heart rate, anxiety, abdominal cramps, and diarrhea.

As with sodium, correction of low or high sodium blood level may involve more than...
Any Backpack Can Be Tube-Friendly

My insurance company does not pay for enteral nutrition (EN/tube feeding) backpacks. In order to travel without my IV pole in tow, I decided to adapt a regular backpack to carry my EN pump and formula.

I bought a cheap backpack, making sure that it was deep enough to fit a full feeding bag above my pump. Over time, I equipped the backpack with two setups: one for a feeding bag with a drip chamber and one for a bag without a drip chamber.

For the feeding bag with the drip chamber, I hand-stitched two elastic ribbons inside the backpack, just below the top part (see figure 1), making sure that when the bag was in place it was well above the pump. This allows for a full drip chamber as long as the backpack is in an upright position. I stitched one of the elastic bands to the backpack on both ends; the second is stitched on one side only. To keep the feeding bag from sliding out of place, I attached the second elastic band with a safety pin to the first elastic band (see figure 2).

At first I also added an elastic band to keep my EN pump in an upright position (see figure 3). But I soon realized this was not necessary as my pump operates in all positions as long as the feeding bag is well above it. I now simply put the pump on the bottom of the backpack.

I cut a hole in one of the side pockets, so I can thread the tubing from the pump (inside the pack) to connect with my feeding tube (outside the pack). I sealed the edges of the hole with a lighter to keep it from fraying. (Editor’s note: you can also reinforce the area with an iron-on patch; follow manufacturer’s directions and use caution if the backpack is made of nylon.)

When I switched to feeding bags without a drip chamber, I had to add a second setup to my backpack. I could have changed the elastic bands to fit around the larger feeding bag, but instead I decided to add a hole in the top of the backpack, just below its handle (figure 4). I sealed the edges of the hole with a lighter. To use this setup, I thread an elastic band through the pre-cut holes on top of my feeding bag (figure 5) and out through the hole in the backpack. I tie the elastic band around the handle of the backpack, basically using the handle of the backpack as a “hook” for my feeding bag (figure 6).

—Julia H. juhint@hotmail.com

EN Workshops on DVD

A DVD from the 2009 Oley annual conference tube-feeding workshop is now available through the Oley library. The DVD features presentations on enteral access (by Mark DeLegge, MD) and enteral complications (by Stephen McClave, MD). Slide presentations from the workshop can also be viewed online at http://www.oley.org/conference_presentations.html.

To borrow the DVD, call Cathy at the Oley office at (800) 776-6539 or e-mail harrinc@mail.amc.edu.
Remembering Lee Koonin, Founder of Lifeline Foundation

Marshall Koonin

In 1977, Lee Rotbart Koonin died on November 19, 2009. It was her seventy-fourth birthday. It may not be listed in Time magazine as a notable death, but Lee (as everyone knows her) was a surprising woman who accomplished much.

Lee was the president of her high school sorority, and winner of the Miss Talent competition in Washington, D.C., in 1950. She met her husband Marshall in high school and they married when they both were eighteen.

Within four years of their marriage, Lee became ill. It did not appear to be a life-threatening illness, just something requiring relatively minor surgery. But it changed the direction of her life.

A Pioneer and Founder

After multiple surgeries, for what was eventually diagnosed as the newly named Crohn’s disease, Lee dropped to sixty-eight pounds; she was starving to death. This led to Lee becoming one of the first patients to return home from the hospital with parenteral nutrition (PN). In 1977, she received her catheter, or “line,” for the delivery of the lifesaving fluid. This “total nutrition by vein” is common in hospitals and at home today, but it was not common in 1977.

Frustrated at almost having lost her life and having to learn on her own about homePN, Lee decided she couldn’t let others be victims of an information vacuum. She founded the Lifeline Foundation, a consumer advocacy organization, and opened her life and medical history to others in order to get something done, sublimating her own shyness. Newspaper articles were written about the “woman who eats while she sleeps.” Lee made guest appearances on numerous television interview shows across the country, as well as on more in-depth shows and national early morning shows.

Through the Lifeline Foundation, Lee and Marshall published newsletters, organized picnics, and developed a network of volunteers who were willing to reach out to others using homePN. By 1983, the Foundation was consuming a great deal of their resources. Lee and Marshall met with the newly founded Oley Foundation, and after reassuring themselves that the Oley Foundation would continue working toward the goals so important to Lee, Lee and Marshall handed the Lifeline Foundation over to the Oley Foundation.

A Role Model and Advocate

When Lee appeared on Good Morning America, untold numbers of individuals learned the value of homePN and Lee was established as a role model for others. The Time/Life book on nutrition features a whole chapter documenting Lee’s inspirational life and accomplishments. As an invited speaker, Lee has addressed medical societies (unusual for a layperson), and presented major speeches to specialized groups focusing on parenteral and enteral nutrition at their national conventions.

When Congress was considering catastrophic insurance in 1981, Lee’s testimony to the House Health Subcommittee was well received. Lee showed how people who were forced to be declared “disabled” in order to finance the substantial cost of homePN were actually “enabled” as a result of the nutrition. Lee encouraged legislation to protect these differently abled individuals to allow them to work and yet retain benefits under catastrophic insurance. Clearly her speech had an impact on the future of employment.

Lee was one of the earliest individuals to identify the problems of lifetime caps to health insurance, and, most importantly, that after beginning homePN, most individuals with an accommodation could begin or return to being fully functioning and employable workers. Her words became the foundation for the Americans with Disabilities Act.

A Wife and Mother

Lee really did not want to be a medical trailblazer. She just wanted to be a wife to Marshall and mother to Susan, the daughter she adored. You know, the simple life. She was an accomplished writer and had completed 75 percent of a book about her life and triumphs, as well as short “thoughts” that resembled good Hallmark cards.

