

Transplant News

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Editorial

Professor Jerome Loveland **Fditor**

his edition defines the importance of the multidisciplinary team in the management of the transplant recipient, their donor, as well as the extended support structure vital for optimal outcomes, rescinding the concept that transplantation is simply a surgical exercise to implant a new organ. Without detracting from the importance of a technically successful procedure, this event will be destined for failure without appropriate pre- and post-transplant care, this on a life-long basis.

Hence it is extremely pertinent that every article is this edition is written by patients and professionals other than physicians, hence providing vital insights into the transplant experience itself, as well as the knowledge vital to looking after yourself during your lifelong journey.

Finally, we noted with sadness that Dr Julian Holmes, an author of one of the articles in this edition, passed away recently, and would like to extend our love to his family. Dr Holmes is just a single example of the innumerable professionals that have contributed to transplant medicine over many years, this with the single endpoint of caring for patients with end stage disease, allowing them the opportunity to continue to embrace life and contribute to the often complex society that we live in.



Transplant News Tribute

The Transplant News editorial and production team wish to dedicate this issue to members of the transplantation community who have passed away this year. We extend our condolences to their families and friends and hope that in sharing stories of the renewed life through the gift of transplantation, we are all inspired to live life to the fullest.

NOVARTIS

Publication of this newsletter was made possible

The Dental Certificate and Oral Disease

Dr Julian Holmes, BDS, BA, MPhil Retired dentist, treatment protocol researcher, writer and publisher, www.grevcellsales.com



Some facts for you to think about!

- People with gum disease are 40% more likely to have a chronic body condition as well.¹
- 91% of patients with heart disease have periodontitis, compared to 66% of people with no heart disease.¹
- A study found that people who had not gone to a dentist in the previous year, had a 50% higher mortality rate than those who went two or more times annually.²
- The researchers concluded that 'good oral health promotes longevity'.²

Il potential transplant patients need a "The Dental

Clearance Certificate".

Mouth oral infections can be devastating in terms of your long-term health and treatment outcome.

Modern research shows there is far more to oral disease than meets the eye. Gum disease, or to give it the correct name, Periodontal Disease, is a silent and insidious infection in the early stages; by the time you seek help, most of the damage has already begun. The damage extends from your mouth to whole body.

The process is

- Bacteria build up on your teeth making your gums prone to infection.
- The debris becomes infected.
- Your immune system moves in to attack the infection and the gums become inflamed.
- This inflammation increases unless the infection is brought under control.
- Over time, the inflammation and the chemicals released by the bacteria eat away at the gums and bone structure that hold teeth in place, allowing a more serious disease, known as periodontitis, which spreads to the rest of your body.

Your mouth has been described as the "Gateway to Your Body". In the later stages, treatment becomes more complex, needing mouth rinses, anti-inflammatory medication, antibiotics and surgery.

New tests look for:

- Your immune response markers,
- Systemic elevations of pro-inflammatory cytokines,
- Increased systemic levels of high-sensitivity C-reactive protein

These terms may be new to you, but this data allows a more complete picture of your health status to be established, and more appropriate treatment can be offered.² Modern dental care is not about a couple of x-rays, a cursory glance with a mirror and probe.

Dentistry has become a scientific discipline as our knowledge of the processes at work and how these impact the rest of your body. Dentists have special lights and glasses to look for the early signs of oral cancers, and they have access to a range of new technologies.

Remember:

Your dental certificate represents a single moment in time,
 a snap-shot, and as the period from that examination







- grows, so does the potential for new disease to begin.
- Published research suggests this review should be assessed according to your risk and treatment needs.
- If you smoke, are diabetic, physically challenged or preor post-transplant, you would carry a higher risk than a healthy person.

Your risk assessment should involve:

- Tests to look for the immune markers of disease
- Systemic elevations of pro-inflammatory cytokines and high-sensitivity C-reactive protein
- The use of special tests to look for pre-cancer tissue changes
- An assessment of the pH of your mouth
- Do you have lichen planus or any other immune-related tissue change?
- Do you have low salivary flow? This can lead to debris stagnation and infection;
 - decreased saliva flow can be due to your medication, age or other disease processes that need to be investigated and assessed.
- How effective are you at oral cleaning? A well trained hygiene team will use disclosing dyes to look for debris missed during your cleaning cycle;
- When did you last change your tooth brush, and is the brush you use the best for your mouth?
 - does the brush handle need to be adapted to make it easier to hold?
- Do you use a re-mineralising tooth paste?

