

HAPPY FEET

A revolutionary treatment for diabetes-related skin disorders using a collagen and glycerine-based solution

By Rohini Pathmanathan

FACING FACTS

Like other lifestyle disorders such as cardiovascular disease, hypertension and stroke, diabetes mellitus continues to be on the rise worldwide. Closer to home, both type I and type II diabetes are part of the marked rise in non-communicable diseases (NCD) which have charted an upward trend in the past decade and which, according to the Ministry of Health's National Strategic Plan for NCD, poses a significant threat to the nation's health. The fourth National Health and Morbidity Survey released in 2011 highlighted that 20.8 percent of the population over the age of 30 are diabetic. Based on these findings, it is estimated that a shocking 2.5 million Malaysian adults are living with diabetes.

MORE THAN JUST SKIN DEEP

For diabetics, insulin shots and blood-glucose monitoring are only part of the

treatment and management equation when it comes to keeping diabetes in check. Diabetic neuropathies which include damage to the peripheral nerves remain a significant challenge for most people living with diabetes. These microvascular injuries involve the destruction of small blood cells that enervate multiple bodily systems, and when unchecked, lead to a progressive and systematic deterioration of all organs and functions.

Of these neuropathies, diabetic dermopathy remains a foremost complication of the disease's related skin disorders. This often involves skin lesions to various parts of the body. "It is important to remember that diabetes is a multi-system disorder," says Dr Harikrishna K.R. Nair, Head of the Wound Care Unit at Hospital Kuala Lumpur and President of the Malaysian Society of

Wound Care Professionals (MSWCP). "Our skin is our body's largest organ, and diabetics are at an increased risk for wound formation because diabetes impedes blood supply, affects sensation and the immune system, thus slowing down the healing process. Neuropathic complications such as reduced sensation in the hands and feet also mean that patients are less likely to realise they have an injury until the problem has advanced significantly."

KNOW YOUR RISK!

Patients with long-term disease and poor blood-sugar management are at the highest risk for developing diabetic-related skin lesions.

FOOT LOOSE

The bulk of dermopathic complications occur on and around the feet areas. "Think about it. The feet are where we apply the most pressure through walking and other activities that help us move about," says Dr Harikrishna. "When we stand, our entire weight is concentrated on our legs. Just how serious is the problem? About 25 percent of diabetics will go on to develop foot-related problems. In addition to skin lesions, these include numbness, motor neuropathy (atrophic muscles), and deformities to the feet."

Other symptoms include:

- **Charcot arthropathy** – deformity of the ankle joint leading to disability
- Callus and corn formation
- Skin thickening
- Dry skin prone to flakes, cracks and/or fissures
- Fungal infections of the toenails
- Bruises, swelling and inflammation that do not fade or subside
- Blisters and ulcers that develop into weeping sores, furuncles and pustules
- Hyperpigmentation and skin discolouration

"Left untreated, these lesions can progress to such a stage where they become septic and gangrenous. In such cases, the affected limb is most often amputated," acknowledges Dr Harikrishna. "When you are diabetic, even a minor wound can become open, weeping sore. You may not be able to prevent a skin lesion from developing, but you can definitely do something about it before amputation becomes necessary."



DID YOU KNOW?

Every 30 seconds, someone in the world loses a limb as a result of diabetes. The amputation rate for people suffering diabetes is 10 times higher than for those who are not diabetic.

Q: I've been living with type II diabetes for the past five years and have recently noticed blisters and sores forming around my shins, toes and ankles. I'm afraid these wounds may be the result of an infection. Would a simple course of antibiotics be enough to clear the problem?

Dr Harikrishna: While a routine dose of antibiotics may reduce the intensity and frequency of the symptoms you are experiencing, they may fail to clear the condition altogether. The better option would be a collagen and glycerine-based solution that functions to form a protective barrier against the skin. This would serve the dual function of reducing inflammation and moisturising the skin which improves its resilience and elasticity in the long-term.



TREATING DIABETES DERMOPATHY: A COLLAGEN- AND-GLYCERIN PERSPECTIVE

Clinical trials at Hospital Kuala Lumpur and Hospital Putrajaya have demonstrated the effectiveness of a collagen and glycerine-based solution in ameliorating diabetes-related skin disorders. A total of 10 patients were involved in the trial, with the participant mean age being 50 years of age.

The five men and five women who participated in the trial were given a collagen and glycerine-based lotion to be applied daily on their legs. Patients applied two drops of lotion to the affected area(s) daily using a specific massage technique. Changes to skin conditions were then evaluated at specific trial points.

The 10 case studies involved patients who suffered from a range of skin conditions which included macerated periwounds, thickened scars, scalding of the bilateral lower limb and hyperpigmentation among others. Changes were charted over a period of eight weeks, given that most skin lesions take one or two months to heal.

"Though the skin conditions treated ranged from severe bilateral scalding to milder cases of dry skin and hyperpigmentation, the changes have been remarkable," enthuses Dr Harikrishna, the chief physician presiding over the trials at Hospital Kuala Lumpur and Hospital Putrajaya. "What's more, the use of these glycerine and collagen-based formulas are suitable for use on any part of the body and not just the feet."