Lee often said, “Life would be perfect if only the VCR worked,” implying that most of her life was actually perfection, despite how others may have viewed her challenges. As a genteel woman, she would submit to all types of medical examinations, some quite personal. She would draw the line at sticking out her tongue, however, because “a lady never sticks out her tongue.” As Lee’s final hospitalization was concluding and it was relatively clear that her options for recovery were remote, her concerns were completely with her family. In a quiet voice, she told her daughter, “This is breaking my heart.” There are a lot of broken hearts right now.

A Champion

Lee’s accomplishments, talents, and humor could fill several more pages, but you get the idea of who she was. She was a true champion, a winner. After going through absolute hell, due to her unbelievable tenacity and desire for life she obtained a better result; she became a productive member of society, a role model to thousands, and an advocate who changed others’ lives and advanced medical science.

Her impact on the world may not ever truly be known, but as one medical professional said to a large group of those fed parenterally, “Lee Koonin is the reason you have survived and are all here today.” Another homePN professional recently wrote, “You have... had such a major role in pioneering the practice of home parenteral nutrition. I am grateful for your long-term impact on that practice which has been so helpful to thousands of consumers.”

A wonderful, thoughtful, giving woman was lost, but her legacy will carry on for decades. This death may be little known and not well-publicized, but Lee’s life may have had a great impact on your survival, or that of a loved one.

In recognition of Lee’s many contributions on behalf of homePEN consumers, she has been posthumously awarded the 2010 Lyn Howard Nutrition Support Consumer Advocacy Award by the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.). This award was established in 2009 to honor a HPEN consumer, caregiver, or family member who has worked tirelessly for regulatory change and to increase funding and research for clinical nutrition. It is named in honor of Dr. Lyn Howard, co-founder of the Oley Foundation, who has made significant contributions to patient-centered care throughout her prestigious career.
Join Me in D.C.

Joan Bishop

The Digestive Disease National Coalition (DDNC) — the leading public policy advocacy organization in our nation’s capitol for persons affected with digestive diseases — invites you to participate in the 20th Annual Public Policy Forum on March 7 and 8, 2010, in Washington, D.C.

This annual event brings together patients, health care providers, industry representatives, and lawmakers and their staff for educational programs, legislative updates, and advocacy training. Participants from around the country learn about federal health care legislation and policy, and then educate members of Congress on issues of concern to the digestive disease community.

With Congress considering a major health care overhaul, you must make your voice heard on Capitol Hill to ensure that any upcoming reforms improve health outcomes for the digestive disease patient community. This year the Medicare Home Infusion Coverage Act will be reintroduced and I believe it’s more important than ever for those who will shape this legislation to seriously connect with the recipients of home infusion therapy and their efforts… YOU!

I am planning to participate again this year and hope you will consider joining me. On Sunday afternoon we’ll enjoy panel presentations that will provide us with an overview of the issues. This will prepare us for our scheduled visits with legislators on Monday. I have found this to be an excellent opportunity for homePEN recipients to showcase themselves as living, contributing, and voting members of society. Putting a face to a disease or “high-tech” therapy is very powerful!

For more information, to register, and/or to learn more about the travel stipends available, contact Dale Dirk or Lisia Griffin at (202) 544-7497. Enjoy a visit to www.ddnc.org to identify hotel information, view the tentative agenda, etc. And don’t forget to let me know if you are planning to attend — (800) 776-6539 or bishopj@mail.amc.edu. I hope to see you there.

Corporate Partner Spotlight

Thank You Sherwood Clinical

Sherwood Clinical began as the vision of one man. Seeing a need, Charles Sherwood developed a plan to deliver high-quality infusion care in the comfort and convenience of patients’ homes, and in 1993 Sherwood Clinical was born. Today, more than seventeen years and one hundred employees later, Sherwood Clinical provides home-infusion care throughout Georgia and the western Carolinas.

Sherwood Clinical provides a wide range of services including antibiotic therapy; enteral and parenteral therapy for adult and pediatric patients; on-site dietitian with clinical enteral and TPN expertise; central line maintenance; IV hydration; IV inotropics; IVIG therapy; pain management; Synagis home injections (for RSV prevention); intermittent therapies including Tysabri, Remicade, Reclast; skilled nurse visits; and patient and caregiver education. Sherwood Clinical also provides nebulizers through our newest division, Nebs and Meds.

A Trusted Provider of Home TPN for Over 30 Years

Coram’s Nourish Nutrition Support Program™ provides a customized care approach for home TPN and enteral patients. We are dedicated to providing high quality clinical care, nutrition expertise and personal support for nutrition consumers in the home.

Coram is proud to be a sponsor of A.S.P.E.N. Clinical Nutrition Week 2010. Come see us at booth #109.
my leg, they would have known how to help. But nobody knew what
to do with a person who was in my situation. It was all so mysterious
and frightening to them. I barely understood it myself; how could I
expect them to understand it?

People seem to expect tubes and lines
when they come to the hospital, but they
don't expect it in the living room. Several
times I was visited when I was hooked up
and it really upset people. That was a sur-
prise to me. My friends are not shrinking
violets; they are pretty tough. To this day I
find it strange. I mean, you visit someone
who's been in a terrible auto accident, and
they're bloody and scarred. I was just sit-
ting there with this pump running, and
they found it intimidating. It was the fear of the unknown.

Also, at that point I couldn't eat, so people were reluctant to eat
around me. That really stifled social situations. People were just being
polite, and that's completely understandable.

