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Peggy Chenoweth, 36
www.amputeemommy.com
You Can Beat the Odds of Secondary Conditions

"While we may not be able to control all that happens to us, we can control what happens inside us."

—Benjamin Franklin

No one is more at risk for amputation than someone who has already lost a limb.

The facts are disturbing. Diabetes is the number one cause of nontraumatic amputations among Americans, with over 86,000 lower-limb amputations occurring each year.

A recent study published in the Archives of Physical Medicine and Rehabilitation projected that the number of Americans with limb loss would more than double from 2005 to 2050, from 1.6 million to 3.6 million. The main cause of this sharp increase is the rising incidence of diabetes.

Additional studies have shown that from 9 to 20 percent of people with diabetes who had already experienced an amputation underwent a second amputation within 12 months of the first surgery. Five years after the first surgery, 28 to 51 percent of amputees with diabetes had undergone a second amputation. Worse still, the 5-year mortality rate after amputation ranges from 39 to 68 percent.

Although these statistics indicate that the odds are against you, you don’t have to be in this group. Common sense and good preventive care can preserve what you have.

In fact, the Amputee Coalition believes that many amputations related to secondary conditions can be prevented. This is a key reason why limb loss prevention is now included in the Coalition’s mission (see page 13, “A Catalyst for Change”). To reach out to and empower people affected by limb loss to achieve their full potential through education, support and advocacy, and to promote limb loss prevention.

In most cases, the means and methods already exist to prevent and reduce the incidence of limb loss in the United States. What’s lacking is a coherent effort to get out a consistent message that safety measures can be taken to prevent traumatic amputations and preventive care is available for those who need it. In the coming years, the Amputee Coalition intends to change this.

The Amputee Coalition is working to raise awareness about the risk of limb loss due to secondary conditions and preventive steps that can be taken, including weight management, diet, exercise and regular foot exams. A large number of amputations could be prevented by better preventive care and patients taking better care of themselves and doctors being more diligent about educating their patients on what to look for -- treating complications and problems early.

There are many things that can be done to prevent or repair the secondary conditions caused by limb loss. It’s not too late. The human body is very resilient. You just need to get started.

Bill Dupes, Senior Editor
What will our son’s life be like? Can he overcome this?

“**When Connor was born** without his leg, we had so many questions, so many worries about our little boy. But it didn’t take long for us to realize he was literally unstoppable. With the help of people we met at Hanger, our family found hope. They understood what we were facing and had the expertise to give Connor a future as bright as any child’s. Their confident, reassuring approach helped us stop seeing our son’s limitations, and start seeing him for what he was—a normal little boy. Thanks to their caring service and amazing technology, constant worry gave way to lasting joy.”
— Colleen & Michael Karow

Seven-year-old Connor Karow exemplifies the true spirit of independence. Each morning he puts on his own prosthesis and wears it all day. He loves to play with his brother Ryan, and when faced with a new challenge, he finds a way to adapt. His quick smile, curious mind and natural ability to put people at ease are all part of what make Connor special.

**Our Patients Never Fail to Inspire Us.** With our national network of offices, unsurpassed clinical expertise, advanced technologies and dynamic peer advocacy program, Hanger is the leader in prosthetic and orthotic care. But what satisfies us the most are stories like Connor’s.

Visit Hanger.com to read stories of amazing people moving their lives forward every day.
Can he overcome this? What will our son's life be like?

Our Patients Never Fail to Inspire Us.

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Moving Lives Forward

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Visit amputee-coalition.org today and sign up to become a Friend of the Amputee Coalition at no cost. Friends get access to valuable resources and information about living with limb loss and how to prevent limb loss. You will also receive a complimentary electronic subscription to our award-winning magazine, inMotion.

To receive a print subscription to inMotion for just $24 a year, visit amputee-coalition.org/inmotion_about.html or call us at 888/267-5669 today!

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About the Cover

Design by Patrick Alley
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Aaron, bilateral C-Leg wearer.
Minneapolis, Minnesota
Over the past several years, the Amputee Coalition has worked with local advocates to advance legislative initiatives for the limb loss community, and 2011 is no different. In fact, with the newest initiative to ask governors to designate April as Limb Loss Awareness Month, we’ve seen even more involvement than ever!

Earlier this year, the Amputee Coalition submitted proclamations to all 50 state governors to recognize the limb loss and limb difference community in each state and to raise awareness, discuss prevention and support, and educate the broader community about the issues facing the limb loss community. In March, we sent out an e-mail to all of our friends and had an overwhelming response! Governors’ offices were calling to get more information, individual amputees and support groups were rallying and developing plans to celebrate, and the proclamations started flooding our office.

The hard work from all of our friends who called or sent e-mails or letters to their governor’s offices made this new initiative an awe-inspiring success in our first year. We hope you will continue your hard work and effort on behalf of the limb loss and limb difference community, and we hope that you celebrated April as Limb Loss Awareness Month in your state.

In addition to the great success of the gubernatorial proclamations, the Amputee Coalition continues to work at the state and federal level for fair insurance access to prosthetic devices. The federal bill has been introduced in the Senate as S. 773, and we expect introduction in the House to occur soon. So far this year we have seen seven states introduce bills, and we are expecting introduction in another seven states.

It’s important to continue the efforts for fair insurance access. We hope each of our friends has seen what getting involved can accomplish with the Limb Loss Awareness Month proclamations and how we can translate that to make a difference to ensure fair insurance access to prosthetic devices. So far, 19 states have passed laws to ensure fair access to prosthetic devices.

Continuing to pass these laws is crucial to make a difference for amputees in all 50 states. The more states that pass these laws, the more likely it will be for the federal government to act. If you’re interested in getting involved beyond the proclamations, or if you have ever been affected by inadequate insurance coverage for your prosthetic or orthotic device(s), we need you! Visit our Advocacy Action Center on the Amputee Coalition Web site (amputee-coalition.org), and see what you can do to help! 🏁
"oil. tighten. pack. roll."
— Matt Getze, wheelchair world adventurer

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On January 12, 2010, a 7.0 magnitude earthquake devastated Haiti, killing over 230,000 people, displacing more than 1.2 million, and leaving thousands of Haitians without limbs.

Hanger Orthopedic Group and the Hanger Ivan R. Sabel Foundation immediately responded with a cash donation of $25,000 and a contribution of nearly $500,000 in supplies to ease pain and promote healing, including neck and back braces, limb immobilizers, fracture boots, wrist splints and cervical collars. Next, Hanger and the Foundation, along with its partners in the Haitian Amputee Coalition (the Harold & Kayrita Anderson Family Foundation, Physicians for Peace, the Catholic Medical Mission Board and Donald Peck Leslie, MD, of the Shepherd Center), moved quickly to meet the needs of the Haitian amputee population by establishing, equipping and staffing a sustainable prosthetic clinic on the grounds and with the support of the Hôpital Albert Schweitzer (HAS), an undamaged local hospital with a high clinical reputation located 60 miles from Port-au-Prince in Deschapelles, Haiti.
To date, more than 800 amputees have been treated at the Hanger Clinic (known in Haiti as the “Klinik Hanger”). Special thanks go to the Amputee Coalition for supporting the clinic by providing its clinical literature for the amputees, translated into their native Kreyòl language.

I volunteered to lead the clinical team for the first 3 months in Haiti. During the first few months, we treated more than 100 new amputee patients a month. We worked from early morning till very late in the night, 7 days a week, to handle the influx of amputees and to properly fit them with new prostheses. As the year progressed, the clinic took on a more consistent flow of patients while the day-to-day triage and cases of new amputation began to lessen.

Through on-the-job clinical education, training and mentorship, our Haitian technicians are developing the skills to become more independent in their ability to assist the amputees. Joel, Cira, Paul and Tchoe, our Haitian technicians, excel in their ability to learn new skills in their life-changing new trade. Benefiting from every group of prosthetists the Foundation has sent, the Haitians' skill level has increased exponentially.

In February 2011, I returned from my second clinical rotation in Haiti, a year after the earthquake and my first rotation. I am overwhelmingly excited about what I have seen. Upon my return, I was elated to see how well the Haitian technician trainees maintained the clinic over the holidays. As the first lead practitioner back on the ground for 2011, I was ready to start delegating and getting our crew on task, but soon realized they had started without me! Roseland started the intake of patients, Rony was placing patients in treatment rooms ready to translate, and Joel and Paul were evaluating patients’ current needs for adjustments to their prosthetic devices. Wow – they were operating like a well-oiled machine. I am so proud of them!

This year, the patient demographics have changed. The majority of patients are now walking in. We are seeing more patients who require only adjustments to the prosthesis they have received from the clinic; many require a socket change due to changes in their limbs from increased function and healing. We still continue to see some new amputees for their initial prosthesis.

I have the overwhelming sense that I am truly living and working in a major historical humanitarian event. I feel blessed to be a part of this great effort. I am very proud of the Haitian people and our Haitian staff. This is what it’s all about – helping others, not only medically, but in every aspect of life so they are skilled and able to help themselves. The hope I see in their eyes is much different than the fear and despair of the first year after the quake.

Today, the clinic is full of laughter. Patients spend their time waiting by swapping stories, singing and painting. The clinic has turned into a beautiful Haitian mural project. All of the treatment rooms are painted, as well as the interior walls of the clinic. The atmosphere is unmistakably Haitian, filled with papier-mâché figures, pictorials of Haitian life, and the music of one of our patients, a local musician who comes to sing and play for the people. The outcome is better than I ever dreamed, but of course, there is still much work to be done.
Even after you feel that you have recovered from the loss of a limb, been rehabilitated, and, hopefully, reintegrated into the lifestyle you would like to continue, you should not consider your “problem” over. The loss of a limb can affect you in many more ways than just physically, including emotionally, socially and financially. In this section, however, we will focus primarily on the secondary physical conditions that can result from or be compounded by the loss of a limb.

These secondary physical conditions could include weight gain, loss of muscle mass and bone density due to lack of use, contractures of joints, injuries as a result of falls, skin problems and infections, back, hip, knee and shoulder problems, and additional problems with your remaining limbs from overuse and added stress.

As an amputee, you might also be at risk for diseases and disorders, such as diabetes, high blood pressure, and heart disease, which could possibly lead to the loss of an additional limb.

These conditions are often related to inactivity and “being out of shape,” obesity, improper prosthetic fit, a lack of physical therapy and an inefficient gait, the failure to properly monitor skin problems, and an overall lack of knowledge about appropriate self-care as an amputee.

In this Special Report (pages 12-50), we will discuss these problems and a number of possible solutions for them.
A Catalyst for Change

The Amputee Coalition’s Role in Promoting Limb Loss Prevention

Amputee Coalition’s message of limb loss awareness streams in Times Square

Our mission:

The Amputee Coalition is a nonprofit organization representing individuals with limb loss and empowering them to achieve their full potential through education, support and advocacy, and promoting limb loss prevention across the United States.

A quick scan of national voluntary health organizations will show you that none include limb loss in their mission – except for the Amputee Coalition. The American Diabetes Association’s mission is “to prevent and cure diabetes and to improve the lives of all people affected by diabetes.” The American Heart Association’s mission is “to build healthier lives, free of cardiovascular diseases and stroke.” The American Cancer Society’s mission is “to eliminate cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer, through research, education, advocacy, and service” – to name a few. But none mention amputation or limb loss.
The Amputee Coalition Board of Directors made the bold decision to include limb loss prevention in the organization’s mission after extensive discussion and a survey of constituents about 2 years ago. Since 1986, the Amputee Coalition has participated in limb loss prevention activities; however, the organization did not identify prevention as part of its mission.

“There is no contest. The Amputee Coalition Board of Directors made the bold decision to include limb loss prevention in the organization’s mission after extensive discussion and a survey of constituents about 2 years ago. Since 1986, the Amputee Coalition has participated in limb loss prevention activities; however, the organization did not identify prevention as part of its mission.

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“Astounding Statistics

- On average, 507 Americans experience amputation every day.
- 185,000 amputations occur each year.
- 60 percent of all amputations are preventable.
- Diabetes and vascular disease are the leading causes of limb loss and major drivers of increased limb loss incidence in the U.S.
- Leg amputations alone account for more than $250 million each year in healthcare costs.
- 75 percent of acquired pediatric amputations are from trauma – most notable is that, on average, 600 children lose a limb due to a lawn mower accident each year.

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- 75 percent of acquired pediatric amputations are from trauma – most notable is that, on average, 600 children lose a limb due to a lawn mower accident each year.

“The addition of prevention to the mission is a recognition of this long-time work, the input from our constituents and the opportunity that exists for us to influence prevention in a meaningful and unique way,” says Kendra Calhoun, president and CEO of the Amputee Coalition. “The resounding response from our constituents was ‘yes, include limb loss prevention.’ In fact, one of the recurring written response themes in the survey – and I am paraphrasing – was ‘If not us, then who?’ and that question has really stuck with me.”