You are probably thinking that this is all new information from 3. Berkowitz RJ. Mutans streptococci: acquisition and the latest research. Yet the oral-body disease link is not new! In 1900, British physician William Hunter claimed that poor dental health could cause several systemic diseases.⁵ In 1911 he expounded these theories in a series of lectures in the USA. Hunter claimed anaemia, gastritis, colitis, obscure fevers, nervous disturbances of all kinds from mental depression to actual lesions of the cord, chronic rheumatic infections, and kidney diseases had an oral origin. Hunter did not have the modern diagnostic equipment we take for granted today, but his papers and lectures laid the foundation for further research.

Your natural teeth and any implant-supported teeth support microflora colonies in close proximity to the bloodstream. These are great examples of how other diseases that have an oral origin can facilitate a bacteraemia and systemic spread of bacterial products, components, and immunocomplexes.

- The link between oral disease and cardio-vascular disease is irrefutable8 (see Dale et al)9
- Other diseases such as pancreatic cancer, are linked to high plasma antibodies from oral bacteria¹⁰⁻¹²
- Oral disease can determine your mortality and survival rate from oro-digestive cancers¹³

So what can you do?

- The dental certificate should be renewed at a predetermined time interval based on your risk factors and treatment needs
- You should see your dental hygiene team a minimum of

- every 3-4 months
- Buy an ultrasonic tooth brush as they do the work; you just have to place and hold them in the correct place.
- Do NOT share your tooth brush with anyone else, even if you have detachable brush heads; the risk of crossinfection should be uppermost in your mind, and how to minimise that risk.
- Use a remineralising tooth paste; currently the best and most effective available tooth paste is Sensodyne, Powered by NOVAMIN.
- Spit, do not rinse. The new minerals in your mouth and saliva will continue to work with you to strengthen your

Please note; Dr Julian Holmes receives no financial reward for any product he may mention or endorse. Their use is based on over 30-years clinical treatment, observation and research.

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In Memoriam

This article is published in memory of Dr Julian Holmes. Dr Holmes kindly submitted and edited the article for Transplant News readers earlier in the year. The Transplant News editorial team is grateful for the article contribution and wishes to express their condolences to his family, friends and patients.



Going for a transplant - some lifestyle guidelines

Marlize de Jager Transplant Co-ordinator Mediclinic South Africa Parktown, Johannesburg



he most important member of the transplant team is YOU!

The success of your transplant depends a great deal on how seriously you take this responsibility. It is important for you to have a good understanding about your medical care and always be actively involved in it. Hard work and commitment can lead to a better quality of life after transplant.

Your body's immune system is designed to seek and destroy any foreign objects in your body such as a cold virus, a flu virus, or a transplanted organ. The process of destroying the transplanted organ is called rejection. Rejection shows you that your immune system is working. After transplant your immune system needs to be suppressed (blocked) to protect the transplanted organ from being identified by the body as a foreign object and rejected.

You will need to take anti-rejection medication to prevent rejection for the rest of your life. Because your immune system is suppressed by this medication you will be at risk for infection. Although the risk for infection is highest in the first 3-6 months after transplant you will always be vulnerable for infection

There are many ways to stay healthy after transplant and avoid infections and it is important to know your transplant team's specific guidelines. The following guidelines are commonly recommended for transplant recipients

CONTACT

- Avoid close contact with people who have a cold or flu.
- Avoid crowds of people in a closed area, during cold or flu season, or when you are severely immune-suppressed.
- An annual flu vaccination is highly recommended
- Do not share eating utensils, cups and glasses with others since many viral illnesses are spread through saliva and mucous.
- Wash all eating utensils, cups and glasses in warm soapy water.
- Do not share razors or toothbrushes



HAND WASHING

Make use of good hand washing techniques.

- Before eating and preparing food.
- After going to the bathroom or changing diapers.
- After petting or playing with pets.
- Use warm water and soap and scrub forcefully for one minute.
- Be sure to scrub between your fingers and under your nails as well.
- Rinse and dry hands thoroughly.