Don: A full-size pump, on an IV pole. You take that out of the hos-
pital and put it in the house, and it's unexpected. I went from twelve
to eighteen hours a day on HPN in the 1980s, and by that time we
had portable pumps. I don't see people concerned a bit about a back-
pack. But despite the nice things we've got now — portable pumps,
backpacks, and all that — I think people going home on PN today
experience the same things we did when we went home.

Liz: I have been on HPN since 1986. I came home with a large
pump and pole also. About a month after I came home I called the
home care company that took care of me. They had an office about
five miles away, so I went down and they gave me a tour. I got to talk
to the nurse who called me and to the general manager. For me, that
was a huge thing. They got to know me, I got to know them, and
I had a better understanding of what was going on. So even though
no one else around me necessarily knew very much about what I was
doing, I had a really good connection with the home care company
people, and that helped me a lot.

Don also spoke about eating. I'm on HPN twenty-four hours a day
because of Crohn's, and I've had periods of time when I don't eat be-
cause of obstructions. My friends have known me many years, and yet
it is still uncomfortable if we go out and I don't eat and they do. It's
not uncomfortable for me. I'm fine, because who wants the pain and
the rest of the stuff that comes with the obstruction? But the people
around me are uncomfortable that I can't eat, even after all this time.

Ann: I started HPN in 1987. My doctor was still having her patients
mix their own solutions. To me that was initially the most intimidating
thing: putting all these things together in a bag, having to maintain
sterile technique, and being terrified I was going to make a mistake.
But I also had a good connection with my home care company. The
company was so used to dealing with my doctor's patients, and so
well versed in how to get them comfort-
able at home, that once I got past the fear
of making a mistake, I didn't feel terribly
isolated.

But although I felt fairly comfortable
with the regime and fairly comfortable
with the therapy, I felt like I was the only
one doing this. I knew that wasn't true
in my head, but not in my heart. And I
wondered, am I going to be able to cope
with this?

Liz: Of course, the huge difference in how I felt made doing all of this
just fine. I will, however, admit that for a while I didn't infuse about
one night a week, even though I was supposed to infuse every night.

Don: It's a mental health day.

Liz: That's exactly right. I did it because I wanted to be sure I was the
one who was still in control. I waited two years to go on HPN from
the time they first brought it up to me, because in my mind it seemed
if I ended up having to be on HPN, the Crohn's had finally won. So
for a little while I did not hook up one night a week just because this
way, I thought, I'm still the boss; I'm still maintaining control. But
then I got smart enough to realize this wasn't exactly what I wanted
to do anymore, that when that night came and I didn't feel well, I
should hook up.

Ann: I had been sick with infections and a variety of other things for
so long that I was forty pounds under the weight I should have been
when I started HPN. With the immediate relief of feeling so much
better and gaining weight and starting to look like a human being, I didn't have the temptation of skipping a night for probably the first year. But as I started to get back to normal, there were nights when I'd be hooking up later than I normally would. I'd be tired, and think, I just don't want to do this tonight. But I don't think I ever actually skipped just because by the end of the day my body would want it so badly that I knew I would feel really awful if I tried to skip.

Working and Traveling
Lisa: What did you do about work after you went on HPN?

Liz: Originally when I went on HPN I had my own business. For about eleven years I did motivational speaking and stress management seminars. I traveled all over the United States, and to Europe five times. On the first trip to Europe I assumed they would strip open the boxes that had all my HPN and stuff in them and that the customs people would be all over me, but I wasn't ever stopped by customs. I was in Germany when 9/11 happened.

My home care company shipped the pump, the pole, the whole shebang for me, everywhere I went. It was wonderful. Out of all the times I traveled, I had one time when my pump and pole didn't get there, and as it happened I was doing a stress management seminar for a home care company. So they had a pump and pole.

Then I worked for five years for an insurance company. Toward the end of that job I started having to do hydration all day, then my doctors switched me to HPN twenty-four hours a day. During that time I had a bunch of surgeries and it ended up they didn't think it was in my best interest to work.

Ann: When I started HPN I was just starting a new job, which as it turns out was wonderful, because it gave me more flexibility than private practice did. During the time I was working I was never on HPN during the day. I did travel occasionally, but it was usually for no more than one or two nights. By the time I was in a job where I was doing more traveling, I was only on hydration at night; the solution didn't have to be refrigerated, so I could just bring it with me. At that point I had a portable pump. (As a little aside, I found out about portable pumps at my first Oley conference. That was my big awakening, and one of the best things Oley has done for me.)

In 2001, when I had my last major gut surgery, I wound up having to be on HPN nineteen to twenty hours a day. I was home recovering for quite a long time and I struggled with the issue of whether I was going to go back to work. I was trying to arrange to work at home a couple of days and work in the office a couple of days each week. Finally my husband sat me down and said, “Do you really think this is realistic? Think about how you feel during the day.” I finally did come to the conclusion that it wasn't realistic for me to go back to work. But it was a huge adjustment initially.

I actually wound up going to see a psychologist to talk about it. The

Wisdom, cont. pg. 8 ➤
Wisdom, from pg. 7

thing was, it wasn’t on my terms. I had always looked forward to retirement as a time when I would do certain things. I expected to work part-time during retirement. But here I was, not only unable to do any kind of work, but also unable to do all the things I had envisioned doing. I have limitations on what I can do physically, in terms of my stamina and how I feel in the morning and things of that nature.

So it’s a lot of things in terms of the adjustment, but I think the biggest thing was that it was forced on me. It wasn’t my decision. I mean, it was my decision ultimately, but it wasn’t a decision I had much of a choice about.

Liz: Some of my friends got together and had an “intervention.” They said, “You understand, you just can’t do this anymore. Maybe some day things will be better and you’ll be able to work, but not now.” At that time I was having surgery about once every year and a half. By the time my friends got done I realized they were right, but it was a huge assault. I still volunteer when I can. I have to do something where I feel I have some worth. I know I have worth even if I don’t do something, but as long as I feel well enough to be able to do something, I want to be able to do that.