“In convening the Limb Loss Task Force, our board of directors took initiative to create a plan that will have a powerful impact on resolving these issues in the next decade.”

There are nearly 2 million people with limb loss living in the U.S., and this number is expected to almost double by 2050 unless a major public awareness campaign is launched and key prevention initiatives put into place.

In fact, the statistics show a grim future on limb loss.

“No comprehensive or integrated plan exists on the national or state level that reflects amputee care within the civilian population – no mechanism for limb loss prevention advancement, cost reduction, or care improvement for people affected by limb loss,” says Calhoun.

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In fact, the statistics show a grim future on limb loss.
1. Implement a blueprint for limb loss prevention that includes partnerships with like-minded groups on a multifaceted approach to limb loss prevention.

2. Host a consensus conference to define national optimal care guidelines for amputees to review current practice guidelines and address questions relevant to promoting specialized care that improves the lives of people living with limb loss.

3. Develop a national research agenda on limb loss prevention and amputation care.

4. Create a model for amputee rehabilitation/community reintegration and early limb loss prevention to be implemented in hospitals and clinics around the country. The Amputee Coalition will pursue a demonstration project that would develop and evaluate a model system of amputee care. Similar model systems have been developed and serve as a stimulus for progressive research leading to standards of care in other disabling conditions such as spinal cord injury, traumatic brain injury and burns.

“We can get a great deal of traction on these action plans,” says Calhoun, “as a prevention catalyst and national subject matter expert on living with limb loss.” She cites this year’s launch of April as National Limb Loss Awareness Month and the development of the Limb Loss Risk Assessment as two examples of how the Amputee Coalition can raise awareness about prevention as well as show the world that life does not end with an amputation. The National Limb Loss Awareness Month campaign, 507aday, garnered more than 180 million public impressions during the month of April.

“This is not an “and/or” discussion. Our reason for being is to serve the limb loss community – nothing has changed in that regard,” says Marshall Cohen, Amputee Coalition Board of Directors Chair who cited increased services and programming for support groups, amputee education and peer visitation. “But now we are planning ways to include limb loss prevention, for instance, in care pathways. We want to make limb loss prevention part of the discussion in the larger health concerns such as diabetes, peripheral artery disease (PAD) and obesity – and to get that discussion happening sooner, not at the end when too often surgeons make amputation sound like a defeat.”

Another example Calhoun cites is a recent conversation with Jim Throneburg, inventor and owner of Thorlos, a major and well-respected sock company in North Carolina. “Jim told me his company’s purpose is to serve the best foot health interests of loyal customers by making socks that deliver foot health. He said his company has worked with diabetes educators and arthritis care providers, but one day it hit him that the people who are likely most concerned about foot health are those who have only one left. Amazing. We are looking forward to more discussions with Jim and the Institute for Preventive Foot Health.”

The Amputee Coalition Is a Prevention Catalyst

catalyst (kat’ Ω list’ ) n.
an agent that provokes or speeds significant change or action.

“As a catalyst organization,” says Calhoun, “we believe through proactive dialogue and action, we can cause important and beneficial events to occur for amputees and people at risk for limb loss.”

According to Calhoun, for the Amputee Coalition, this includes:

• Spurring relevant healthcare fields to incorporate limb loss prevention in treatment pathways (e.g., diabetes educators including the National Limb Loss Information Center as a resource for high-risk patients)

• Connecting like-minded and like-missioned organizations to leverage knowledge, skills and outreach for at-risk populations, including those at risk for a second amputation (e.g., conducting an ankle-brachial index (ABI) screening program in conjunction with Limb Loss Awareness Month)

• Partnering with state/federal government organizations, academic organizations and corporate partners by bringing our wealth of information, knowledge and experience in limb loss to bear on joint efforts that reduce the incidence of limb loss.

“The danger,” says Calhoun, “is that there is such a pent-up need for an organization to fill this gap that we have to be wise about our approach and prioritize our actions taking into account the areas for most mission-impact, the best fit for the Amputee Coalition, and available resources.”
It has often been said that the human body is like a machine – keep it well-maintained and it should last you a long time. But what happens when despite our best efforts at looking after the machine, a system failure presents itself?

Diabetes is a disease caused by abnormal levels of blood glucose in the body, a result of the human body's deviation from normal insulin production. Insulin is a hormone produced by the pancreas. Its purpose is to regulate fat and carbohydrate metabolism and sugar levels in the blood. Diabetes affects the kidneys, blood circulation and eyesight, and complications from the disease can also lead to blindness and even limb loss. It is a major trigger of heart disease and stroke and the seventh leading cause of death in the United States.

There are two primary types of diabetes: type 1 and type 2. Type 1 diabetes occurs when the body becomes unable to produce insulin and is often characterized by excessive sweating, thirst, weight loss and fatigue.

Type 2 diabetes occurs when the body either does not produce insulin or the cells of the body ignore produced insulin. Symptoms of type 2 diabetes can include those listed above for type 1 as well as blurred vision, infections that affect the bladder, skin and gums and neuropathy (numbness in the extremities).

Data collected by the Centers for Disease Control and Prevention (CDC) show that 25.8 million people in the United States, or 8.3 percent of the population, are affected by diabetes. It is estimated that 7 million of those cases are still undiagnosed. Once diagnosed, it is a disease to be taken seriously. Inattention could lead to many complications, including lower limb loss. Of all the nontraumatic causes of lower-limb loss in America, according to the CDC, over 60 percent are due to diabetic complications. For Brian “Fossil Hunter” Evensen, of St. Petersburg, Florida, the ramifications of diabetes became all too tangible in a relatively short time.

An avid collector of fossils, underwater treasure and artifacts, Evensen began experiencing symptoms of the disease in his early 50s. At age 53, he was diagnosed with type 2 diabetes, which eventually led to the loss of his left leg, below the knee, resulting in lifestyle changes that ultimately affected his archaeological career.

Diabetes: The Silent Thief
by Elizabeth Bokfi
Evensen first noticed something was amiss when he found himself very thirsty on a regular basis. A visit to his doctor confirmed the early stages of diabetes.

“In my 50s, I started having dehydration problems,” Evensen says, “drinking a lot of water and I couldn’t figure out why. The doctor told me I had the first signs of diabetes. So I quit eating sugar, but I still wasn’t following a proper diet. After a few years of taking meds, not checking blood and stuff, I had a little accident.

“One day I was on a big pile of rock, fossil hunting. As I climbed to the top, the whole pile let go and everything came down. Crushed my ankle and tore the bottom of the foot. I went that day to the hospital. Doctor put me on light antibiotics and sent me home. After a week, it kept getting redder and redder. I went back to the foot doctor. He gave me a regular dose and I thought it was working. The infection seemed to clear – at first. When it continued to worsen, I went to the hospital. They put me on a higher dose of antibiotics, and I stayed in. After 2 weeks I was told they were going to perform surgery on my toes. They thought if they took them, they could stop the infection. That didn’t work, so about 4 days after they took the first three toes, they amputated the other two and midway into the foot.”

“A third surgery was exploratory, working to save my foot. I said, ‘Please make this one count ‘cause I can’t take this [the surgeries] again.’ [During the] third surgery, they took it below the knee. I immediately felt better. I knew they had gotten it. It was then I realized that I was an amputee and I had to start changing my lifestyle.”

Prevention is much less costly, both physically and financially, as Evensen soon found out. Most of the insurance money he had been paying into a policy didn’t cover even the basic prosthesis. Diabetes had not only robbed him of a limb, but also cost him financially in a big way. Evensen found himself needing an assistant to help run his St. Petersburg business, the Lost In Time Store. It also affected his scuba diving, an integral part of his treasure-hunting business.

“My insurance that I paid $400 a month for was pretty much useless,” Evensen says. “Out of a quarter-million-dollar bill they only wanted to pay $12,000 of it. Rehab wasn’t covered. The insurance didn’t cover prosthetics either. Eventually they settled to cover rehab. I went 2 weeks, so I was happy about that. When I got out, I started looking at legs – $5,000, $10,000. I hadn’t been working at the store and was getting low on funds. My landlord was wondering what was going on. I had my assistant in the store to help run things.”

After the brother of Evensen’s close friend mentioned the story to his own tenant, Bill Hansbury, at a birthday party, the wheels of change were set into motion for Evensen. It wasn’t long before Evensen received a phone call from “Boston” Bill Hansbury, founder of The Boston Bill Foundation, a nonprofit corporation that helps amputees with the cost of their prostheses.

“We went and had breakfast that day and he told me about his foundation and the

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Check Your Feet!

Vivian Fonseca, MD, president-elect, Medicine & Science, American Diabetes Association, lists five important ways to prevent amputation due to diabetes:

1. Perform regular foot examinations – both by healthcare providers and self examination.
2. Keep feet clean and dry.
3. Use moisturizing lotions when skin is dry and cracked.
4. Use appropriate, well-fitting shoes – including custom-made shoes and inserts.
5. Trim toenails and calluses regularly – and correctly. These should be done by a podiatrist or foot care expert if neuropathy is present.
used legs, just to get people up and going,” explains Evensen. “He’s a character. Don’t know exactly how old but he’s quite a character and quite a well-respected man in the area. He said at breakfast, ‘Are you the kind of guy that is going to get up and use the leg or use it for an ashtray?’ I told him I didn’t smoke, so I couldn’t use it for an ashtray.”

The Boston Bill Foundation made arrangements for Evensen to see their doctor and have a fiberglass leg made. “A week later they called me and gave me this leg. I tried it on and got up and walked out. I told him I was an old surfer and all I needed to know was that something was under me. I have good balance. I just walked out that same day.”

Evensen now gives peer support through St. Petersburg Brace and Limb, St. Petersburg General Hospital and Largo Medical Center. And at 61 years of age, he continues his passion for treasure hunting, adapting to certain activities in a new way.

“It definitely has affected certain things,” Evensen explains. “I’m not climbing any big piles anymore, but I spend a lot more time researching archaeological stuff. I find I can dig like I always did, but find it harder to get in and out of the hole like I did with my real leg. Now I take my leg off to get in, but put it back on to get out without getting it dirty. Hell, everything is more difficult.” Taking his time to do things saves Evensen from getting exasperated. “You can move on that way. I can still do things. Not with 100 percent accuracy, but I can still do it. I thought I was done for life, but I found out I was totally wrong.”

Having his prosthesis for only a year, Evensen still dives. “I dive without my prosthesis. I dive spiral now, underwater with tanks, with only one fin. If that’s the only thing it did to me, so be it. I can handle that. I’m just glad I can still do what I love.”
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Prevent and Control Diabetes Through Physical Activity

What can a physically active lifestyle do for me?
Research has shown that physical activity can:
• Lower your blood glucose and your blood pressure
• Lower your bad cholesterol and raise your good cholesterol
• Improve your body’s ability to use insulin
• Lower your risk for heart disease and stroke
• Keep your heart and bones strong
• Keep your joints flexible
• Lower your risk of falling
• Help you lose weight
• Reduce your body fat
• Give you more energy
• Reduce your stress.

Physical activity also plays an important part in preventing type 2 diabetes. A major government study, the Diabetes Prevention Program (DPP), showed that a healthy diet and a moderate exercise program resulting in a 5 to 7 percent weight loss can delay and possibly prevent type 2 diabetes.

What kinds of physical activity can help me?
Four kinds of activity can help. You can try:
• Being extra active every day
• Doing aerobic exercise
• Doing strength training
• Stretching.

Be Extra Active Every Day
Being extra active can increase the number of calories you burn. There are many ways to be extra active, including the following:
• Walk around while you talk on the phone
• Play with the kids
• Take the dog for a walk
• Get up to change the TV channel instead of using the remote control
• Work in the garden or rake leaves
• Clean the house
• Wash the car

• Stretch out your chores (for example, make two trips to take the laundry downstairs instead of one)
• Park at the far end of the shopping center lot and walk to the store
• At the grocery store, walk down every aisle
• At work, walk over to see a coworker instead of calling or e-mailing
• Take the stairs instead of the elevator
• Stretch or walk around instead of taking a coffee break and eating
• During your lunch break, walk to the post office or do other errands.

Do Aerobic Exercise
Aerobic exercise is activity that requires the use of large muscles and makes your heart beat faster. You will also breathe harder during aerobic exercise.
Doing aerobic exercise for 30 minutes a day, most days of the week, provides many benefits. You can even split up those 30 minutes into several parts. For example, you can take three brisk 10-minute walks, one after each meal.

See your doctor first to make sure it’s OK for you to increase your level of physical activity. Talk with your doctor about how to warm up and stretch before exercise and how to cool down after exercise. Then start slowly with 5 to 10 minutes a day. Add a little more time each week, aiming for 150 to 200 minutes per week. You could try:

- Walking briskly
- Hiking
- Climbing stairs
- Swimming or taking a water-aerobics class
- Dancing
- Riding a bicycle outdoors or a stationary bicycle indoors
- Taking an aerobics class
- Playing basketball, volleyball or other sports
- In-line skating, ice skating or skateboarding
- Playing tennis
- Cross-country skiing.

