

# foot Scape

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## From The Public Officer

Happy new year to the supporters of Footscape. As we enter 2012, Footscape is looking forward to implementing new projects that stand to benefit foot health within disadvantaged populations. Throughout the year we will be organising a number of fundraising activities, including operating several Bunnings Warehouse community barbecues.

The first of these barbecues proved hard work, however, was nonetheless successful with \$900 raised on the day. These funds will assist Footscape to purchase a new autoclave for instrument sterilisation. I thank the extensive work by our Fund-

raising Coordinator Catherine Harty, the assistance of Bunnings, Coles and Safeway for their commercial support and the volunteers (pictured below) on the day who generously donated their time and cooking expertise.



*Anthony Lewis  
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## In This Edition

In this edition we explore the impact of walking aids upon foot and lower limb health in disadvantaged individuals and communities. We welcome contributing articles from:

### 1. *Melissa Noonan, Executive Officer of Limbs 4 Life*

Melissa provides an overview of Limbs 4 Life which is a non-profit organisation developed to provide information, support and access to resources for people in the Australian community affected by limb loss.

## In This Edition (cont'd)

### 2. Sarah Baklien, State Schools Relief

Sarah outlines the work of State Schools Relief to supply footwear and clothes for students encountering financial and family hardship. State Schools Relief will assist Footscape implement a children's orthotic project during 2012.

### 3. Olivier Jacqmain, Managing Editor of Diabetes Voice

This published article reviews the Samadhan system for offloading the diabetic foot in developing countries. We thank Olivier for permitting Footscape to reproduce this article.

## Limbs 4 Life

Limbs 4 Life is a non-profit organisation developed to provide information, support and access to resources for people in the community affected by limb loss. Established in 2004, our organisation actively engages in community education programs to raise awareness to the broader population about the causes of amputation – diabetes, vascular disease, cancer trauma and congenital differences. Our objective is to ensure that no one goes through the proceeds of limb loss alone.

Losing a limb can be a challenging way of life for each individual. However, receiving assistance from an organisation who understands can help to ease the burden. We also work to voice the concerns of amputees within the disability sector, at forums, to government and through an alliance with disability boards.

Limbs 4 Life is a crucial link and an in-demand organisation to amputee and allied support organisations. The importance and value of our work has been recognised by a range of philanthropic and corporate supporters, and in 2009 we were honoured with the National Disability Award for Social Inclusion. In the future Limbs 4 Life plans to expand its services to meet demand and ensure that even more amputees receive the assistance they need to engage effectively in the management of their own health care and participate in their community.

Limbs 4 Life has built a community of amputees and care-givers across Victoria who, until our inception were without support, connections and a network to call their own. Limbs 4 Life has amassed considerable social capital and built community capacity through its volunteer driven program and enhanced the social inclusion of amputees and their care givers through access to resources, information and activities.

Limbs 4 Life offers a range of programs and services that assist amputees, their families and primary care givers and health care professionals.

The Limbs 4 Life Peer Support Program was established to provide new amputees and their families with access to trained volunteers. The program matches new amputees, or those about to lose a limb, with a volunteer who has experienced a similar



amputation. Speaking with a peer support volunteer can play an important part in a new amputee's recovery and rehabilitation. Peer support volunteers offer encouragement, information and guidance. They can also help to alleviate feelings of isolation and, most importantly, provide an ear to listen. Whether the cause of limb loss was diabetes, vascular disease, cancer, trauma or infection, it can be comforting for people to discuss their concerns with someone that has been in a similar situation.



The Limbs 4 Life Peer Support Program is based on a model of mentoring that has been used for a number of years, for many different health and wellbeing issues. It is used to complement the services which medical professionals provide. As an organisation we are supported in our efforts by health care staff, who praise the program for its ability to assist patients and their families to adjust to their new life after amputation. Many amputees have reported that receiving a visit from a peer support volunteer was a very rewarding experience, one that gave them the chance to speak openly about how they were feeling, address issues and concerns that they had, and alleviate the fear of the unknown.

*Amplified* is an amputee-specific magazine published quarterly. Each edition includes a range of entertaining and informative articles aimed at empowering amputees, and

all those who care for amputees, with up-to-date information. *Amplified* is a free publication and is distributed nationally by mail and email.

Social and sporting activities are a quintessential aspect of the Australian lifestyle and provide a way for participants to remain healthy, active and connected to their communities. Limbs 4 Life runs and promotes a number of social and sports programs and activities designed specifically for amputees of all levels of ability and mobility. Social and sporting activities are tailored to help with fitness, assisting with balance, flexibility, general wellbeing and foster community interaction and participation.