PETS

- If you have pets, make sure that they are healthy and have regular check-ups at the vet.
- It is essential that their recommended vaccinations are up to date and deworming is done frequently.
- Wash your hands thoroughly after petting or playing with your pet.
- If your pet is ill, have him examined by your vet as soon as possible.
- Groom and/or bath your pet regularly.
- Do not let your pet lick you in the face.
- Do not handle animal waste. Ask someone else to clean area or use gloves and wash your hands after if no one else to help you.
- Do not clean bird cages, fish or turtle tanks, or change cat litter boxes.
- It is recommended that the following types of pets should be avoided.
 - Reptiles, turtles, frogs, hamsters and guinea pigs. These animals can carry infections that could cause you to become ill.
- The following animals are considered high risk animals
 - Caged birds in their homes, such as parrots, parakeets etc.
 - Recipients should avoid having any caged bird.
- Avoid stray or sick animals and exotic animals
- Discuss getting any new pets with your transplant team, especially in the first 6 months following transplant
- Contact your Transplant Team immediately if you are bitten by any animal.



GARDENING

- Your transplant team may request that gardening be avoided for about 3-6 months, until the immunosuppressive level is lower.
- What to wear when working in the garden.
 - Ha
 - Sunscreen
 - Gloves
- Wear gloves when working in the garden
- Wash your hands frequently when gardening.
- Avoid compost piles, wet leaves and rotting organic matter. These materials can carry mould which can cause significant respiratory infections in immunosuppressed patients.

SWIMMING

- Always wear sunscreen and a hat when swimming
- You may swim
 - in chlorinated pools
 - in the oceans or large lakes
 - After your wounds are healed and the water is safe.
- Avoid swimming in
 - Ponds or small lakes with standing water
 - Public hot tubs or jacuzzis should be avoided

SEXUAL ACTIVITY

Both men and women find their desire and ability to have sex returns after transplant.

- Ask your transplant team when it is medically safe for you to have sex.
- How quickly you are ready to have sex after transplant depends on how you feel.
- When you are ready it may help to discuss any concerns with your partner.
- Practicing safe sex is the best way to prevent sexually transmitted diseases (STD). You have an increased risk for getting STD because your immune system is suppressed.
- Safe sex practice include:
 - Having sex with only one partner
 - Washing your genitals before and after sex
 - Always using condoms
 - Avoid sex with anyone who has sores, a rash, or a foul discharge from their genitals
 - Avoid anal sex.



Becoming a living kidney donor

Carla Wilmans Transplant Manager Wits Donald Gordon Medical Centre Parktown, Johannesburg



he decision to become a living kidney donor can feel daunting and overwhelming, so before making this life changing decision, it is important to have as much information as possible.

Our kidneys are vital, life sustaining organs that do the following:

- Maintain the balance of chemicals in the body by filtering approximately 190 litres of fluid every 24 hours and removing waste products, toxins and excess fluid through urine
- Regulation of salt, potassium and acid:base balance
- Production of certain hormones and vitamins
- Activation of Vitamin D which regulates calcium and phosphate which is important for our bones
- Blood pressure control

Prolonged ongoing damage to the kidneys can lead to an irreversible condition called End Stage Renal Disease (ESRD). Once a person progresses to ESRD, the only way to treat this would be dialysis or kidney transplantation. If ESRD is left untreated, a person will become toxic and die.

Dialysis treatment occurs three times a week for four hours, and whilst some patients do well on dialysis, many patients find the treatment burdensome, they feel unwell, constantly tired and struggle to live a normal life. Unfortunately, not all patients on dialysis will be be a suitable candidate for a kidney transplant. However, if a patient does meet the criteria then the option of kidney transplantation should be explored as it frees a patient from the burden of dialysis, they will experience significantly fewer health problems, the risk of death is reduced, and they will experience an overall better quality of life.

Transplantation is therefore undoubtedly the best treatment of ESRD

A kidney can be transplanted from a deceased donor or a living donor. A living donor can be either a related living donor or a non-related living donor. A related living donor is someone genetically related to the patient, for example a brother, mother or cousin, whilst a non-related living donor is someone with no genetic link to the patient, for example spouse or close friend.