**Do Strength Training**

Doing exercises with hand weights, elastic bands or weight machines two or three times a week builds muscle. When you have more muscle and less fat, you'll burn more calories because muscle burns more calories than fat, even between exercise sessions. Strength training can help make daily chores easier, improving your balance and coordination, as well as your bones’ health. You can do strength training at home, at a fitness center or in a class. Your healthcare team can tell you more about strength training and what kind is best for you.

**Stretch**

Stretching increases your flexibility, lowers stress, and helps prevent muscle soreness after other types of exercise. Your healthcare team can tell you what kind of stretching is best for you.

**Can I exercise any time I want?**

Ask your healthcare team about the best time of day for you to exercise. Consider your daily schedule, your meal plan, and your diabetes medications in deciding when to exercise. If you exercise when your blood glucose is above 300, your level can go even higher. It’s best not to exercise until your blood glucose is lower. Also, exercise is not recommended if your fasting blood glucose is above 250 and you have ketones in your urine.

**Are there any types of physical activity I shouldn’t do?**

If you have diabetes complications, some exercises can make your problems worse. For example, activities that increase the pressure in the blood vessels of your eyes, such as lifting heavy weights, can make diabetic eye problems worse.

If nerve damage from diabetes has made your feet numb, your doctor may suggest that you try swimming instead of walking for aerobic exercise.

Numbness means that you may not feel any pain from sores or blisters on your feet, so you may not notice them. Then they can get worse and lead to more serious problems. Make sure you exercise in cotton socks and comfortable, well-fitting shoes that are designed for the activity you are doing. After you exercise, check your feet for cuts, sores, bumps or redness. Call your doctor if any foot problems develop.

**Can physical activity cause low blood glucose?**

Physical activity can cause hypoglycemia (low blood glucose) in people who take insulin or certain diabetes pills, including sulfonylureas and meglitinides. Ask your healthcare team whether your diabetes pills can cause hypoglycemia. Some types of diabetes pills do not.

Hypoglycemia can happen while you exercise, right afterward, or even up to a day later. It can make you feel shaky, weak, confused, irritable, hungry or tired. You may sweat a lot or get a headache. If your blood glucose drops too low, you could pass out or have a seizure.

You should still have a physically active lifestyle. You should, however, take steps to prepare for hypoglycemia. Ask your
doctor what you can do before, during and after exercise to help prevent or treat hypoglycemia. Following are some general guidelines:

**Before Exercise**
- Be careful about exercising if you have skipped a recent meal.
- If you take insulin, ask your healthcare team whether you should change your dosage before you exercise.

**During Exercise**
- Wear your medical identification or other ID.
- Always carry food or glucose tablets so that you’ll be ready to treat hypoglycemia.
- If you’ll be exercising for more than an hour, check your blood glucose at regular intervals. You may need snacks before you finish.

**After Exercise**
- Check to see how exercise affected your blood glucose level.

**What should I do first?**
Always talk with your doctor before you start a new physical activity program. Ask about your medications (prescription and over-the-counter) and whether you should change the amount you take before you exercise. If you have heart disease, kidney disease, eye problems, or foot problems, ask which types of physical activity are safe for you.

*(inMotion Editor’s Note: A study reported in the May 2005 issue of Diabetes Care suggests that when physicians help plan their diabetic patients’ physical activity and follow up on their behavior, the patients are much more likely to stick to it.)*

**Decide exactly what you’ll do and set some goals.**
Choose:
- The type of physical activity you want to do
- The clothes and items you’ll need to get ready
- The days and times you’ll add activity
- The length of each session
- Your warm-up and cool-down plan for each session
- Alternatives, such as where you’ll walk if the weather is bad
- Your measures of progress.

**Find an exercise buddy.**
Many people find that they are more likely to do something active if a friend joins them. If you and a friend plan to walk together, for example, you may be more likely to do it.

**Keep track of your physical activity.**
Write down when you exercise, and for how long, in your blood glucose record book. You’ll be able to track your progress and to see how physical activity affects your blood glucose.

**Decide how you’ll reward yourself.**
Do something nice for yourself when you reach your activity goals. For example, treat yourself to a movie or buy a new plant for the garden.

**What can I do to make sure I stay active?**
One of the keys to staying on track is finding some activities you like to do. If you keep finding excuses not to exercise, think about why. Are your goals realistic? Do you need a change in activity? Would another time be more convenient? Keep trying until you find a routine that works for you. Once you make physical activity a habit, you’ll wonder how you lived without it.

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**Note:** This article is abridged from a publication titled What I Need to Know About Physical Activity and Diabetes, from the National Institutes of Health (NIH), the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the National Diabetes Information Clearinghouse (NDIC).

*This article is intended for educational purposes only. For specific advice about your care, you should consult a doctor.*
Helping Your Loved One With Diabetes

**Tip 1**
Learn about diabetes.
There is a lot to learn about living well with diabetes. Treatment is changing, and we are learning more every day. You can use what you learn to help your friend or loved one.
- Attend a class.
- Look on the Internet.
- Ask the doctor or nurse how you can learn more.

**Tip 2**
Understand your loved one's diabetes.
Each person's experience with diabetes is different. What things are hard for your loved one to manage? What things are easy?

**Tip 3**
Find out what your loved one needs.
Try asking these three questions:
- What do I do that helps you with your diabetes?
- What do I do that makes it harder for you to manage your diabetes?
- What can I do to help you more than I do now?

**Tip 4**
Talk about your feelings.
Diabetes affects you too. Telling your loved one how you feel can help both of you.

**Tip 5**
Offer practical help.
Instead of nagging, find ways to be helpful. Ask what would help your loved one most.
- Offer to go to the doctor with him or her.
- Take a walk with him or her.
- Cook a tasty and healthful meal to share.

**Tip 6**
Try a new approach.
When things aren't going right, try something new. Find one thing that works and build from there.

**Tip 7**
Get help.
There are people who can help you help your loved one who has diabetes.
- Find a diabetes support group in the health section of your newspaper or on the Internet.
- Ask your healthcare provider about ways to get help if your loved one is sad or depressed.
- Check the resources below for organizations to contact.

**Related Resources**
- **American Association of Diabetes Educators**
  aacnet.org
- **Centers for Disease Control and Prevention**
  cdc.gov/diabetes
- **Eldercare Locator**
  www.eldercare.gov

**Family Caregiver Alliance**
caregiver.org
**Family Caregiving 101**
familycaregiving101.org
**National Diabetes Education Program**
ndep.nih.gov
**National Family Caregivers Association**
fccacares.org
**National Kidney Foundation**
kidney.org
**National Institute of Mental Health**
nimh.nih.gov
**Vascular Disease Foundation**
vdf.org

This article was based on a publication of the National Diabetes Education Program.
Can Brain Games Prevent Cognitive Decline?

Riddle: What is free to all and usable by any, which improves mental awareness and restores memory?

Answer: Oh, you forgot too?

As the American population grays with age, more people are looking for ways to preserve their gray cells. More and more of us are turning to technologies, drugs, diets, exercise regimens or other strategies for warding off mental decline. For those watching loved ones slip into the grip of debilitating diseases such as dementia or Alzheimer’s, the search for something, anything, to forestall the effects is desperate and costly. The market just for brain games for seniors – $225 million in 2007 – is projected to increase to $2 billion by 2015, according to a recent story published by Bloomberg News.

Unfortunately, a panel of experts convened by the National Health Institute recently concluded that the value of measures such as mental stimulation, exercise and diet for preventing cognitive decline and Alzheimer’s disease has yet to be demonstrated in rigorous studies. The panel determined that there is currently no evidence of even moderate scientific quality supporting the association of any modifiable factor – dietary supplements, use of prescription or non-prescription drugs, diet, exercise and social engagement – with reduced risk of Alzheimer’s disease. The evidence surrounding risk reduction for cognitive decline is similarly limited. Limited evidence shows weak associations between many lifestyle choices and reduced risk of Alzheimer’s disease and cognitive decline.

“Alzheimer’s disease is a feared and heartbreaking disease,” says Dr. Martha L. Daviglus, conference panel chair and professor of preventive medicine and medicine at Northwestern University, Chicago. “We wish we could tell people that taking a pill or doing a puzzle every day would prevent this terrible disease, but current evidence doesn’t support this.”

However, the outlook for combating mental decline isn’t wholly bleak. The panel’s assessment of the available evidence revealed that inconsistent definitions of what constitutes Alzheimer’s disease and cognitive decline limit progress to understand how the onset of these conditions might be delayed or prevented. Other factors include an incomplete understanding of the natural history of the disease and limited understanding of the aging process in general. The panel recommended that the research community and clinicians collaborate to develop, test and uniformly adopt objective measures of baseline cognitive function and changes over time.

Thus, the panel’s conclusion doesn’t mean that these measures don’t work – only that results so far are inconclusive. And other studies demonstrate that mental stimulation, social interaction, diet and exercise do help keep minds sharp and offer benefits for good health overall. Therefore, it’s best to develop good habits of eating sensibly and engaging your body and brain in a variety of activities before you reach a point at which you are concerned about cognitive decline. However, given the panel’s conclusions, it’s probably best to look for inexpensive means of doing so rather than buying pricey dietary supplements, drugs, gadgets and games that promise to reverse the effects of the brain’s aging.

One important point other studies reveal is that simply engaging in the same games or exercises won’t help you stay mentally sharp. If, for instance, you’ve enjoyed doing crosswords since you were a child, then continuing to do crosswords as you age won’t provide the challenge your brain needs to stretch itself. You’ll simply be reusing mental tools you’ve already mastered.

So, if you like crosswords, word jumbles, Scrabble and the like, you need to try something different, perhaps numbers puzzles like Sudoku or cryptograms. Spatial relations game enthusiasts can try...

Contact the Amputee Coalition at 888/267-5669 or amputee-coalition.org
logic and strategy challenges, word association games, trivia and so forth. For cost-effective brain stimulation, simply go online. Many free mental games can be found at Web sites such as games.aarp.org and onlinegamesforseniors.com. Searching Google for "brain games seniors online" reveals hundreds, perhaps thousands, more.

Of course, games are not the only way to challenge your brain. Trying anything new can stimulate different parts of the brain. Reading books covering subject matter with which you are unfamiliar; finding new paths home from work; taking classes in art or music; trying new hobbies; socializing in new places with unfamiliar faces – any of these activities can offer your brain stimulation that can help your mental acuity.

And while a healthy diet and a sensible exercise plan may not stave off dementia or Alzheimer's, they do help prevent chronic diseases such as diabetes and depression. This is important, because the panel also found that chronic diseases and risk factors such as smoking are associated with increased risks of both Alzheimer's disease and cognitive decline. That doesn't mean these chronic diseases or smoking cause Alzheimer's or cognitive decline, only that they are related – correlation is not causation. However, that correlation ought to be sufficient motivation to stop smoking, eat right and exercise.

Even if there's currently insufficient evidence to prove that mental stimulation, socializing, diet and exercise can help prevent Alzheimer's and dementia, don't we already know that these pursuits are good for us? Certainly, they aren't going to hurt. For overall health, it's important to keep challenging our brains and our bodies in new and different ways.

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Learn more.

Connect more.
EmpoweringAmputees.org

Introducing an online community for people affected by amputation and limb deficiency. Password-protected and monitored for your safety. If you’ve been there, you should be here.
What Is a Diabetic Foot Ulcer?
A diabetic foot ulcer is an open sore or wound that occurs in approximately 15 percent of patients with diabetes, and is commonly located on the bottom of the foot. Of those who develop a foot ulcer, 6 percent will be hospitalized due to infection or other ulcer-related complication.

Diabetes is the leading cause of nontraumatic lower-extremity amputations in the United States, and approximately 14 to 24 percent of patients with diabetes who develop a foot ulcer have an amputation.

Research, however, has shown that the development of a foot ulcer is preventable.

Who Can Get a Diabetic Foot Ulcer?
Anyone who has diabetes can develop a foot ulcer. Native Americans, African Americans, Hispanics and older men are more likely to develop ulcers. People who use insulin are at a higher risk of developing a foot ulcer, as are patients with diabetes-related kidney, eye and heart disease. Being overweight and using alcohol and tobacco also play a role in the development of foot ulcers.

How Do Diabetic Foot Ulcers Form?
Ulcers form due to a combination of factors, such as lack of feeling in the foot, poor circulation, foot deformities, irritation (such as friction or pressure) and trauma, as well as duration of diabetes. Patients who have diabetes for many years can develop neuropathy, a reduced or complete lack of the ability to feel pain in the feet due to nerve damage caused by elevated blood glucose levels over time. The nerve damage often can occur without pain and one may not even be aware of the problem. Your podiatric physician can test feet for neuropathy with a simple and painless tool called a monofilament.