Sharing Experiences
Lisa: How can HPEN consumers learn from one another?

Don: At the last Oley conference, I went to the round table discussion some young people led on dating and stuff because I wanted to hear their back and forth. Mostly the participants were teens and twenties, and they were really sharp. To them, the Internet is the same as a textbook was to me. It is the place you go to find something.

Liz: My sense is that people get more information face to face. I used to do a lot of visiting for people who had ostomy surgery. I could talk to them on the phone until I was blue in the face, but it wasn’t until I walked in the room and they saw that I didn’t have an extra head that they really understood they could live a normal life with something that was such a change for them. I believe there’s a need and a place for face-to-face contact with people.

Ann: I corresponded back and forth by e-mail for quite a while with a woman who has my disease, but she wanted to meet me. It wasn’t as important for me because I had met someone through Oley who has my disease. And I had the Oley family as my support structure. But I did go meet her. For her, it was a huge thing to have a face-to-face sit down with somebody who was going through something similar to what she was going through.

Relationships
Lisa: Can you comment on how HPEN has affected your relationship with family members?

Liz: My son was an adult when I went on HPN, but it’s been interesting watching my grandkids. When they were little, I was on hydration. I told them Grandma needed more water. Now they continue to ask when they have questions. It’s made no difference to them whatsoever,
but they have felt comfortable about it. So aside from meaning I have more energy and can do more things with my son, his wife, and my grandkids, I don’t think it’s had any impact for me with my family.

Don: Parents of kids who I coached said to me, many times, “I don’t envy you your disease, I don’t envy you being on HPN, but I do envy that you have all this time to spend out on the ball field — not just with your kids, but with my kids. You have more time to spend with the kids doing fun things than I do because I have to work so much.” The first time I was told that, I thought, Wow. That’s absolutely true. I spent more time with the kids in this community than anybody else because I had the time to do it. Looking back, I would have hated to miss all that.

Ann: I don’t think I can separate my HPN dependency from the rest of my disease; it’s too integrated. Overall what we’ve had to deal with has brought my husband and I closer. In terms of the rest of my family, it’s been a nonissue, or in some respects a positive thing, because people saw that it was (a) necessary and (b) making a difference in my quality of life.

Getting back to your earlier question about HPEN consumers learning from one another: New HPEN consumers are ready for somebody who is coping and healthy-looking to walk into their room with a pack on their back — whether it’s a fanny pack or a big pack. Because often they’re in the hospital with a pump on a pole and they’re thinking that’s what they’re going to have at home. I have had more people say, “Oh my gosh! Look how little that pump is!” They need to know they’re going to be mobile, they can go out to the grocery store if they want to, they can live pretty much normal lives. They’re ready for that very early on. They won’t absorb it all, but it will be very reassuring.

Liz: I visited one hospital where they have patients on ambulatory systems while they’re still in the hospital. But these consumers still gain hugely from somebody who is on HPEN walking in; someone who can tell them they can live a normal life and talk about it. They use it as an opportunity to talk specifically about things that are important to them, not just generic things, and to answer their questions.

Lisa: Thanks so much. In the newsletter, this is as close to a visit as we can get!

Check It Out!

“Micronutrients in Parenteral Nutrition” is the title (and subject) of a Gastroenterology magazine supplement released in November. This special edition contains the proceedings from the American Society of Parenteral and Enteral Nutrition (A.S.P.E.N.) 2009 research workshop, which was organized and chaired by Oley co-founder Lyn Howard, MB, FRCP, and former Oley board member Alan Buchman, MD, MSPH, FACP, FACG. The Oley Foundation helped support the workshop.

This workshop brought specialists from around the world together to look at the dosages currently recommended for micronutrients in parenteral nutrition and to develop future recommendations based on current research. This supplement to Gastroenterology (Nov 2009, 137[suppl 1]) is available online at www.gastrojournal.org.
Nominate Someone Who Inspires You!

The five awards Oley presents each year recognize those in our community who have earned our respect, inspired us, and taught us. Nominate someone today, following the criteria listed below. We’ve provided a form you can use as a guideline when submitting your nomination(s). Nominations must be received by April 1, 2010.

Awards will be presented at the 2010 Oley Consumer/Clinician Conference and the awardees will be spotlighted in the LifelineLetter. Several of the awards include a partial travel grant to the conference (to be held June 28-July 2, in Saratoga Springs, NY). Recognition is given to all nominees.

The Awards and Criteria

**LifelineLetter Annual Award**
- 19 years of age or older
- HomePEN consumer or caregiver for five years or longer
- Demonstrates courage, perseverance, a positive attitude in dealing with illness or caregiving, and exceptional generosity in helping others in their struggle with homePEN
- Winner will receive a partial travel grant to the Oley annual conference

**Child of the Year Award**
- 18 years of age or under
- HomePEN consumer for one year or longer
- Shows a positive attitude in dealing with illness and therapy which encourages and inspires others
- Winner will receive a partial travel grant to the Oley annual conference

**Celebration of Life Award**
- Any age
- HomePEN consumer for three years or longer
- Lives life to the fullest: traveling, fishing, gardening, volunteering, attending school, spending time with family, etc.
- Winner will receive a partial travel grant to the Oley annual conference

**Lenore Heaphey Award for Grassroots Education**
- Oley Foundation Regional Coordinator
- Organized an outstanding information and/or education program in the past year
- Winner will receive a nominal cash award to foster educational/support activities in his or her local area