Currently in South Africa there are thousands of patients needing a kidney transplant and this need far outweighs the availability of deceased donor kidneys. Depending on a patient's blood group, the waiting time for a deceased donor kidney can be up to 10 years. This can be devastating for a patient on dialysis and sometimes a patient will die whilst waiting for a deceased donor kidney. This current situation in South Africa therefore drives the need for living kidney donation.

Decades of experience in living kidney donation demonstrates a very high success rate and excellent outcomes for both the recipient and the living donor.

The advantages of receiving a living donor kidney are:

- Significantly reduced waiting time on the transplant list
- The surgery is a planned, scheduled event at a time that is convenient to both the donor and recipient
- The recipient will receive a better matched kidney which reduces the risk of rejection

It stands to reason that receiving a better quality kidney, a better matched kidney, significantly less time on dialysis and a planned surgery will translate into a better outcome. It has been proven through years of research that the outcome of living kidney donation is better than that of deceased kidney donation. The wealth of experience in living kidney donation and research studies that have tracked living donors for over 20 years after they donated a kidney, have shown that there are no long term health risks, including kidney disease, associated with the donation of a kidney. The remaining kidney compensates and will take over the work of the donated kidney. In fact, the rigorous testing that occurs before donation means that living kidney donors are in excellent health at the time of the transplant and are therefore less likely to have complications.

Once a person has decided to donate one of their kidneys to a loved one, contact should be made with the living donor transplant coordinator at the transplant unit in the area so that they can facilitate the multi-disciplinary donor evaluation or workup. The workup is vital to ensure a successful transplant for the recipient and the donor. This workup will also minimise risks for the donor post-transplant.

The donor workup will be arranged by the living donor transplant coordinator and comprises a variety of tests including a crossmatch, general examination, physical examination, blood tests, cardiac and respiratory tests, surgical examination as well as a psycho-social interview. These are all equally important to ensure that there are no obvious risks to the potential donor and that by donating a kidney, the donor's health will not be affected. Support is provided every step of the way by the multi-disciplinary team of doctors and coordinators.

Quite simply, transplantation is the best treatment for many patients with ESRD and living kidney donation affords the best possible outcome.



Siblings Mark Hendra and Tanya Bothma share their organ and tissue donation journey

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e first came into contact with Tanya Bothma, a petite blonde, while gathering information for the tissue donor story on her brother, Centurion-based Mark Hendra (36). Mark a dynamic, vibrant young man tragically lost his life when his powered paraglider spiralled out of control one Sunday afternoon early in July 2017 at Sunderland Ridge, Centurion. Mark, IT businessman and flying enthusiast, was described by his brotherin-law Schalk Bothma as an adventurous soul with a big heart for his family, animals, children and the environment, and was somebody who committed fully to any project or hobby. "He loved living his life and didn't hold back on anything." Although Mark was not married and had no children of his own, he was very familyorientated and never missed a family celebration or birthday. Devastated, the family battled to come to terms with his death; especially Tanya. The siblings had been close, not only in age, but because Mark had always been on hand to offer comfort and reassurance to his sister, diagnosed at a very early age with chronic lung disease and bronchiolitis obliterans. But, based on the fact that that Mark was a registered organ donor already, the Hendra family had absolutely no hesitation in agreeing to donate some of his tissue for transplant purposes. Despite their overwhelming grief and loss, it was a privilege for them to consider helping someone else in need. Having been privileged to tell Mark's story, we requested final comment from his mother, Sr Judy Hendra. Judy informed us that Tanya had since been placed on the 'active' lung transplant list with

We later learned that Tanya had received the call alerting her to a lung donor who was a suitable match in early December. Tanya was immediately admitted to theatre and following a seven-hour procedure her family were relieved to hear that her 'new' lungs were working, she was no longer on mechanical support and the medical team were busy closing her chest...! From there Tanya was transferred to the intensive care unit where the surgical team reassured her family that the procedure had gone as well as could be expected but that the following 12 hours would be critical. Tanya remained in ICU where she was closely monitored. The family were advised to expect the following three months to be eventful with many ups and downs. The Hendra and Bothma family's text message read (with kind permission Judy Hendra):

the Division of Pulmonology, Groote Schuur Hospi-

tal subsequent to Mark's accident.