Vascular disease can complicate a foot ulcer, reducing the body’s ability to heal and increasing the risk for an infection. Elevations in blood glucose can reduce the body’s ability to fight off a potential infection and also retard healing.

What Is the Value of Treating a Diabetic Foot Ulcer?
Once an ulcer is noticed, seek podiatric medical care immediately. Foot ulcers in patients with diabetes should be treated for several reasons, such as reducing the risk of infection and amputation, improving function and quality of life and reducing healthcare costs.
How Should a Diabetic Foot Ulcer Be Treated?
The primary goal in the treatment of foot ulcers is to obtain healing as soon as possible. The faster the healing, the less chance for an infection.

There are several key factors in the appropriate treatment of a diabetic foot ulcer:
• Preventing infection
• Taking pressure off the area, called “off-loading”
• Removing dead skin and tissue, called “debridement”
• Applying medication or dressings to the ulcer
• Managing blood glucose and other health problems.

Not all ulcers are infected; however if your podiatric physician diagnoses an infection, a treatment program of antibiotics, wound care and possibly hospitalization will be necessary.

There are several important factors to keep an ulcer from becoming infected:
• Keep blood glucose levels under control
• Keep the ulcer clean and bandaged
• Cleanse the wound daily, using a wound dressing or bandage
• Do not walk barefoot.

For optimum healing, ulcers, especially those on the bottom of the foot, must be “off-loaded.” Patients may need to wear special footgear, or a brace, specialized castings or use a wheelchair or crutches. These devices reduce pressure and irritation to the ulcer area and help the healing process.

The science of wound care has advanced significantly over the past 10 years. The old thought of “let the air get at it” is now known to be harmful to healing. We know that wounds and ulcers heal faster, with a lower risk of infection, if they are kept covered and moist. The use of full-strength betadine, peroxide, whirlpools and soaking are not recommended, as this could lead to further complications.

Appropriate wound management includes the use of dressings and topically applied medications. These range from normal saline to advanced products, such as growth factors, ulcer dressings, and skin substitutes that have been shown to be highly effective in healing foot ulcers.

For a wound to heal, there must be adequate circulation to the ulcerated area. Your podiatrist can determine circulation levels with noninvasive tests.

Controlling Blood Glucose
Tightly controlling blood glucose is of utmost importance during the treatment of a diabetic foot ulcer. Working closely with a doctor or endocrinologist to accomplish this will enhance healing and reduce the risk of complications.

Surgical Options
A majority of noninfected foot ulcers are treated without surgery; however, when this fails, surgical management may be appropriate. Examples of surgical care to remove pressure on the affected area include shaving or excision of bone(s) and the correction of various deformities, such as hammertoes, bunions or bony “bumps.”

Healing Factors
Healing time depends on a variety of factors, such as wound size and location, pressure on the wound from walking or standing, swelling, circulation, blood glucose levels, wound care and what is being applied to the wound. Healing may occur within weeks or require several months.

How Can a Foot Ulcer Be Prevented?
The best way to treat a diabetic foot ulcer is to prevent its development in the first place.

Recommended guidelines include seeing a podiatrist on a regular basis. He or she can determine if you are at high risk for developing a foot ulcer and implement strategies for prevention.

You are at high risk if you:
• Have neuropathy
• Have poor circulation
• Have a foot deformity (e.g., bunion, hammertoe)
• Wear inappropriate shoes
• Have uncontrolled blood sugar.

Reducing additional risk factors, such as smoking, drinking alcohol, high cholesterol and elevated blood glucose, are important in the prevention and treatment of a diabetic foot ulcer. Wearing the appropriate shoes and socks will go a long way in reducing risks. Your podiatric physician can provide guidance in selecting the proper shoes.

Learning how to check your feet is crucial in noticing a potential problem as early as possible. Inspect your feet daily – especially between the toes and the sole – for cuts, bruises, cracks, blisters, redness, ulcers and any sign of abnormality. Each time you visit a healthcare provider, remove your shoes and socks so your feet can be examined. Any problems that are discovered should be reported to your podiatrist as soon as possible, no matter how “simple” it may seem to you.

The key to successful wound healing is regular podiatric medical care to ensure the following “gold standard” of care:
• Lowering blood sugar
• Appropriate debridement of wounds
• Treating any infection
• Reducing friction and pressure
• Restoring adequate blood flow.

The old saying “An ounce of prevention is worth a pound of cure” was never as true as it is when preventing a diabetic foot ulcer.

Article reprinted courtesy of the American Podiatric Medical Association (apma.org).
Amputation, one of the most devastating and costly consequences of diabetes, can be prevented when patients are treated by podiatric physicians.

That’s the finding of a national, large-scale study co-authored by Dr. James Wrobel, DPM, MS, associate professor of medicine at Rosalind Franklin University of Medicine and Science. He is also director of the Center for Lower Extremity Ambulatory Research (CLEAR) at the university’s Dr. William M. Scholl College of Podiatric Medicine. CLEAR is recognized for its work in treating and preventing lower-extremity complications associated with diabetes.

“More than half of all amputations in the U.S. are related to diabetes,” says Wrobel. “Podiatrists are detecting conditions that can lead to amputation. That’s just what we do.”

The first of its kind, the study examined records for almost 29,000 patients with diabetes, ages 18-64, and compared health and risk factors for those who had seen podiatrists to those who had not. Researchers found that podiatric care – defined as at least one podiatrist visit before a foot ulcer was diagnosed – was associated with a nearly 15 percent lower risk of amputation and 17 percent lower risk of hospitalization.

The study, funded by the American Podiatric Medical Association (APMA), used Thomson Reuters’ MarketScan Research Databases, which contain anonymous healthcare claims data.

“We statistically matched patients with diabetes and foot ulcers who had visited a podiatrist with like patients who had not,” says lead researcher Teresa Gibson, PhD, director of health outcomes research at Thomson Reuters. “Patients who had seen a podiatrist in the year prior to the onset of a foot ulcer had significantly lower rates of any amputation and 17 percent lower risk of hospitalization.

The large quantity of data and the precision of the data matching make the study findings more robust.

“We found people who looked very similar to each other, and we were able to observe the outcomes were due to podiatric care rather than something else distorting the data,” Wrobel says. “This is a very strong study; as it was conducted in patients already having a foot ulcer, and it highlights the podiatrist’s role in preventing hospitalizations due to infection and in preventing amputations if a foot ulcer develops.”

Diabetic foot complications are the leading cause of nontraumatic lower-limb amputation in the U.S., a lapse in prevention that costs an estimated $3 billion per year. The Centers for Disease Control and Prevention estimates that 24 million Americans have diabetes, and 86,000 undergo amputations each year.

Podiatrists diagnose and treat foot problems, which may be the first area to show symptoms of serious conditions like diabetes, arthritis and heart disease. People with diabetes are prone to foot infections and ulcers because of poor circulation and neuropathy (loss of physical sensation).

Podiatrists can spot problems like calluses, blisters or ill-fitting shoes before a hard-to-heal sore develops.

The study, presented July 2010 during APMA’s Annual Scientific Meeting in Seattle, adds to the body of evidence that shows that including podiatry in a multidisciplinary, coordinated effort to treat diabetes could prevent up to 50 percent of related amputations and the pain, depression and loss of quality of life that often follow.

Wrobel points to the conclusion of the study and numerous smaller studies that preceded it that show expert podiatric care not only saves limbs but possibly lives as well, given that the 5-year survival rate after an amputation is poorer than with many cancers.

Wrobel emphasizes the need for coordinated patient care and communication among healthcare providers. “The delivery of healthcare in this country happens too often in isolated pods – insurance companies, managed care providers, fee-based care,” he says. “There has been very little patient advocacy. Problems with diabetes are too pervasive for care not to be more coordinated. We’re beginning to see it now, bubbling up from patient frustration.”

However, in 10 states, according to Chad Appel, APMA state advocacy associate, Medicaid programs do not reimburse for podiatric care, including California, Michigan and Arizona, where Native American populations suffer higher rates of diabetes and related complications.

“Budgets are hurting, and they have to look for somewhere to cut, and right now, podiatric care is an optional service under Medicaid,” Appel says.
Can an Ugly Toenail Predict Amputation?

Nearly three in four people with diabetes at high risk for amputation have diseased toenails. This is one of the findings of a recent study coauthored by Drs. Stephanie Wu and David G. Armstrong of Scholl’s Center for Lower Extremity Ambulatory Research (CLEAR) at Rosalind Franklin University.

“This study is something of a confirmation of what many have felt, but the ubiquity of the results is something of an eye-opener,” notes Dr. Wu. “It appears that if you have certain pre-existing risk factors for amputation coupled with a clinically diseased nail, chances are you have a significant fungal infection based on laboratory cultures. It is our hope that this study will assist us in making more rapid assessments and embark on much-needed therapy for these high-risk patients.”

Skin Temperatures Can Predict Limb-Threatening Wounds in Amputation-Prone Diabetics

A study performed by researchers from universities in Texas and Chicago concludes that potentially limb- and life-threatening wounds in people with diabetes can be successfully prevented with a novel prevention tool. The TempTouch is an infrared thermometry device designed by Xilas Medical (San Antonio, Texas), in conjunction with international diabetic foot experts. High-risk patients demonstrated more than a four-fold reduction in foot ulcers compared to traditional prevention therapies.

“Wounds will heat up before they break down,” notes Dr. David G. Armstrong, professor of surgery at Scholl’s Center for Lower Extremity Ambulatory Research (CLEAR) at Rosalind Franklin University of Medicine and Science. “People with diabetes develop these wounds often without knowing it, so a little forewarning can save a lot of pain and suffering down the road.”

Dr. Lawrence A. Lavery, professor of surgery at Texas A&M University and the study’s principal investigator, agrees. “Identifying areas of high temperatures allows patients to identify inflamed areas before the wound occurs. By preventing the wound, we can prevent the amputation that might otherwise occur in the future.”

This study was reported in the journal Diabetes Care. For more information, visit diabetic-foot.net.
New Treatment Option to Increase Blood Flow to Feet and Hands

If you have diabetes or peripheral arterial disease (PAD), wouldn’t it be great if you could think your way to healthier feet? It may be possible, thanks to the WarmFeet® Intervention technique developed by Birgitta Rice, MS, RPh, CHES, a clinician and certified health education specialist at the University of Minnesota Epidemiology Clinical Research Center. The technique uses biofeedback to harness the body’s natural healing power and improve blood flow to the hands and feet for those suffering from poor circulation.

Rice and colleagues, then at University of Wisconsin, conducted a randomized, controlled study to determine the effect of biofeedback-assisted relaxation training on foot ulcer healing, comparing a group of subjects who learned the technique to a group that did not. In the group that learned the relaxation technique, 14 out of 16 ulcers (87.5 percent) healed completely within 12 weeks, compared to 7 out of 16 (43.75 percent) in the control group that did not learn the technique. Supported by findings like these, Rice developed the WarmFeet® Intervention.

With biofeedback, people use measured information about changes in bodily processes to gain conscious control over normally unconscious physiological functions (such as skin temperature). With WarmFeet®, assisted thermal biofeedback means measuring skin temperature at a specific site (such as the fleshy part of a finger or the big toe) before relaxation and then again afterward. This before-and-after setup allows the relaxation time to be spent relaxing rather than worrying about temperature change.

Visualization, another component of the WarmFeet® technique, allows feet to feel even warmer or more at ease, by forming a mental image of comfort or warmth around your feet. Visualization is often used in stress reduction and self-healing, playing a successful role in the treatment of various illnesses. It is particularly effective when the body is in a relaxed state, which biofeedback can help induce.

The WarmFeet® technique is designed to improve blood flow to the hands and feet and thereby significantly increase healing of chronic foot ulcers and pain relief in patients with diabetes and/or PAD. It may also help improve blood flow so that enough blood is flowing to an amputation site to ensure adequate healing.

Researchers say the technique is easy to learn and follow as well as being noninvasive, non-pharmaceutical and cost-effective. Health professionals can quickly learn to train patients with diabetes or PAD and at risk for vascular complications to practice the WarmFeet® technique. For healthier patients, it can serve as a means of self-help complementary to the podiatric and medical care they are receiving.

See further information at WarmFeetKit.com.
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– Linda Lyons

“Previously all of the soft tissue in the residual limb would move in the socket. In this new technology, there’s no more slushy skin. I have more freedom of movement and more stability and better control of my arm. I want to wear my prosthesis now. It is the greatest invention in prosthetics in the last 100 years!”
– Chuck Hildreth

“I found it difficult to participate in my favorite sport, rowing, because my prosthesis would slip off and I would lose grip on the oar. But after being fit with the HiFi, I was able to rejoin crew. It feels more like a part of my body.”
– Michael Hart

“My ability to move is much better. It doesn’t feel like I’m carrying something. The HiFi is a part of me. It’s solid; it has me. And it’s a wonderful thing!”
– Terrance Wortham

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*Based on commercially available prosthetic sockets.
The first rule of shoe selection for amputees is to consider the cause of amputation. If the amputation was the result of diabetes, then protecting the sound foot is of paramount importance.