**Nan Couts Award for the Ultimate Volunteer**
- Clinician (physician, nurse, dietitian, etc.) practicing in the field of homePEN or related field (psychology, interventional radiology, pain management, etc.)
- Demonstrates a willingness to give of themselves, above and beyond their regular work hours, to educate, empower, and improve the quality of life for homePEN consumers

---

2010 Oley Award Nomination

1. Provide the following information:

I am pleased to nominate the following individual for the 2010:

- [ ] LifelineLetter Award
- [ ] Child of the Year Award
- [ ] Celebration of Life Award
- [ ] Lenore Heaphey Award for Grassroots Education
- [ ] Nan Couts Award for the Ultimate Volunteer

Nominee’s name: _______________________________________

Age: _____ Daytime Phone: (_____) _______ - _________

E-mail: ____________________ @ ________________________

Primary diagnosis: ____________________________________

No. years on HPEN ______

Your name: ___________________________________________

Daytime Phone: (_____) _______ - _________

E-mail: ____________________ @ ________________________

2. Tell us why you are nominating this person.

Cite specific examples of how the nominee meets the award criteria. Please limit length to one page (attach).

3. Submit nomination to:

The Oley Foundation
214 Hun Memorial, MC-28
Albany Medical Center
Albany, NY 12208
Fax (518) 262-5528
E-mail harrinc@mail.amc.edu

Questions? Call (800) 776-OLEY
Lab Values, from pg. 2

just the supplementation or restriction of potassium. Correction may even involve giving magnesium instead of potassium. Again, your doctor will make this decision.

Magnesium

Magnesium is an essential electrolyte involved in metabolism and energy production, the formation of proteins, heart tone, and the activity of nerve impulses. Magnesium works in conjunction with calcium in the balance of muscle contraction and relaxation. It helps regulate the acid-base balance in the body and is crucial in activation of enzymes necessary for carbohydrate, fat, and protein metabolism. Magnesium is also a mineral.

As with potassium, blood levels do not accurately reflect the total body stores of magnesium. Less than 1 percent of the total magnesium in the body is found in the blood and approximately 55 percent is found in the bone. Although the blood levels do not reflect the body stores, we still need to measure the blood levels because we have to follow the trends of the magnesium. Also, as with potassium, blood levels are associated with various body functions and activities, and measuring them can help identify problems occurring in the body. Magnesium is also eliminated from the body in the urine.

Hypomagnesemia (low blood magnesium) occurs from losses mainly from the gastrointestinal tract, as well as a result of some medications. Losses of magnesium can also be the result of intestinal or biliary fistulas, ulcerative colitis, malnutrition, pancreatitis, or vomiting. When someone has low magnesium, one of the difficulties of replacing the magnesium with oral medications is that these magnesium salts can themselves cause diarrhea. Common effects of low magnesium include weakness, confusion, difficulty swallowing, and growth failure in children.

Hypermagnesemia (high blood magnesium), when the kidneys are healthy, occurs primarily as a result of increased intake. Excess intake can occur from using magnesium-based laxatives.

Common effects of high magnesium include low blood pressure (hypotension), flushing, and even difficulty breathing.

It is important to understand that low blood levels of magnesium can affect the calcium balance in the body. Magnesium is required to make parathryoid hormone, which regulates calcium in the body. Also, as mentioned earlier, low magnesium blood levels can cause low blood potassium.

Calcium

Calcium is a major component of bones and is involved in the maintenance of blood pressure and blood clotting. When calcium is included on a laboratory report it is generally reported as total blood calcium. Calcium is highly bound, mainly to albumin (an important protein in the blood; discussed below), and the remainder floats free. The biological activity in the blood is related to the free calcium. When a person has a low albumin level, the measured calcium will also be low; however, the free portion may remain normal.

Lab Values, cont. pg. 12
There are numerous formulas that can be used to calculate the corrected level of calcium in the blood. The one used most often in clinical practice follows. (Note that although the normal albumin level ranges from 3.5 to 4.5 gm/dl, we will use a value of 4 gm/dl in our calculation, which is what many physicians do. Also, for the example in Figure 1, we will use 3 gm/dl as the measured albumin level and 7.5 as the measured calcium.)

The formula: Assuming that the normal albumin level is 4 gm/dl, for every 1 gm/dl that the albumin is below 4 (see Figure 1, A) you correct the calcium in the opposite direction by a factor of 0.8 (see Figure 1, B and C).

As mentioned above, if you have low calcium (hypocalcemia) your magnesium may be out of balance. Your health care provider should ensure the magnesium levels are normal and are not contributing to the hypocalcemia. Some other causes of low calcium include the use of certain diuretics (the water pills like furosemide), low vitamin D intake, and a high intake of phosphorus. Some common symptoms of hypocalcemia include numbness, breathing difficulties, and muscle twitching or tightness.

Symptoms of high blood calcium (hypercalcemia) include weakness, fatigue, high blood pressure, nausea or anorexia, and decreased muscle response. Causes of high calcium include excess intake of calcium or vitamin D, calcium-containing antacids, and another diuretic called hydrochlorothiazide.

**Phosphorus**

Phosphorus is another electrolyte that is important to bone health, the body's acid-base balance, and the production of energy. It is also a component of cell membranes. Once again, phosphorus is also mainly found inside of the cells and blood levels do not reflect total body stores. Your bones serve as a reservoir for phosphorus. Low blood phosphorus levels will cause a loss from the bones, since maintaining blood levels is more important to the body than maintaining bone health. Phosphorus and calcium are dependent on each other, and both are controlled by hormones. Aggressive replacement of either electrolyte can cause a change in the blood level of the other, so care must be taken when treating low levels of either one.