Our website is yet another way that Limbs 4 Life is helping to ensure that amputees and their care givers can access information. The website is updated regularly and provides information, links, news and details about current events. The AMP-Link forum was created by demand from the community, and offers a new medium for amputees to connect and talk with each other, especially important for those living rurally and individuals who are socially isolated.

Now in its eighth year, Limbs 4 Life has proven itself to be an important and in-demand organisation with over 3,500 people accessing the website for information daily and an estimated 23,000+ readership of *Amplified*. Limbs 4 Life has fostered links to amputee support organisations internationally and throughout Australia in an effort to promote and assist with research relevant to the wellbeing of amputees.

For more information go to [www.limbs4life.com](http://www.limbs4life.com) or phone 1300 78 2231

Melissa Noonan  
Executive Officer

limbs4life

## Supporting Victorian students through the hard times

Since 1930 State Schools' Relief has been helping Victorian Students.

They began during the Great Depression when unemployment was around 30 percent. Then, with no jobs nor steady income, families didn't have decent housing, and many children went barefoot year-round.

A committee of concerned Victorian teachers and principals banded together to help those that needed it most. Teachers often "knew" which children had the greatest need, so an arrangement was set up where more prosperous schools helped those less fortunate.

State Schools' Relief coordinated the practical help – like giving clothes, shoes and food to students who needed it so they could continue their education.

It was this spirit from which State Schools' Relief was born.

Today it's not only the poor that State Schools' Relief helps; they supply clothing and footwear to students experiencing financial hardship, family illness, neglect, family violence, natural disasters and house fires.

In the last financial year they impacted on the lives of



thousands of Victorian students and their families by providing 3,235 pairs of shoes/sneakers to students. This is an increase of 24% compared to the previous year.

This year a year 8 boy was thrilled, when he received a new pair of shoes through State Schools' Relief – for the first time in his life.

Other children State Schools' Relief helped include: Two brothers were attending school on alternate days until it was discovered that they were sharing a single pair of shoes between them.

"Poverty is well and truly alive today," David Schmidt, SSR CEO says. "It's just less exposed."

"The clothes and footwear we purchase are only possible because of donations. We rely on these to continue our work."

"We now help over 10,000 kids each year," David says, "but we could do so much more."

David insists that the community spirit that built State Schools' Relief still exists.

State Schools' Relief and Footscape have recently formed a partnership to help disadvantaged children in the Hume City Region achieve healthy feet.

If you are a teacher or Principal, you can access this service by contacting the office on 03 9575 7900.

If you are a parent requiring State Schools' Relief assistance, contact your school Principal for a confidential meeting about applying for support on your child's behalf.

*Sarah Baklien*



*Confidence to connect*

## Offloading the diabetic foot in the developing world

Diabetic foot complications are the most common cause of hospital admissions among people with diabetes. Worldwide, more than 1 million amputations are performed each year as a consequence of diabetes, which means that a lower limb is lost to diabetes somewhere in the world every 30 seconds. If a person with diabetes has a lesion on the sole of a foot, offloading bodyweight is of vital importance; all therapeutic efforts are bound to fail if he or she continues to walk on an ulcer. In 2000, the authors of this report designed a system of offloading that was developed specifically for people living in developing countries. The Samadhan System is based on the principles of simplicity and ease of application. Requiring no special training, it is affordable and effective.



The simple device is made with a piece of foam, some adhesive, and a piece of an elastocrepe bandage.

Among people with diabetes in India, a lack of awareness of the risks from foot complications, compounded by poverty and low literacy, leads to high-risk behaviours like barefoot walking and the use of inappropriate footwear. Moreover, in India, as in many developing countries, foot care is not recognized; there are few professional opportunities for foot care specialists. Most healthcare providers obtain experience through personal efforts – joining an overseas unit as an observer or by attending sessions at diabetic foot care conferences, for instance.

Non-scientific approaches and numerous local faith-related practices tend to divert public and professional attention away from the steps that are necessary

and available to prevent and treat diabetic foot problems. This ultimately increases the risk for amputation.

**“Non-scientific approaches and faith-related practices increase the risk for amputation.”**

As practising diabetologists with 10 years of experience in this environment, having concluded that improvisation is the key to success, we have developed several novel techniques and approaches for diabetes care in general and diabetic foot care in particular. These are all simple, affordable and effective, and require no special training.

### The role of offloading

If a person with diabetes has a lesion on the sole of a foot, he or she needs to use offloading methods or devices to shift body weight away from the site of ulcer. This is of vital importance: all therapeutic efforts are bound to fail if a person continues to walk on an ulcer. Methods to offload the foot include bed rest, the use of a wheelchair, crutch-assisted walking, total-contact casts, felted-foam half-shoes, therapeutic shoes, custom splints, and removable cast walkers. However, either due to economic constraints or because they are not available, these methods are not commonly used in the developing world. Moreover, offloading methods like total-contact casts need technical expertise for application.