Diabetes

Uncontrolled diabetes and the resulting high blood sugar levels lead to nerve degeneration, or neuropathy. This loss of feeling usually starts at the extremities, in the hands and feet, so particular attention needs to be paid to any wounds or lesions that may begin to develop there. Because of the repetitive stresses and constant weight on the feet during walking, the foot is the main site for ulceration for patients with peripheral neuropathy. It is also difficult to heal these foot ulcers because most patients want to remain active and prefer not to sit around waiting for wounds to close.

Recognizing the importance of protecting these “at-risk” feet (and avoiding costly amputations), Congress enacted the Medicare Therapeutic Shoe Bill in 1993 to provide proper footwear and inserts for people with diabetes who qualify under Medicare Part B. The program was designed to prevent lower-limb ulcers and amputations in people who suffer from the disease. Eligible patients qualify for one pair of shoes, plus extra pairs of inserts and/or shoe modifications, for each calendar year.

These facts set the stage for many of the extra-depth and therapeutic shoes available on the market today. In response to the need for protective footwear, many pedorthic shoe manufacturers developed products with removable insoles, extra cushioning, seamless and stretchable uppers and wide supportive soles.
Shoe Selection
The first rule of shoe selection for amputees is to consider the cause of amputation. If the amputation was the result of diabetes, then protecting the sound foot is of paramount importance. This is also true for people without diabetes if they have any similar symptoms such as nerve damage, poor circulation or a history of ulcers. In these situations, protection becomes the overriding concern.

Certified pedorthists are trained to first look for the correct fit and function in a shoe, and only then do they consider cosmetics. Proper shoe fit begins with measuring foot size: both feet (if you are not an amputee) and each time you need a new pair. Swelling, weight gain and aging can all play a role in foot size and determining the appropriate shoe.

Good shoes are not too rooomy or too tight. Big shoes will not hold the foot in place and they allow sliding inside, which potentially leads to “jamming” of the toes or shearing, which can irritate the skin. Conversely, shoes that are too small will reduce circulation or may cause blisters. In addition, good shoes will have firm counters (the stiffer portion at the back of the shoe) to help stabilize the heel and supportive soles that provide shock absorption. Sometimes the sole may be a little wider, or flared; this provides a broader base to control the motion of the foot as you walk.

When necessary, as determined by a medical professional, you may need a customized insole or a custom orthotic for the shoe. This will replace the removable inlay. Having a custom insole molded to the bottom of your foot will help even out the pressure and relieve points of irritation.

Partial-Foot Amputations and Toe Fillers
Sometimes, despite the best of intentions and efforts, nothing can be done to prevent the advancement of wounds and ulcers. To limit further and far more serious complications, the best option, at times, is to amputate. Though some amputations may require a prosthetic device, many foot amputations remove only a small part of the foot or a single toe.

These partial amputations do not require full prosthetic devices. However, patients can benefit from a toe filler that mimics and replaces the portion that has been removed. Good fillers may allow patients to continue wearing their existing wardrobe of footwear, and cosmetic acceptance can often be a big part of getting beyond the surgical loss. Without a toe filler, the foot may have too much room and slide inside the shoe; or the upper shoe may crumple or collapse at the site of the missing digit or digits. Toe fillers can be made from a variety of materials, such as foam or cork, and are often incorporated onto custom foot orthoses. They can then be moved from shoe to shoe.

Shoes for Prosthetic Feet
As previously stated, the No. 1 consideration for patients with a full prosthetic foot is to preserve and protect the remaining foot. If the “good” foot is in danger of breakdown, the patient needs to consider extra-depth shoes (as discussed above) or perhaps even a custom molded shoe. A custom molded shoe is made from a plaster cast of the patient’s foot. It is specifically designed and constructed with a custom insole to enclose the foot without any restrictions. Some patients are concerned with cosmetics, so custom shoes are often made for both the good foot and the prosthetic to provide a matching pair.

If the patient has a prosthetic foot, and there are no other health concerns for the good foot, it can still be difficult to get the right shoes. Sometimes, patients have to consider buying two pairs of the same style shoes just to get the proper fit on each foot. Listed below are Web sites and services that help prosthetic wearers exchange single shoes to avoid these extra expenses:

- Oddshoefinder.com
- National Odd Shoe Exchange
  408/892-3484
  oddshoe.org

Choosing the right shoes is an important aspect of overall health. Active patients feel better, respond better to treatment and tend to do better in the long run. Pedorthists have a passion for footwear, and they will be delighted to help patients find the right fit and function.

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Endocrinologists treat diseases affecting the glands and complex conditions that involve many systems within the body. The endocrine system includes the pancreas, a gland that produces the hormone insulin. Insulin helps regulate carbohydrates and fats in the body. When production of insulin fails, diabetes will result.

David Calder, MD, a retired endocrinologist, treated diabetes patients for many years and is at risk for diabetes himself. He recently published a book, The Diabetes Office Visit, and developed an iPhone application to help people with diabetes manage the disease.

Q. In your book, you use the concept of Greyhound Bus vs. Hertz Car Rental style doctor’s visits. Which style does someone with diabetes need to choose?

The old Greyhound slogan was “Sit back, relax and leave the driving to us”; the Hertz approach is “We put you in the driver’s seat.” Most diabetes care is done by the person with diabetes, so it’s Hertz. Many people would prefer the Greyhound approach, which works for almost everything else in medicine. When you see a doctor about chest pain, the doctor takes charge. With diabetes, the doctor and diabetes educators provide the patients with the tools, but it’s up to each of us as patients to use those tools.

Q. What foods contain carbohydrates, and why is controlling your carbohydrate portion size important?

Fruits, vegetables, grains – anything we eat that grows out of the ground has carbohydrates in it. Milk has carbohydrates, too. Controlling portion size is crucial, because what’s important is not just what we eat but how much. Everyone with diabetes has insulin deficiency. If you have type 2 diabetes and make enough insulin to cover the carbohydrates in a half cup of cereal, your blood glucose will stay normal if you eat that half cup. If you eat 1 cup, then your blood glucose will be too high. Failure to monitor portion size causes many of the problems with controlling our glucose level and our weight.

Q. You recommend keeping detailed records of blood sugar testing, diet (especially carbohydrate intake), exercise and medication. Why is this so important?

One goal in diabetes treatment is controlling the A1C hemoglobin – it’s an average of the blood sugars over the last 2-3 months. This A1C hemoglobin correlates closely with the risk of microvascular complications (eye, nerve and kidney damage). Tracking your blood glucose levels on a daily basis helps you and your doctor decide what treatment is needed to preserve your good health.

But people have trouble with record-keeping; many will just bring in their blood sugars on a scrap of paper. The book and iPhone application show how to collect and present the most useful data for making decisions about your treatment. The book has a sample form with examples of how to record your blood glucose results, carbohydrate intake, exercise and medications.

Q. Based on your experience, most of us will not stay on a diet all of the time. Why does this make maintaining portion size important?

People with diabetes need to recognize the amount of carbohydrates that matches their body’s ability to produce insulin. Recording your carbohydrate intake will help you be consistent, but it’s difficult to do all the time. Company comes, you go on vacation – these interruptions in routine can result in blood glucose level changes. If you’ve had a disruption to your routine and then find your blood glucose levels are high, the first thing to determine is if it’s food-related. That’s when you focus on carbs. Start recording your glucose test results again and start reading the labels and checking what’s in your foods.
Q. How would you characterize patients who are most successful at keeping diabetes under control?

People who accept that they actually are in charge and set management goals and work to achieve them are successful. Wayne Gretzky said, “You miss 100 percent of the shots you don’t take.” In diabetes, you fail to achieve 100 percent of the goals you don’t set.

Many people tend to focus attention on glucose control and forget that heart disease is about four times more common in someone with diabetes. Heart disease risk can be significantly reduced with aggressive management of blood pressure and lipids (LDL cholesterol [low-density lipoprotein, the “bad” cholesterol], triglycerides and HDL cholesterol). You should have treatment goals for those factors. Also, consult with your doctor about setting goals for other risk factors that will help you reduce the risk or even prevent the complications of diabetes, including heart disease.

Q. Have you seen patients who successfully reversed the risk of diabetes?

Me, I hope! I am doing my best to reach my target goals. Controlling my waist circumference and weight is the most difficult. Things that I can just take a pill for are much easier to accomplish. My LDL was 132 mg/dl (milligrams per deciliter), and now it’s 74 mg/dl thanks to a low-fat Mediterranean-style diet and Zocor.

I have seen others be successful. For many people with type 2 diabetes, weight loss removes some of the resistance to insulin so they don’t have to produce as much of it. Losing weight and exercising can slow the progression of type 2 diabetes.

Q. How will your iPhone/iPad/iPod application help people manage their diabetes?

You can have everything about your diabetes — your goals, your glucose diary, your lab tests, the book to consult — at your fingertips 24 hours a day. And the app is not just for people with diabetes. It’s designed for everyone who needs to track their labs — and that means all of us, because we are all at risk of heart disease.

A new video discussing the Diabetes Office Visit app’s features can be seen at diabetesofficevisit.com.

For more information, contact Dr. Calder at dcalder@diabetesofficevisit.com.

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The majority of people with limb loss or difference have an active and satisfying quality of life. Approximately 68 to 88 percent of amputees wear a prosthesis at least 7 hours a day to aid in mobility and performing everyday activities. The vast majority of amputees who use a prosthesis tend to walk with at least one deviation or problem as a result of improper prosthetic fit or alignment, lack of proper gait training, development of poor habits or compensation for a physical limitation. As a result, an increased load or weight is often placed on the intact limb due to the altered walking pattern, which in turn often causes discomfort or pain in the joints and may result in some form of degenerative joint disease or disability. Three of the most common secondary complications in lower-limb amputees due to compensatory and/or altered stresses are osteoarthritis, osteoporosis and back pain.
Osteoarthritis is the most common form of arthritis. It causes pain, swelling and reduced motion in the joints as the result of a breakdown of the cartilage in the joints. Cartilage is the slippery, shock-absorbing padding that covers the end of the bones in the joint. About 20 percent of the general population has osteoarthritis of the knee or hip due to age, excess weight or joint injuries. Research indicates that 40 percent of people with a single below-knee amputation have osteoarthritis in the sound (intact) knee. Even worse, 60 to 75 percent of people with an above-knee amputation have osteoarthritis in the sound knee. A recent study reported that 80 percent of people who have used a prosthesis for more than 45 years will have knee pain. Osteoarthritis in the sound side hip occurred in about 45 percent of below-knee amputees and 73 percent of above-knee amputees within an average of 47 years after the amputation. An average of 18 percent of all amputees had osteoarthritis in the amputated side hip.

Osteoporosis is a condition where bone density is decreased, increasing the risk of fractures. In the general population, 10 million people have osteoporosis and another 34 million people are at risk – 68 percent of these combined groups are women. Risk factors include family history, gender (women are at greater risk), age, low calcium, smoking and not getting enough physical activity. For people with limb loss, the reduction in weightbearing through the bones on the amputated side limb becomes an additional risk factor. In fact, 80 to 90 percent of all long-term prosthetic users have a reduction of approximately 30 percent in bone density in the amputated side hip. There appears to be a relationship between amputees’ age at the time of amputation and the time they were examined by the doctor. However, there was no correlation to bone density with residual limb length or the length of time after amputation. Additionally, no research suggests that people with limb loss experience a greater number of hip fractures than the general population.

Low back pain is very common in the general population. It is estimated that 70 to 85 percent of all people experience back pain at some point during their life, and 15 to 45 percent report having back pain each year severe enough to prevent normal activity. People with limb loss have been found to have significantly more low back pain. Approximately 50 to 60 percent of amputees will have moderate to severe back pain. The majority of people with limb loss experience back pain within 2 years after their amputation.

Although the information presented in this article may suggest that the loss of a limb will result in a lifetime of medical problems, studies show that the majority of amputees who lose a limb early in life go on to live long and productive lives. The new generation of people with limb loss positively appears to have higher expectations concerning their performance of daily tasks and recreational activities. They want to work, play and live life without limitations, enjoying the benefits that can come with increased activity, such as better general health and overall well-being. However, as activity increases and is sustained over time, there should be a concern for long-term effects to the body. For example, will amputees who are more active during their youth and early adulthood pay the price in later years with respect to increased risk of degenerative joint changes to the sound limb, the remaining joints of the amputated limb, or the spine? Although the risk of degenerative joint disease and low back pain does increase after amputation, there is little evidence to suggest that the amount or type of activity increases the risk of secondary conditions after amputation. Therefore, it is suggested that prevention is the best treatment for those who will be using a prosthesis for many years.