Causes of low phosphorus include low intake of phosphorus and the use of calcium-containing antacids. High levels often occur due to poor kidney function or excess intake of certain laxatives.

**Nutritional Markers**

There are no blood values or levels that measure nutritional status. However, there are some blood proteins and enzymes that may alert the physician to changes in the body in response to artificial nutrition. These markers are only one tool that the physician uses in the assessment of the consumer's overall health. Although there are a number of markers, I will cover only a few here.

**Figure 1. Calcium Calculations**

\[
\text{A.} \quad \frac{4 \text{ gm/dl (normal albumin)}}{- 3 \text{ gm/dl (measured albumin)}} = \frac{1}{1} \text{(the difference between normal and measured albumin)}
\]

\[
\text{B.} \quad 1 \times 0.8 = 0.8 \text{ (set factor)}
\]

\[
\text{C.} \quad 0.8 + 7.5 \text{ (measured calcium)} + 8.3 \text{ (corrected calcium)}
\]

During an acute illness or if some other inflammatory process is occurring, another blood protein can also be helpful. This protein, called *C-reactive protein* (CRP) is increased in the blood in response to stress. When stress occurs and the CRP rises, albumin and prealbumin levels generally fall. This is a natural process as the body responds by manufacturing CRP in preference to the other blood proteins. As the stress resolves, the other blood proteins are manufactured and levels return to normal.

**Liver Function Tests**

As with nutritional markers, liver function cannot be measured by blood tests. The physician can, however, use blood levels of enzymes produced by the body to monitor the effect of disease or nutrition on the liver.

One of the liver enzyme lab values that often has hidden meaning is the *alkaline phosphatase* (ALP). The liver is one of the sites where the enzyme is manufactured, and in liver disease, the ALP will rise. However, ALP is also produced in the bone. The laboratory measurement doesn't distinguish between the two and reports all forms of ALP. Persons with bone disease or cancer, for example, will also have an elevated ALP. Physicians can order specific ALP measurements to identify the source, but that is not frequently done.

When ALP is manufactured it requires zinc to be incorporated into the enzyme. People with zinc deficiency will have low levels of ALP. Zinc deficiency can occur in patients with high stool output, short
Nutrition and You

Fascinating, Fabulous Fiber
Laura E. Matarese, PhD, RD, LDN, FADA, CNSD

Fiber is indeed fascinating and fabulous, and it’s an important aspect of nutritional care for those with intestinal failure. There are different types of fiber. Some are well tolerated by individuals with intestinal failure and others may present a problem. Basically, fiber can be classified into three categories: soluble, insoluble, and functional.

Soluble Fibers
Soluble fibers are very important to people with short bowel syndrome (SBS), particularly if the colon is connected. These fibers dissolve in water (are soluble) and form a gelatinous substance (like Jell-O) when combined with water. Soluble fibers slow transit time (the time it takes for something to go through your gastrointestinal tract), which may help with absorption of nutrients. They also add bulk, which helps to solidify bowel movements and gelatinize ostomy output. This may give you a little more control over your output. The added bulk also increases the satiety value of the diet.

Soluble fibers also help to balance intestinal pH and, as they ferment, they stimulate intestinal production of short-chain fatty acids (SCFA). These SCFA are then absorbed through the mucosa (lining) of the colon and used as a source of energy. The SCFA also help with sodium and water absorption. SCFA also have a nutritional effect on the number and quality of cells in the gastrointestinal tract and stimulate intestinal adaptation.

You can get soluble fiber naturally through food, such as legumes (peas, soybeans, and other beans), oats, rye, barley, some fruits and fruit juices (including prune juice, plums, berries, bananas, and the insides of apples and pears), certain vegetables (including broccoli, carrots, and Jerusalem artichokes), root vegetables (sweet potatoes, onions, and potato skins are sources of soluble fiber), and psyllium seed husk (a mucilage soluble fiber; mucilage is a thick, gluey substance, similar in texture to marshmallows, produced by most plants).

Insoluble Fibers
Insoluble fibers pass through the gastrointestinal tract largely unchanged. Nonetheless, they do have an effect. They increase bulk, soften stool, increase satiety value of the diet, and help to control and balance intestinal pH. They also shorten transit time, which is why many individuals with SBS often do not tolerate insoluble fiber.

Food sources of insoluble fiber include whole grain foods, wheat and corn bran, nuts and seeds, potato skins, flax seed, sesame seed, and vegetables such as green beans, cauliflower, zucchini, and celery. Insoluble fiber may also be found in the skins of some fruits, including tomatoes. That is why many HPEN consumers with SBS often benefit from peeling fruit before eating.

Functional Fibers
The category “functional fibers” is a new category. Functional fibers are non-digestible carbohydrates engineered or extracted from plants. They add bulk to food, increase fiber without grit, and improve the mouth feel, stability, and taste of food. In animal studies, functional fibers have been shown to confer the health benefits of soluble fiber. However, they do not provide other nutrients found in whole foods. For example, if you eat a banana, you not only get the soluble fiber but you also get nutrients such as potassium.

Examples of engineered functional fibers include polydextrose from dextrose, sorbitol, and citric acid. Extracted functional fibers include pectin from citrus and cellulose from trees, as well as natural polydextrians from inulin and oligofructose extracted from chicory root.

Getting Fiber
Food is best. Remember that when introducing a new food into your diet, you should start with small amounts and gradually increase the amounts. If you cannot eat enough fiber-containing foods, there are fiber supplements (see Sept/Oct 2008 LifelineLetter). These are generally soluble fiber.
The following list represents everyone who contributed between October 1 and December 1, 2009. We also want to thank all of those who are not listed below, who gave earlier this year or who have supported the Foundation by volunteering their time and talents.