HEALTH FEATURE

CHARTING CHANGES WITH DR HARIKRISHNA NAIR



What makes the lotion as effective as it is?

Dr H : I believe the lotion's effectiveness lies in the concentration of its ingredients. The formula is made up of 10 percent collagen, 40 percent water, and 50 percent glycerine. Collagen is a vital element in skin repair and rejuvenation as it is a deep-penetrating ingredient. It treats both the epidermis and the dermis layers of the skin. Glycerine is a powerful ingredient that helps bind water, forming a protective moisturising layer on top of lesions and open sores. Such a high content of glycerine, in particular, makes it an advancement over other wound-care products on the market.

Why does the lotion have to be applied using a specific massage technique?

Dr H : Massaging the skin improves blood circulation to the affected area. As we know, a common complaint of most diabetics is poor blood circulation. Using a specific massage technique helps deliver the lotion's nutrients directly to the area in need of healing, helping it to penetrate better and produce optimum results.

When did patients first start seeing results of using the lotion?

Dr H : Changes were apparent from the very first use. Patients reported reduced itching, flaking and cracking of the skin. Over time, other reports included improved skin tone and colour, less scarring, and a closing over of open lesions and sores.

What benefits can patients look forward to from use of the lotion?

Dr H : In less than a month, all patients in the trial experienced more moist, comfortable skin with significantly reduced rates of wrinkling and hyperpigmentation.

How safe is the formula for use on skin?

Dr H : Extremely safe! No adverse side-effects were found during the clinical trial. The lotion is both hypoallergenic and non-comedogenic. Even the most sensitive skin will benefit from its use.

Case Study Photos (Before & After)





Putting her Best Foot Forward

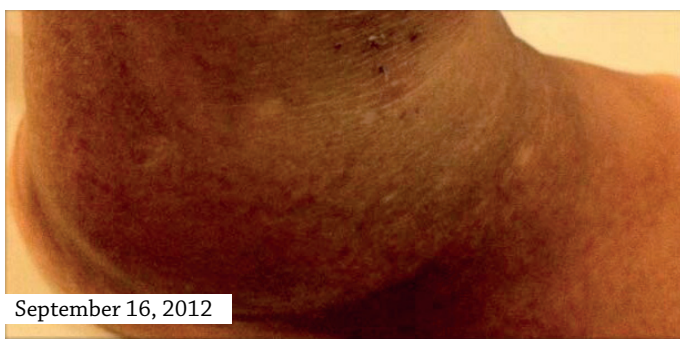
Madam Hooi Wei Yong

I was diagnosed with type II diabetes when I was 43 years old. I am now 69, and first noticed a darkening of the skin around my right foot seven years ago. Worried, I consulted my doctor and was shocked to learn that the problem would in all likelihood get worse and develop into a full-blown wound.

My friends, noticing the change to my foot, joked that I could do with washing it better. To them, it had the look of being covered with dirt. Needless to say, all their jibing made me even more worried as no matter what I tried, the patch of dark skin surrounding my right foot continued to spread and darken even further.

The doctor explained that the problem was most likely due to poor blood circulation, a direct result of my diabetic symptoms. The collagen and glycerine lotion helped tremendously and within one month, my skin began to revert to its original colour. Though I finished my treatment in September 2012, I still see my doctor for regular follow-ups. I also continue applying the lotion to my feet to ensure the problem does not recur. Between that and maintaining a low-sodium diet, I have my diabetes condition more or less in hand now.

My advice to all patients with diabetes-related foot problems is to not delay seeking treatment. Consistently using the prescribed lotion has worked wonders in reversing my condition. Remember to follow your doctor's instructions for the most effective outcome!



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THE DIABETIC'S GUIDE TO PREVENTING FOOT PROBLEMS

Instead of waiting for the worst to happen, follow these simple tips for happier legs and feet!

DO monitor your blood glucose levels daily and follow your doctor's advice regarding the proper diet, exercise and medication regimen for your age group and condition.

DON'T walk around barefoot, even around your own home. When leaving the house, opt for close-toed shoes and slippers. When choosing shoes, opt for ones made of canvas or leather.

DO wear socks and stockings that are elastic and fit well. Cotton socks are best as the material allows the feet to 'breathe'.

DON'T smoke. Smoking disrupts blood

circulation which is a core problem if you are diabetic.

DO wash your feet in warm water and a mild antibacterial solution daily. Make sure to towel them off well, and keep the area between the toes dry to prevent fungal infections.

DON'T delay seeking medical attention if you notice lesions, blisters or other skin problems. These include:

- Changes in skin colour
- Changes in skin temperature
- Slow-to-heal sores, blisters or ulcers
- Unusual and/or persistent foot odour

DO see a podiatrist once every few months for a check-up even if you don't have foot problems.

DON'T remain sedentary or inactive for

extended periods of time. Even doing simple things like putting your feet up while sitting, wiggling your toes and rotating your feet at the ankle helps improve blood circulation.

DO keep dry feet and legs moisturised with a good quality lotion. Check with your doctor to find out which product is most suitable for you.

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