The 10 steps listed on this page are suggestions that you may follow to help reduce the risk of complications related to limb loss.

1. Be sure that your prosthesis fits correctly at all times.
2. Be sure that your prosthesis and sound limb are of equal height; avoid having your prosthesis shortened.
3. Walk with an equal width of walking base and don’t favor your sound leg.
4. Avoid hopping excessively on your sound limb when not using your prosthesis. Use crutches around the house when not wearing your prosthesis.
5. Stand with equal weight distributed between limbs; avoid favoring your sound limb.
6. Maintain good posture while sitting or standing.
7. If pain is present, use a cane to reduce excessive stress to the knee or back.
8. Maintain a nutritious diet and retain your appropriate body weight.
9. Exercise regularly, incorporating a strengthening, stretching and cardiovascular endurance program, with your doctor’s permission.
10. Maintain a regular appointment schedule with your doctor, prosthetist and physical therapist.

Related Resources

Bone Health and Osteoporosis
Chapter 4: The Frequency of Bone Disease
surgeongeneral.gov/library/bonehealth/chapter_4.html

Osteoarthritis and You
cdc.gov/Features/OsteoarthritisPlan

Review of Secondary Physical Conditions Associated With Lower-Limb Amputation and Long-Term Prosthesis Use
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Preventing Contractures

by Nicholas LaRaia, PT, DPT, NCS

The most important point in any discussion of contractures is that prevention works best. However, if a contracture does develop, there are many approaches to treatment. The best results are usually obtained through a combination of approaches, but one of the most important elements is an active exercise program.

What are contractures?
Contractures are the permanent or semi-permanent restriction of movement of soft tissues due to shortening and/or structural changes in the connective tissues of the body. Sometimes the normally elastic or stretchy tissues are replaced by stiff, fibrous tissue; this can be in skin, muscles, tendons and ligaments. When these soft tissues surrounding the joints in the body become shortened or inelastic, a joint contracture develops that can severely limit the motion of the joint or even freeze it in one position. This occurs for a variety of reasons. Nerve damage or neurologic disease paralyzes muscles; injuries or burns will cause inelastic scar tissue; and immobilization for prolonged periods such as casting after fracture or surgery will allow structural changes and shortening to take place. Often, just inactivity due to illness or to pain in joints will reduce the range of joint motion through the changes noted above.

Why are contractures a problem for amputees?
Contractures can so severely limit joint motion that general mobility and function are affected. When joint motion is restricted, the limbs or residual limbs of an amputee cannot move through the motion they need for function and regular activity. If a below-knee (BK) amputee has a knee flexion contracture, fitting a prosthesis is difficult. If a prosthesis can be fitted, standing on it with the knee bent requires much greater muscle power and causes much quicker fatigue than standing with the legs straight. Anyone can experience this by trying to stand for 5 minutes while keeping the knees bent. The same is true for an above-knee (AK) amputee with a hip flexion contracture. A hip flexed beyond 15 degrees makes fitting a prosthesis difficult. If a prosthesis can be fitted, standing with a normally straight spine becomes impossible and even more fatiguing because the hip muscles also attach to the spine. Many AK amputees with hip flexion contractures will likely always need a walker so they can relieve some of the strain from their flexed backs by putting weight on their hands.

Now let’s talk about actually making some steps. When the BK amputee with a knee contracture attempts to step with the prosthesis, he or she cannot swing his lower leg out in front of him or her, forcing a shorter step and a much more inefficient gait. Most amputees will already make a shorter step with the intact limb (if they have one). This forces the amputee to try to make steps by twisting the trunk to step out farther, exacerbating what is probably already a sore and tired back. The AK amputee with a hip contracture will not be able to use the prosthetic limb to propel himself or herself forward because he or she cannot push the hip back. Watch people walk, or look at a picture of people in motion and you can see how the hip normally extends out behind them. When the hip is limited to a flexed forward position, the natural rhythmic left-right propulsion of stepping is lost. A study from

Contact the Amputee Coalition at 888/267-5669 or amputee-coalition.org
the University of Pittsburgh showed that when all factors were considered, the absence of joint flexion contractures was the most important predictor of successful early prosthetic use. Upper-extremity amputees will have a difficult time reaching forward to grasp or hold objects if they cannot extend the elbow or reach up with the shoulder. Normal activities that require both hands cannot be performed. This can affect dressing, cooking, grooming or eating.

**What can amputees do to prevent contractures?**

Prevention is certainly the best approach to dealing with contractures because they are extremely difficult to stretch out once they develop. Unfortunately, most amputees have spent a lot of time trying to salvage a limb or confined to bed with multiple medical problems before the amputation surgery itself. Limited time spent up and normally moving about is the likely cause of most contractures. Lying in a hospital bed with the head of the bed up and the knees bent up or pillows under the knees is a sure way to induce contractures at the hips and knees. Similarly, lying in bed with the elbow bent up on the chest will result in a contracture at the elbow. Some studies have indicated that at least 5 to 6 hours of activity per day is required to maintain normal joint motion, regardless of time spent stretching every day. Stretching can certainly help, but activity and exercise are even more important for maintaining joint range of motion, especially when someone is limited to bed activity or wheelchair activity. A physical or occupational therapist can be very creative in developing an exercise and activity program in such a restricted setting.

**How can amputees manage or get rid of contractures once they have them?**

Stretching out contractures can be very difficult to impossible. How tissues elongate and what mechanisms can facilitate this are not well-understood. Therapists can manually stretch contracted joints, amputees can self-stretch and static splints and spring-loaded dynamic splints have been used. Even a process called serial casting has been used to stretch out contracted joints. A series of casts is applied to the contracted joint (serial casting), each one stretching out the joint more than the last one over time. This works much more easily with distal joints such as ankles, knees, wrists and elbows, but not so easily for hips and shoulders. The process is lengthy, uncomfortable and even more restrictive, as the cast itself is heavy and bulky. Other techniques use heat with stretching. One study showed that ultrasound treatment added to prolonged stretching worked better than prolonged stretching by itself.

It takes lots of time and hard work to stretch out a contracted joint, and stretching alone won't get it done. It is very important that active exercises are used along with stretching for more sustained rather than temporary increases in joint range of motion. Consult a physical therapist for appropriate exercises, activities, and a stretching regimen to improve joint movement.

**Are orthotic devices useful?**

Orthoses and static and dynamic splints can help limit contractures at the ankles, knees or elbows when a person is confined to a bed or chair for a long time. A common contracture at the ankle is the "foot-drop" position, and this can be avoided with night splints. These devices can also help stretch out already contracted joints, but the emphasis is on "help stretch," since it takes active exercise in addition to splints or orthoses to increase the motion in a restricted joint. In fact, some research shows that exercise alone is more important than the prolonged stretching provided by a dynamic splint in stretching a contracture. 🧘‍♂️
“You can't start the thousand mile journey without taking that first step, and that's what A Step Ahead Prosthetics has given me: The first step.”

Corporal Christopher Levi  
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Double Above Knee Amputee  
Purple Heart Recipient
Last year, in response to findings from a membership survey, the Amputee Coalition changed its mission to include an emphasis on limb-loss prevention. Although the majority of amputations result from diabetes and its complications, such as peripheral arterial disease (PAD), mishaps related to many work and recreational activities may lead to amputation as well. Additionally, some behaviors can leave you at greater risk for diabetes and its complications, including limb loss. Recognizing what puts us at risk for amputation is a necessary first step toward prevention.

Lawn Mower Accidents: Leading Cause of Major Amputations for Young Children
Lawn mower accidents cause serious injuries to legs, arms, fingers, toes or other body parts. Studies show that nearly 80,000 Americans are injured by a lawn mower each year. Lawn mower-related injuries account for more than 51 percent of traumatic amputations among children. For children under age 10, major limb loss is most commonly caused by lawn mowers. More than 600 children undergo mower-related amputations each year.

Make lawn mower safety a priority this summer. Your mower is a dangerous and potentially deadly piece of equipment. By following just a few safety measures before you mow, you can avoid life-altering accidents.

The Amputee Coalition offers these safety guidelines:
- Never allow children to play on a lawn mower, even if it is turned off, or to ride on a lawn mower with you.
- Keep your children indoors, and do not allow other children to play nearby while you are mowing.
- Children should be at least 12 to operate a lawn mower and at least 16 to operate a riding mower.

2011 Mowing Safety Checklist
Keep this checklist, based on information from the American Academy of Pediatrics, in your garage or near your mowing equipment.

BEFORE MOWING
- Pick up loose materials from the lawn to prevent injuries from flying objects.
- Wear shoes, not sandals.
- Use eye and hearing protection.
- Start and refuel mowers outdoors, never in a garage.
- Refuel with the motor turned off and cool.
- Adjust blade settings – ADULTS ONLY!

WHILE MOWING
- Only use mowers with automatic shutdown abilities, such as those with a control that stops motion when the handle is released.
- Don’t mow in reverse unless necessary, and watch out for others.

AFTER MOWING
- Wait for blades to stop completely before removing the grass catcher, unclogging the discharge chute or crossing gravel roads.
We were with Beth. Every step of her way.

JUST LIKE YOU
Beth Davis, CMF co-owns Just Like You, one of the many BOC-accredited facilities making a difference to their patients every day.

Background: Beth and her mother opened Just Like You in 1997. Beth worked there part-time until graduating from Louisiana Tech.

Impact: With Susan G. Komen Breast Cancer Foundation support, Beth co-founded a program to provide no-cost care to uninsured or underinsured breast cancer survivors.

Service: Beth’s commitment to service doesn’t end at Just Like You. She has been selected to serve on major manufacturers’ retail advisory panels, where she shares her industry knowledge.

“ I cannot imagine navigating this field without BOC. I count on BOC to make sure that we are not only in compliance with all regulations, but that we have the training and support to achieve our goals.”

Beth Davis

BOC is proud to have been a part of Just Like You’s success.

You can count on BOC during your journey, too.
Fireworks Accidents Cause Amputations and Third-Degree Burns
This Fourth of July, make sure children are properly supervised and all instructions are followed when using fireworks. According to the U.S. Consumer Product Safety Commission, in 2008, emergency rooms treated an estimated 7,000 people for fireworks-related injuries, most often involving hands, fingers, eyes and legs.

The best way to prevent a fireworks-related injury is to leave fireworks to trained professionals. But for those who participate, regulatory agencies offer these tips:
• Do not let children under 14 use fireworks.
• Supervise individuals under age 18.
• Only buy from reliable fireworks sellers. Read and follow all warnings and instructions. Don’t try to alter or combine them and don’t experiment with homemade fireworks.
• Use fireworks outdoors only; keep them away from houses and flammable materials.
• Have a bucket of water nearby.
• Do not try to relight or handle malfunctioning fireworks. Soak them in water and throw them away.
• Be sure spectators are a safe distance away before lighting fireworks.
• Never ignite fireworks in a container – especially a glass or metal one.
• Store fireworks in a cool, dry place according to their storage instructions.
• Do not wear loose clothing near a fire or while using fireworks.
• Rockets should be launched from a rocket launcher – not a bottle.
• Sparklers need to be handled carefully, too – they burn at more than 1,000 degrees Fahrenheit. Light them individually at arm’s length. Wear gloves while holding a sparkler, and never give one to a child under 5.
• Educate children about the dangers of fireworks and teach them to practice safety at all times.
• Don’t mix alcohol and fireworks.

Before purchasing fireworks, familiarize yourself with your state’s fireworks laws. Check cpsc.gov/cpsc/pub/pubs/012.html for the U.S. Consumer Product Safety Commission’s list of state firework regulations. Also, check local regulations – many municipalities ban or restrict fireworks use.

Attention Farmers: The Limb You Save Could Be Your Own!
Farming consistently rates as one of America’s most dangerous jobs. Family farms, which do not normally undergo government inspection, endure many more accidents resulting in serious injury, amputation or fatality per year than large industrial operations.

Farm equipment and machinery is dangerous and often aging, but many accidents also occur because, over time, farmers become complacent while operating dangerous machinery. Farmers who have suffered amputations from farm injuries most often report that hurrying and not following safety rules cost them their limbs.

Farmers should take precautions to prevent accidents when working with farm machinery. Here are some recommendations for preventing farm accidents:
• Make accident prevention a management as well as a personal goal. Develop an awareness of hazards on the farm and prepare for emergencies including fires, vehicle accidents, electrical shocks and chemical exposures.
• Reduce your risk of injury and illness with preventive measures. Read and follow instructions on product labels and in equipment operator’s manuals for safe use.
• Routinely inspect your equipment for problems and potential failures that may contribute to or cause an accident.
• Assess hazards with employees and family members, discuss potential accident situations and outline emergency procedures.
• Be especially alert to hazards that may affect children and seniors.
• Minimize hazards by carefully selecting your equipment, maintaining tools, buildings and equipment, and establishing good housekeeping procedures.
• Provide rollover protective structures, protective enclosures or protective frames for tractors.
• Use seat belts while operating a tractor.
• Make sure guards for farm equipment are replaced after maintenance to protect workers from moving machinery parts.
• Review material safety data sheets (MSDSs) and labels that come with chemical products.