**Individual Donors**

**Ambassador ($2000+)**
- Doris R. Johnson

**President’s Circle ($1,000–$1,999)**
- Paul Armiger and Friends & Employees of ThriveRx, Grand Canyon
- Jane Balint, MD, Rick Davis Hike-a-Thon

**Benefactors ($500–$999)**
- John & Gloria Dimino, Rick Davis Hike-a-Thon
- Deborah Pfister, in honor of Rick Davis & Paul Armiger
- John McHale, Paul Armiger Hike-a-Thon

**Individual Donors**
- John McHale, Paul Armiger Hike-a-Thon
- Ellen Pierce, in memory of Jeff Dutton, Paula Southwick, & Bob Sweet Professional Nutrition Therapists, LLC, Rick Davis Hike-a-Thon
- Rick Davis Hike-a-Thon
- Dex Speerhaus, RPh, CDE, BCNSP* Kendall & Lynn Starkweather Rick Davis Hike-a-Thon
- Mr. & Mrs. Richard Stone, Rick Davis Hike-a-Thon
- Marion Winkler,* Rick Davis Hike-a-Thon

**Supporters ($50–$99)**
- H. S. Ashbaugh, Rick Davis Hike-a-Thon
- Patricia Binger, Rick Davis Hike-a-Thon
- Patrick & David Boxler, Rick Davis Hike-a-Thon
- David & Steven Cohen,** Rick Davis Hike-a-Thon
- Paul & Carol Condit, Rick Davis Hike-a-Thon
- Dean Cook, Rick Davis Hike-a-Thon
- Victoria Damiani, Rick Davis Hike-a-Thon
- Bert Davis, Rick Davis Hike-a-Thon
- Jeff Davis, Rick Davis Hike-a-Thon
- Matthew Davis, Rick Davis Hike-a-Thon
- Sara Davis, Rick Davis Hike-a-Thon
- Thomy Davis, Rick Davis Hike-a-Thon
- Dane Fethering, Rick Davis Hike-a-Thon
- Good Search.com, with thanks to everyone who “searches.” It pays off!!
- Peggy Gruenemeier, Paul Armiger Hike-a-Thon
- Bill Hooper, Rick Davis Hike-a-Thon
- Jayne Jeney, Rick Davis Hike-a-Thon
- Robert Lake, Rick Davis Hike-a-Thon
- Robin Lang, in memory of Linda Gold
- Jacques & Don Leary, Rick Davis Hike-a-Thon
- Laura Materese,* Rick Davis Hike-a-Thon
- Ron & Lisa Metzger,*** Rick Davis Hike-a-Thon
- Melissa Perigueau, RD, in honor of Paul Armiger - ThriveRx
- Nathan Rafferty, Rick Davis Hike-a-Thon
- Barbara Ralph
- John Sindelar & Patricia Homes, Rick Davis Hike-a-Thon

**Contributors ($30–$49)**
- Sheldon Sokol
- Michael Weaver, via matching gift from FM Global Foundation
- Mark & Andrea White, Rick Davis Hike-a-Thon
- Bobbiejo Winfrey, in honor of her 4-year multivisceral transplant anniversary

**Contributors ($30–$49)**
- Margaret Bald
- Patricia Booton, Rick Davis Hike-a-Thon
- Roberta Fost, Rick Davis Hike-a-Thon
- Carole Ryan
- Clayton Smith, Rick Davis Hike-a-Thon
- Anthony Woodburn, Rick Davis Hike-a-Thon

**Friends (Up to $30)**
- Joan Bishop,** Rick Davis Hike-a-Thon
- June Boddren,** Rick Davis Hike-a-Thon
- Bettemarie Bond,** via the United Way of Bucks County
- Robert Brown, Rick Davis Hike-a-Thon
- Mary Chappell, Rick Davis Hike-a-Thon
- Carol Chapin, Rick Davis Hike-a-Thon
- Glen & Deanna Clark, Rick Davis Hike-a-Thon
- Judith Elaine Cline, Paul Armiger Hike-a-Thon
- Jay Crump, OD, PA, Rick Davis Hike-a-Thon
- Roslyn*** & Eric Dahl, Rick Davis Hike-a-Thon
- Rose Verduzio, Rick Davis Hike-a-Thon
- Mary Downey, Rick Davis Hike-a-Thon
- James Dunn, Rick Davis Hike-a-Thon
- Nathan Egan, Rick Davis Hike-a-Thon
- Ms. Joan Gartner, in memory of Dorothy Kelly
- Edward Grissom, Rick Davis Hike-a-Thon
- Cathy Harrington,*** Rick Davis Hike-a-Thon
- Zana Hatch, Freihofer Walk-a-Thon
- Rose Hoelle,** Rick Davis Hike-a-Thon
- Ron & Barbara Horsley, Rick Davis Hike-a-Thon
- Robert & Jutta Jacobs, Rick Davis Hike-a-Thon

**In Memory of Nancy Backinger**
- Mr. & Mrs. Warren Bales
- June Boddren
- Meg Cass-Garcia
- Andrea Frydl
- Portia & Wally Hurton
- Glen Morgan
- Alice Myers
- Diane Wagner

**In Memory of Jo Ann Mac Mullan**
- Ms. Patricia A. Brown, RN, CNSN, ONC
- Eileen & Richard Lowe
- Charles Mac Mullan
- Frank & Lucille Modziack
- Vincent & Helen Pici
- Robert L. Sims, Sr.
- Charles & Catherine Yamarone

**In Memory of Ben Matarese**
- Pamela Charney
- Ms. Patricia A. Brown, RN, CNSN, ONC
- Eileen & Richard Lowe
- Charles Mac Mullan
- Frank & Lucille Modziack
- Vincent & Helen Pici
- Robert L. Sims, Sr.
- Charles & Catherine Yamarone

* Oley Trustee
** Oley RC
*** Oley Staff
Charitable Giving

Transferring stocks, mutual funds, or IRA assets can be an easy, excellent, tax-advantaged way to support the Oley Foundation. Life insurance policies offer another excellent option.