### The Samadhan System

The Samadhan System A solution to the problem was to develop an offloading device based on the principles of simplicity, ease of application, affordability and effectiveness, and which requires no training. The Samadhan System of offloading was developed in 2000. The Hindi word 'samadhan' means 'solution'. The system incorporates both a removable (Samadhan-R) and a non-removable offloading device (Samadhan-IR).<sup>1</sup> It was presented at the Diabetes in Asia Conference in 2001, in Chennai, India. Since then, it has been showcased at a number of international conferences. It was presented at two workshops on the diabetic foot organized by the International Diabetes Federation – one in 2005 in Nairobi, Kenya, and another in 2009 in the Seychelles.

“*The Samadhan System of offloading is based on the principles of simplicity, ease of application, affordability and effectiveness.*”

Clinical trials were conducted in India at our centre, the Lucknow Diabetic Foot Care Clinic and Research Centre. Our aim was to compare the impact on healing of the Samadhan System of offloading versus the common footwear (sandals) that is fre-

quently used for offloading in the Indian subcontinent. More than 70% of people with diabetes in the Samadhan-R group achieved complete healing, compared to only 10% in the common footwear group. In another prospective clinical trial, we compared the Samadhan IR versus common footwear. More than 85% of people in the Samadhan-IR group achieved complete healing, compared with 10% in the common footwear group.

“*The Samadhan System could be developed in countries where the costs of diabetes care are rising dramatically.*”

### Advantages

The Samadhan System can be adopted by anyone with an understanding of the basics of offloading. All that is required to manufacture the Samadhan device is a piece of foam, some adhesive, and a piece of an elasto-crepe bandage. These items are available even in the remotest corners of the world, so this system of offloading is a good option in countries where foot care is not an established field. It could also be developed in countries, where the costs of diabetes care are rising dramatically.

Clinicians can make different sizes of Samadhan devices and keep them ready

for people with different body weights. Decisions regarding the fitting of the device – such as where it offers maximum offloading for the lesion – are taken clinically. Usually, in forefoot lesions, the device is placed near to the lesion; in hind-foot lesions, the device is placed distal to the lesions. After application, a person with diabetes can wear buckled sandals and walk with relative normality.

Time spent on the application and removal of the device is minimal, and the risk of injury during these processes is removed entirely. Furthermore, use of the device ensures a reduced risk of secondary injuries. It can be cleaned, chemically sterilized and reused. The Samadhan-R allows clinicians to observe the progress of a wound and apply dressings. As and when required, it can be made nonremovable (Samadhan-IR) by cutting the border of the elasto-crepe bandage on the dorsum of the foot and sealing it with drops of sealing wax. The wax solidifies in a few seconds and the device becomes irremovable until the seal is broken. The seal can be embossed if necessary; embossing with a unique logo will ensure that the seal has not been broken and replaced at home.

The system is very economical: the cost of offloading is

around 1 USD per person. The ease of its use and its affordability have made this device a very interesting option, particularly in the developing world.

*“In developing countries, the focus should be on basic research for simple and affordable approaches.”*

#### Limitations

We have been using the Samadhan System of offloading for more than 8 years. Having tried it on more than 1000 people with diabetes, we have not come across any complications, such as falls or the formation of new ulcers, due to altered gait. However, we have noted problems related to people

with diabetes removing the Samadhan-R. This can be resolved using the non-removable Samadhan-IR device.

#### Conclusion

Improvisation is the key to success in the developing world. While working in a developing country like India, one has to keep in mind that any treatment modality should be simple, cheap and effective. Given that less than 10% of the 1 billion people living in India has medical insurance, it would be difficult for a method that is effective but not economical to make a major difference in foot care. In these circumstances, one needs to be realistic and work with the resources that are available. The focus should be on basic research for simple

and affordable approaches. The strength of this device lies in its simplicity because it is only with simpler things that we can reach and serve the masses.

**Kshitij Shankhdhar, Lakshmi Kant Shankhdhar, Uma Shankhdhar, Smita Shankhdhar**

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Uma Shankhdhar is a medical nutrition therapist and managing director of LK Diabetes Centre.

Smita Shankhdhar is a diabetes educator and is in charge of the Diabetes Prevention Unit at LK Diabetes Centre.

#### Reference

- 1 Shankhdhar K. Improvisation Is the Key to Success: The Samadhan System. *Adv Skin Wound Care* 2006; 19: 379-82.



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