For farmers who have a disability such as limb loss or other debilitating conditions, help is available from AgrAbility. For more information, visit fti.uwex.edu/agrability.

Choose Cigarettes or Your Legs: Your Legs Are at Risk If You Smoke
Smokers put their legs at risk when they smoke, and they are four times as likely to lose a limb due to PAD, according to the Amputee Coalition. That’s why it’s never too early to begin your preparations today to quit for good by November 17, the date of this year’s Great American Smokeout.

“Smoking is the number one risk factor for peripheral vascular disease (PVD),” says Dr. Scott Stevens, Amputee Coalition Board member and professor of surgery at the University of Tennessee Medical Center and director of its endovascular program. “The toxic chemicals in tobacco travel through the blood stream resulting in the build-up of dangerous plaque, which prevents adequate circulation. Tobacco use is responsible for at least half of the cases of PAD affecting the lower limbs. The severity of PVD increases with the number of cigarettes smoked and increases the risk for amputation.”

The Amputee Coalition encourages smokers to circle November 17 on their calendars now and target that date to quit. By planning ahead, smokers will be taking an important step toward a healthier life, reducing cancer risk and preventing PAD. Everyone knows that quitting smoking is not easy, but it can be done. Education is your best tool. Behavioral therapies, counseling and telephone counseling all help in the battle to quit smoking.

“The Amputee Coalition wholeheartedly supports the American Cancer Society’s 36th Annual Great American Smokeout,” says Kendra Calhoun, president & CEO of the Amputee Coalition. “We hope people will start their plans now to quit for good by November 17. Keep your legs and throw away the cigarettes.”

For an excellent article on the damaging effects of smoking and strategies for quitting, see “Thank You for Not Smoking” (amputee-coalition.org/inmotion/sep_oct_06/smoking.html), by Dr. Christina Skoski. 🌻
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If you’re considering a new or replacement prosthesis, you’ll want to work with the most rigorously trained, highest qualified prosthetists in the world. Look to ABC, the only U.S. group recognized worldwide for setting the gold standard for certification. ABC Certified Prosthetists know how to help you set and achieve your goals.

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Brilliant results start with better educated, qualified practitioners. OandPCare.org is a public service of the American Board for Certification in Orthotics, Prosthetics and Pedorthics.

Get your application today for the 2011 Amputee Coalition Paddy Rossbach Youth Camp!

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As seen on Discovery Health

Come see us now or ask about Online Video Evaluation!
Each year, nearly 34,000 people die by suicide in the United States, and 70 percent of those give warning signs or tell someone about it in advance.

Douglas G. Jacobs, MD, president and CEO of Screening for Mental Health, Inc., and a leading expert on suicide, stresses the importance of teaching people how to recognize the signs and take action. “Suicide is a fatal response to a treatable, and reversible, condition – that condition most often being depression,” says Jacobs.

**Warning Signs of Suicide**

Call 911 or seek immediate help from a mental health provider when you hear or see any of these behaviors:

- Someone threatening to hurt or kill, or talking of wanting to hurt or kill, himself or herself
- Someone looking for ways to kill himself or herself by seeking access to firearms, pills or other means
- Someone talking or writing about death, dying or suicide, when these actions are out of the ordinary for the person.

Seek help by contacting a mental health professional or calling 800/273-TALK for a referral if you witness anyone exhibiting any one or more of these behaviors:

- Hopelessness
- Rage, uncontrolled anger, seeking revenge
- Acting reckless or engaging in risky activities, seemingly without thinking
- Feeling trapped – like there’s no way out
- Increased alcohol or drug use
- Withdrawing from friends, family and society
- Anxiety, agitation, inability to sleep or sleeping all the time
- Dramatic mood changes
- No reason for living; no sense of purpose in life.

**Related Resources**

**American Foundation for Suicide Prevention**
afsp.org

**National Suicide Prevention Lifeline**
800/273-TALK (8255)
suicidepreventionlifeline.org

**Screening for Mental Health**
mentalhealthscreening.org
Innovative Micro-slice pylon
> For moderate to active K3 and K4 level patients
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> Durable; meets the ISO-22675 test standard
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Tips on Preventing and Handling Falls

by M. Jason Highsmith, PT, DPT, CP, FAAOP, and Jennifer Latham Robinson

Lower-extremity amputees fall, right? It’s not a question of if, but when.

Preventing Falls
Check your work environment, your home or other places that you frequently visit for potential trip hazards. These might include:
• Small discrepancies in the floors, like the transition between tile and carpet or exposed wires.
• Pets. (That’s right, I’m looking at you, Fluffy. It’s gonna be me or you.)
• Throw rugs. They look great and can really “tie the room together,” but you could end up on the floor along with the rug.

Even small changes in the hardness of the sole of your shoe, such as switching from sneakers to dress shoes, in addition to increasing your height, can affect the stability of a prosthetic knee.

Things to Think About on the Way Down
There is a good way and a bad way to fall. The bad way is to tense up and go down stiff as a board (it’s not easy to relax when you see impending doom, I know).

The good way to fall is to remain flexible, bend at the joints, and try to protect vulnerable body parts. It’s best to have multiple points of impact, like a car. Unless you have been specifically instructed in some other technique by a healthcare provider, your arms can serve as the bumper, leaving your head and hips to suffer less impact.

After the Fall
Again, there’s a right way and a wrong way to react once you’ve fallen. If anyone is nearby, they will probably move to help you back up. This is natural, but if you’ve dislocated a joint, or worse, improper help may make things worse. And if your leg won’t support you, or if you’re dizzy, you could quickly be right back where you started from.

Take a deep breath, and wait a minute. If there is someone waiting to help you, ask them if they see anything out of the ordinary, such as a wound or bleeding.

If you’re still in one piece, probably the best way to get back up is to roll onto your stomach, bring your feet and knees up beneath your torso, and then rise with support from the person nearby. If you’re alone, it’s probably better to crawl to a nearby steady surface to sit on. Work your way into the seat and perform a further self-assessment in the seat prior to standing.

For More Information
“A Brief Discussion of Falls Among Persons With Amputation of the Lower Extremity”
360oandp.com/amputees-and-falling.aspx

360oandp.com is an online tool for people in the O&P community to learn and share information, technologies and their experiences with others. 360 O&P is a Web-based community focused on empowerment and sharing the latest practical information for patients and professionals.
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AIM Riders Ready to RIDE

by Elizabeth Bohfi

Editor’s Note: This is an update of the initial article “Are You Ready?” featured in the March/April issue of inMotion. The ride is already in progress at the time the May/June issue of inMotion is going to press, due to a delay in publication.

The “I’m READY” ride is fast approaching and Scott Lane is ready. Lane and fellow participants of the 740-mile bicycle ride event will leave Clarksville, Ohio, May 21 and ride to Kansas City, Missouri, arriving June 1. Money raised from the event will help send youths age 10-17 who were born with limb differences or have experienced limb loss to the annual Amputee Coalition Paddy Rossbach Youth Camp.

Their support vehicle, an RV and enclosed cargo trailer, came with two support drivers, all donated by Joe and Pamela Haig, founders of the Robert M. Palmer, M.D., Institute of Biomechanics, a 501(c)(3) nonprofit school.

“We have raised in the ballpark of $9,000 already,” Lane explains, “plus a nonprofit [group] from Cincinnati called Cincinnati Dreams Come True has donated directly to the [Amputee] Coalition enough to send one child to camp – [valued approximately at] $1,700.” The founders, Jay and Barbara Wittenbaum, help children with special needs or those who have potentially life-threatening illnesses. Their organization helps children navigate challenging days by arranging special events for them such as celebrity “meet and greets,” room makeovers when they have been confined to bed for long periods of time, and even trips to special places such as Disney World.

Other developments in the event planning include an extra rider joining the cyclists, now a group of seven. “We had another amputee join the ride. His name is John Cool, who is right side, above-the-knee [amputee]. He rode with amputees across America last year from California to Florida. He’s from Allentown, Pennsylvania, about one hour north of Philadelphia. He’s 44 years old.”

As the date for the event approaches, the list of donors gets longer, and things are falling into place quickly for Lane and his riding group. Prosthetists, children’s charity groups and ordinary citizens have all contributed to the event. Overnight stops for the “I’m READY” ride have been largely provided for by companies that are not only providing accommodations for the group but in some cases also hosting an arrival reception.

“This event is growing and coming together because even though times are tough for everyone, with high gas prices and loss of jobs, people are still very giving and caring,” says Lane. “People realize how great a cause this is and want to help, especially when it comes to helping kids. We are excited about the help we are getting. I am very grateful to all of those who have stepped up to help us. You do not have to be a rider to help – just have a desire to raise awareness and funds to support this cause.”

Scheduled stops are listed below:

- **May 21** Richmond, Indiana. Reception held at Reid Hospital’s rehabilitation facility, 2021 Chester Blvd., Richmond. Accommodations and reception donated by OrPro.
- **May 22** Indianapolis, Indiana. Reception at Action Brace and Prosthetics, south office, 8936 South Pointe Dr., Indianapolis. Accommodations and reception provided by Action Brace and Prosthetics.
- **May 23** Terre Haute, Indiana. Reception at Hanger Prosthetics and Orthotics, 4142 South 7th St., Terre Haute. Accommodations and reception provided by Hanger Prosthetics and Orthotics.
- **May 24-25** Effingham, Illinois. Reception at Omnicare Laboratory, 108 West Washington Ave., Effingham. Accommodations and reception provided by Omnicare Laboratory.
- **May 26** Swansea, Illinois. Reception at Hanger Prosthetics and Orthotics, 7 Bronze Point South, Swansea. Accommodations and reception provided by Hanger Prosthetics and Orthotics.
- **May 29** Columbia, Missouri. Reception at Hanger Prosthetics and Orthotics, 515 North College Ave., Columbia. Accommodations and reception provided by Hanger Prosthetics and Orthotics.
- **May 30** Sedalia, Missouri. Accommodations provided by Certified Brace and Limb, 101 Dundee, Sedalia, Missouri.
- **June 1** Arrival at Kansas City, Missouri.

Related Resources

Amputee Coalition’s Paddy Rossbach Youth Camp amputee-coalition.org/youth_camp.html

Amputees In Motion amputeesinmotion.com

Photo courtesy of Carol Heil
JUST PICTURE IT!

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Guide to Disability Income Insurance - Part 2

This concludes the Guide to Disability Income Insurance article begun in the March/April issue of inMotion (pp 27-30).

How Much Disability Income Will You Need?

Here’s how to find out:

Calculate your benefits. Add up all the income you may be entitled to under the public and private programs listed.

Calculate your savings. Add up the monthly income you could include from other sources, such as your personal savings.

Add them up. If the total income approaches the income you need after taxes, you can assume that, should total disability strike, you would be able to pay your day-to-day bills while getting better.

Then, think about added expenses. A disabled individual may face increased health care costs. He or she might also need extra money to pay for help with shopping, housework, yard work, cooking, or transportation. Funds may also be needed to make the home disabled-accessible by adding ramps and widening doorways.

Decide if you need additional income. The total from employer benefits, Social Security, and other programs, along with your own resources, may not be close to your pre-disability, after-tax income. It may not be enough to support your family. If it is not enough, you will want to consider buying more disability income insurance to make up the difference.

Be aware that some things may reduce your disability income benefits.

Social Security or other government benefits. The amount of long-term disability benefits you may collect may be reduced by the amount received from Social Security or other government programs. This is true whether you are covered through your employer’s group plan or through your personal insurance benefits.

Taxes. Although disability income benefits are tax-free when an individual has paid the policy premiums, disability income benefits are taxable when received from a policy an employer has paid for. These facts must be taken into account when you are trying to figure out your disability income needs.

Think about your work situation.

• If you are an employer, consider a group policy for you and your employees.
• If you are self-employed, an individual policy is a good idea.
• If you work for a business that does not provide benefits under a group policy, an individual policy is also a good idea.

Consider using an agent. Whether you are an employee or an employer, an insurance agent can help you analyze your sources of disability income, determine how long it will take to receive various benefits, and determine whether additional coverage would be wise.
What to Look for in a Policy

You may find that you need an individual disability income policy over and above any other income protection you may have. Here’s what you need to look for:

Definition of Disability
Be sure to determine how various policies define disability. Policies vary. Some pay benefits if you can’t do your regular job. Others pay only if you can’t work at all.

Extent of Disability (Total or Partial)
- Some older policies require that you be totally disabled before payments begin.
- Partial disability sometimes is covered for a limited time. But, most often, partial disability is covered only if it follows a period of total disability from the same cause.