Securities

When you make a gift to the Oley Foundation of appreciated shares of stocks or mutual funds that you've held for more than one year, you completely avoid paying capital gains tax on the appreciated asset, and you also receive a charitable deduction (subject to certain limitations) for the full fair market value of your gift. Instead of selling the securities, which triggers the tax, your broker or fund manager can transfer the assets directly to Oley.

Life Insurance

The gift of a previously purchased life insurance policy can help you provide for loved ones and may achieve tax savings, while also providing generous support for the Oley Foundation. You can contribute a fully paid policy by assigning ownership to Oley, naming Oley the beneficiary of the policy, or naming Oley as a successor beneficiary.

For more information or to discuss the options, please call Oley Executive Director Joan Bishop (800-776-6539).

Your generous gifts help keep Oley programs vital.

Oley Horizon Society Blossoms!

Many thanks to those who have arranged a planned gift to ensure continuing support for HPEN consumers and their families. To learn how you can make a difference contact Joan Bishop or Roslyn Dahl at (800) 776-OLEY.

Felice Austin
Jane Balint, MD
John Balint, MD
Joan Bishop
Ginger Bolinger
Pat Brown, RN, CNSN
Katharina Cotter
Jim Cowan
Rick Davis
Ann & Paul DeBarbieri
David & Sheila DeKold
Tom Diamantidis, PharmD
Selma Ehrenpreis
Herb & Joy Enlich
Jerry Fickle
Don Freeman
Linda Gold
Linda Gravenstein
The Groeber Family
Valerie Gyurko, RN

Alfred Haas
Shirley Heller
Alicia Hoelle
Jeff & Rose Hoelle
Lyn Howard, MD
William Hoyt
Portia & Wallace Hutton
Kahore Iyer, MD
Darlene Kelly, MD
Family of Shirley Klein
Jim Lacy, RN, BSN, CRNI
Bobbi Lang
Hubert Maiden
Laura Macarese, PhD, RD, CNSD
Kathleen McNeece
Michael Medwarz
Meredith Nelson
Nancy Nicholson
Rodney & Paula Okamoto, RPh

Kay Oldenburg
Judy Peterson, MS, RN
Clemens Pietzner
Beverly Promisel
Abraham Rich
Gail Egan Sansivero, MS, ANP
Roslyn & Eric Scheib Dahl
Susan & Jeffrey Schenol
Doug Siedner, MD, FACC, CNSP
Judi Smith
Steve Swensen
Cheryl Thompson, PhD, RD, CNSD,
& Gregory A. Thompson MD, MS:
Cathy Tokarz
Eleanor & Walter Wilson
James Wittmann
Patty & Darrell Woods
Rosaleine Ann & William Wu

PLATINUM LEVEL PARTNERS
($70,000+)
NutriShare, Inc.

GOLDEN MEDALLION PARTNERS ($50,000–$69,999)
Coram Specialty Infusion Services
ThriveRx (formerly NutriThrive)

SILVER CIRCLE PARTNERS
($30,000–$49,999)
Emmaus Medical, Inc.

BRONZE STAR PARTNERS
($20,000–$29,999)
InfuScience, Inc.
Nestlé HealthCare Nutrition

BENEFACTOR LEVEL PARTNERS
($10,000–$19,999)
Abbott Nutrition
NPS Pharmaceuticals
Walgreens-OptionCare

PATRON LEVEL PARTNERS
($5,000–$9,999)
Critical Care Systems, Inc.
EMD Serono, Inc.
NPS Pharmaceuticals
Walgreens-OptionCare

BLUE RIBBON PARTNERS
($2,500–$4,999)
Baxter Healthcare
B. Braun Medical
Kimberly-Clark
Sherwood Clinical

CONTRIBUTORS
($1,000–$2,499)
Moog Medical Devices Group/Zevex
Happy New Year!

Telephone Networking
Revised in 2010!

Have your questions answered and share your experiences with other home IV or tube-fed consumers and caregivers.

Oley's peer-to-peer, toll-free phone lines have facilitated communication between Oley members for many years. Beginning January 1, this Oley program will be revised to include three toll-free lines. All lines will be staffed by consumers or caregivers, willing to share their experiences.

- (888) 610-3008 will be devoted to HPN (intravenously infused nutrition).
- (888) 650-3290 will be devoted to HEN (tube feeding).
- (877) 479-9666 will be devoted to HPEN consumers in their teens and twenties.

We hope you’ll use this networking opportunity to explore options and share ideas. The connections and the fellowship that can follow a call will put you in a better position for coping with day-to-day issues and handling any complications that may come your way. These toll-free numbers will be published in each issue of the newsletter and at www.oley.org. Enjoy a visit!

As always, advice shared by volunteers represents the experience of those individuals and should not imply endorsement by the Oley Foundation.

25th Oley Conference

Save these dates: June 28 to July 2, 2010!

Summer 2010 marks twenty-five years since the Oley Foundation held its first meeting in Saratoga Springs, New York. To celebrate this anniversary, we are bringing the conference back to Saratoga, at the historic Gideon Putnam Resort (www.gideonputnam.com).

Come early, stay later, and enjoy all that this area has to offer. Plan on golfing with us (watch for details on a tournament!), boutique shopping downtown, visiting Saratoga’s famous mineral baths, dance museum and race course, and just plain relaxing. Partial travel scholarships are available to award winners (see page 10). We look forward to seeing you!