- Some policies may not require total disability before partial disability payments are made.

Residual Benefits
A residual benefit allows partial payment based on your loss of income. For example, suppose you were able to work, but your income is reduced because you cannot fulfill all of your job responsibilities. In this case, residual benefits can help to make up the difference in your income.

Residual benefits can generally be paid without total prior disability. It is a standard feature in some policies. But, in other policies, it is a feature that is added to the policy with a rider for an additional premium.

Presumptive Disability
Under some policies, you may be presumed to be fully disabled and entitled to full benefits, even if you can still perform some or all of your regular job duties. This can happen under certain conditions, such as losing your sight, speech, hearing, or use of your limbs. In these cases, the “elimination” period is generally waived. A plan’s elimination period is the length of time between when the disability begins and the point at which the payment of disability benefits starts.

Amount of Benefits
Monthly benefits are generally calculated as a percentage of your stable, earned income at the time you buy the policy.

A typical disability insurance benefit is 60 percent of pre-disability income.

Disability income insurance policies generally require that disability payments from all sources cannot approach or exceed pre-disability income. So the amount of benefits paid by a disability income policy may be reduced when a disabled worker is getting disability payments from other sources, such as workers’ compensation or the SSDI program.

When Payments Begin
Many policies allow you to decide when benefit payments begin. You can choose a waiting period at the time of application. The waiting period may range anywhere from 30 days to 180 days, or more, after the disability begins.

Depending on how much money you have saved, and your other resources, you can reduce the amount you pay for your policy by electing to wait 60 days, 90 days, or even 180 days before you would start to receive benefit payments.

Remember, though, that the first benefit check is usually not paid until 30 days after the waiting period.
Length of Coverage
When you choose a “benefit term,” you are choosing how long benefits are payable to you: for 1 year, 2 years, 5 years or to retirement age. Since disability benefits are designed to replace the income you would otherwise earn by working, most people do not choose benefits extending beyond their working years.

A lengthy disability threatens your financial security much more than a short-term disability. Choosing shorter benefit periods can save you dollars on the policy itself. Bear in mind that if you need this insurance at all, you probably would need it most to cover a disability that permanently removes you from the workforce.

Keeping Pace With Inflation
For an additional premium, you may be able to add a cost-of-living adjustment (COLA) to basic disability income coverage. This provision increases the benefit payout by a specific percentage, after each year of disability. Generally, the increase is from 4 to 10 percent. This can be important, particularly during a lengthy period of total disability. Some policies offer the opportunity to buy additional disability coverage to keep pace with a rising income, without having to undergo a medical examination or to provide further medical evidence that you are still insurable.

Waiver of Premium
Most policies include a “waiver of premium” provision so that you don’t have to pay any more money on the disability policy after you’re disabled for 90 days and until your disability ends.

Noncancelable Versus Guaranteed Renewable
Selecting the kind and length of benefits is only the first step. You should also ask about your choices for keeping your disability policy in force. Most disability income insurance comes with one of two types of renewal options:

- Noncancelable policies give you the right to continue a policy by paying the premiums on time. In this case, the insurance company cannot change the premiums and benefits shown in the policy.
- Guaranteed renewable policies will be automatically renewed with the same benefits. The premium, however, may go up if it is changed for everyone who has the same insurance policy from the company.

While most individually purchased disability income policies are either noncancelable or guaranteed renewable, other kinds do exist.

- Conditionally renewable policies can be canceled by class or geographic area, or for reasons stated in the policy other than deterioration of health.
- Optionally renewable or conditionally renewable policies are extended at each anniversary or premium due date if the insurance company decides to do so.
- Some policies are renewable to age 75 if you are still employed full-time.

What the Policy Does and Does Not Cover
Consider carefully the kind of protection that is best for you and your family. Some policies pay for disability arising from accidents, but not illnesses. Illnesses, however, are a frequent cause of disability. In fact, as you get older, it is more likely that you will need disability coverage for an illness than for an injury.

What to Expect When Applying for Coverage
When someone applies for individual disability income coverage, the insurance agent or insurance company will require the person to provide information including general information, medical history, income and employment.

- General information includes name, address, sex, age, Social Security number and citizenship status. This information is used to verify your identity; to permit access to important sources of financial information; and to provide information that the company needs to issue an insurance plan.

- Employment information enables the insurance company to understand your occupation and work duties. Full and accurate disclosure is extremely important. You should, for instance, provide information on both full- and part-time jobs.

- Medical history information includes information about any illnesses, accidents or treatments you may have had, and whether you have had certain medical tests within the past few years. Occasionally, your application for individual disability income insurance may require one or more medical tests – such as an EKG. You will also likely be asked for blood testing, including a test for exposure to HIV (the virus that causes AIDS). The insurance company must handle these tests and test results in a way that keeps them confidential.

- Financial information is necessary for an individual disability income insurance application so that the insurance company understands the income that is to be insured. The insurance company will ask you for information about wages, salary, and other compensation. Self-employed applicants are asked to provide information about net earnings. Information about other income, such as dividends, interest, and rents, must also be provided. It is very likely that you will be asked to provide copies of income tax returns. The insurer must treat all such financial information confidentially.
What Else Do You Need to Know?

Tax Considerations
In general, if you pay the premiums for an individual disability policy, payments you receive under the policy are not subject to income tax. If your employer paid some or all of the premiums, some or all of the benefits may be taxable.

Business Protection for Small Business Owners
Disability insurance is particularly important if you own a small business. In addition to standard disability income replacement, business protection is also available.

There are recovery benefits that pay after you return to work full-time. These apply during the period in which you are re-establishing a customer or client base. There is overhead expense coverage that pays for certain office expenses.

For jointly owned businesses, there is a disability buy-out policy that provides funds for one partner (or the business entity) to buy a disabled partner’s share of the business. And there is key-person insurance. This protects a firm against the loss of income resulting from the disability of a key employee.

Disability Insurance Policy Checklist
Every policy may have different features. The following checklist will help you compare policies you may be considering:

1. How is disability defined? Is it defined as the inability to perform your own job, or inability to do any job?
2. Does the policy only cover disability from accidents, or both accidents and illness?
3. Are benefits available for partial or residual disability, as well as for total disability?
4. Are full benefits paid, whether or not you are able to work, for loss of sight, loss of hearing or loss of limbs?
5. The maximum benefit will replace what percentage of income?
6. Is the policy noncancelable, guaranteed renewable, or conditionally renewable?
7. How long must you be disabled before premiums are waived?
8. Is there an option to buy additional coverage, without undergoing additional medical tests or examinations, at a later date?
9. Does the policy offer an inflation adjustment feature? If so, what is the rate of inflation? Is there a maximum?

And remember...
...a well-trained benefits consultant, financial counselor or insurance agent can help. Ask about the following:
• What is an adequate level of benefits, in relation to your present and future obligations?
• How long a waiting period (until benefits begin) should you select to fit your situation?
• How long do you want to receive disability income should it become necessary?
• How much coverage can you get at your present salary?

A Final Word

Read the policy itself before you buy. Insurance policies are legal contracts. Read and compare the policies you are considering before you buy one, and make sure you understand all of the provisions. Marketing or sales literature is no substitute for the actual policy.

Ask for the insurance company’s ratings. The A.M. Best Company, Standard & Poor’s Corporation, and Moody’s all rate insurance companies after analyzing their financial records.

Ask for a summary of each policy’s benefits that outlines the coverage. Good agents and good insurance companies want you to know what you are buying.

Don’t be afraid to ask your insurance agent to explain anything that is unclear. If you are not satisfied with an agent’s answers, ask for someone to contact within the company.

Be aware that you have some time to return your policy. Even after you buy a policy, if you find that it doesn’t meet your needs, you generally have 10 to 30 days (this varies by company and state) to return the policy and get your money back.

Finally, find out how to contact your state’s department of insurance. You should know that every state has a department of insurance that regulates insurers and helps consumers. If you need more information, or if you want to register a complaint, check the government listings in your local phone book for your state’s department of insurance.

“It’s not that Fourroux does one thing well, they do everything well!”

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Bi-lateral BK Amputee

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Scan with Smartphone for more on Brandon’s Experience
**Most Popular Alpha Liner Features Identified**

In the 15 years since the Alpha® Liner became the first fabric-covered gel liner on the market, several varieties have been introduced to address specific needs of the amputee population. Now, WillowWood is featuring the liner with the most popular of these options.

Alpha Original Liners deliver comfort and protection for the residual limb and are the powerhouse core of the Alpha Liner family. The most popular liner features are the uniform gel style, green/gray fabric and 6-millimeter gel thickness. This segment of the Alpha Original product line has been renamed the Alpha Original MP Liner and is available in locking and cushion versions.

Alpha Original MP Liners have skin-friendly, mineral-oil-based classic gel. The gel gently adheres to the skin and protects against abrasion and breakdown. The durable fabric helps extend liner life and allows for easy donning of a socket. For information, ask your prosthetist or visit willowwoodco.com.

**THE TECHNOLOGY SHOWCASE**

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Thompson’s Shower Protector is now in all 50 states of the U.S., and the countries of Canada, Wales, England, Ireland, Australia and France. Its continued expanding success is primarily due to its simplicity in design, ease of use and constant reliability.

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**The LegSim™ Gets Linda Around Without Falling Down**

Hi, I’m Linda from Mississippi. I’ve been a LegSim user for almost 6 years and truly enjoy the independence it gives me. When I used crutches, I always had to worry about slipping and falling, especially on slick or wet floors. But with the LegSim I feel much safer because it never slips, even on a freshly mopped floor. Traveling is also much easier with the LegSim. Before, I’d always have to unload my wheelchair from my car if I needed to pump gas or stop to use a bathroom. Even entering a store was a hassle in a wheelchair. But with the LegSim, I can just pull it out of the car and pump gas or buy groceries in no time. I have even used it to mount a horse! I really can’t imagine how I could enjoy life the way I do now without my LegSim!

Call 315/735-1659 or visit LegSim.net to see videos.
NEW! Your Design on a Sleeve

Send us your favorite image and we’ll print it for you. We can print on a prosthetic suspension sleeve cover or a laminating sleeve for your prosthetist to create a permanent design on your new socket. Either way, the custom printing is only $25 more than the cost of a regular SleeveArt®. We offer various sizes to fit most everybody and now with custom printing, the design choices are unlimited.

For more information about our new custom designs, visit our Web site at fredslegs.com/custom.htm. If you don’t have access to a computer, just call Joanne at 954/646-1026 and she will mail you a flyer.

Fred’s Legs, Inc. – Dania Beach, Florida

The new PROPRIO FOOT® with EVO™ by Össur. Stable, smooth, and comfortable.

The newly redesigned PROPRIO FOOT with EVO utilizes intelligent ankle flexion to help users walk confidently and naturally without watching the ground, so they don’t need to think about every step for fear of tripping and falling. The lifelike ankle movement enables the PROPRIO FOOT to adjust for normal sitting and standing, and features automatic alignment for adapting to various types of footwear. PROPRIO FOOT recently received the prestigious Red Dot International Design Award over more than 4,000 submissions from 60 nations. Suggested Medicare assigned billing code is L-5973.

For more information, visit Össur at ossur.com or call 800/233-6263.
Movement for Every Body

Rent, lease or purchase the Vertical Pool for exercise, traction and rehabilitation at home every day with family. Designed for access/egress with lifts already on the market, such as Hoyer and Smartlift, this pool allows movements in vertical, horizontal and seated positions with the aid of an overhead bar for support. Hands-on assistance is possible from either inside the pool or from the outside perimeter.

Efficient in energy, water and space, essential for the 21st century, the Vertical Pool is comprised of 16 rotationally molded double-wall hard plastic, foam-filled parts for an insulation R-value of about 12. These parts can be carried into and through buildings for assembly onsite downstairs or up hillsides.

Rent, lease or purchase, the pool’s at-home convenience eliminates costly time-consuming transportation to public locations where self-conscious public scrutiny and the bacterial issues of shared water exist.

For information, visit theverticalpool.com or call 928/300-9800.
Scott Sabolich Prosthetics and Research is a proud Gold Sponsor for the 2011 UCO Endeavor Games.

The Endeavor Games is a nationally recognized competition that allows all athletes with physical disabilities to participate in a multi-sport event. The games also provide training clinics for aspiring athletes.

Find out how to become involved with the Endeavor Games by visiting www.scottsabolich.com

At Scott Sabolich Prosthetics and Research, we strive to see our patients reach their goals and exceed them. With 10 expert practitioners on staff, we utilize the most dynamic technology available to provide comfort and freedom to our patients. Call today for your free evaluation and reach your full potential!

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To these professionals and their patients, arms and legs are not a luxury.

For more information go to AOPANET.ORG, AMPUTEE-COALITION.ORG, or ARMSANDLEGSARENOTALUXURY.COM.