"It (the lung transplant procedure) is an incredible event in our lives and we will live by His Will and trust that from here it goes as well as the operation itself. Thanks to everyone for your prayers and words of strength and love. We are all very tired but grateful and at peace... At this time particularly, we salute and give thanks for each and every donor family, for their courage in agreeing to honour and respect their loved one's wishes, especially in the midst of their grief and pain. You can be so very proud of your loved one, and the legacy of love that they have left behind. The ultimate gift to another".

Tanya Bothma is the first person to receive a double lung transplant in Cape Town, and what makes this so unique and special is that Groote Schuur is the first hospital within the state sector nationally to perform a bilateral sequential lung transplant. This type of procedure is available in Gauteng, at a private hospital to patients on medical aid.



Since her procedure, Tanya has faced a number of challenges – a heart flutter necessitating a stay in ICU, medication, a fungal infection in the lungs requiring an-

other hospital stay, more medication to control the continuous nausea that makes it difficult for her to eat and gain the necessary weight. But...Tanya has normal lung function for the first time in her life and has increased her lung capacity from 400ml of air to 2L of air flow; she is doing exercises with her pulmonary rehab that she could only dream about doing before! There are still challenges ahead but Tanya is especially and eternally grateful for the donor, and so painfully aware of the pain and grief experienced by the family and friends of the donor since she has experienced both sides of this incredible process called organ donation.

"And finally, we trust in God and believe that His hand is in all of this, and one day we will understand why this amazing gift to one and at the same the tremendous pain for another, goes hand in hand. We urge you to consider becoming a donor, and of leaving a legacy of your own. Thank you".

The Hendra & Bothma families.



SPINNEKOP 2018 - endorsed by the Organ Donor Foundation of South Africa



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ric Kevin Nefdt is an Estate Agent, family man, aspiring adventurer and proud organ donor. Better known as Spinnekop (Afrikaans term for Spiderman), Eric completed the 2017 Comrades Marathon (wearing his Spidey suit) to draw attention to Heart Kids South Africa. This, after training for more than a year in rush hour traffic while wearing the superhero costume. His aim back then was to create awareness around congenital heart disease and to raise funds for a little girl named Elisa (at that time only 3 years old) who had sustained various surgery-related complications following 4 successive open-heart surgeries.

During August 2018, Eric (together with a small support crew)



will attempt to run from Pretoria to Lüderitz, a harbour town in Southern Namibia, to create awareness around organ and tissue donation. The 1,500km marathon-a-day adventure will be broken into some 42-50 days. Eric has made application to Guinness World Records and plans to set the record for the furthest marathon run in a superhero costume. The Organ Donor Foundation of SA, (ODF) in

collaboration with Centre for Tissue Engineering (CTE) has officially endorsed this event and is including the Spinnekop Project amongst its Organ Donor Awareness campaigns for August.

Why Spinnekop?

Organ donation is made possible by heroes – people who voluntarily decide to donate their organs and tissue for transplantation. Eric believes that anybody can make a difference. The Spiderman costume is simply a metaphor or symbol that anyone can be a hero and leave a lasting legacy through donation. Recent statistics reveal that less than 0.2 % of South Africans are organ donors.

www.health24.com/Medical/Heart/Heart-transplants/shocking-less-than-02-of-sa-are-organ-donors-20170418

"We (I) will run for the Organ Donor Foundation of South Africa, and my mission is to be a hero. We aim to educate people on how easy it is to become an organ and tissue donor. Our thinking is to take video-footage using GoPros daily and then post a short clip of what we've experienced at the end of each day. This will include interesting inserts of the terrain, i.e. desert scenery, wild horses close to extinction, ad-hoc street interviews along the route and footage of the journey's highs and lows. These video

updates will be shared publicly to Facebook including community pages along the route, and will be supplemented with local ODF street interviews and transplant recipients." said Nefdt.

Before Comrades:

 http://hometimes. co.za/2016/08/newsflashspiderman-spottedrunning-for-elisa/



After Comrades:

- www.runnersworld.co.za/motivation/why-i-ran-thecomrades-dressed-as-spider-man/
- https://maroelamedia.co.za/nuus/sa-nuus/pretoria-seeie-spiderman-draf-binnekort-tot-in-luderitz/

In the build up and preparation Eric is delivering talks at schools and campuses, sharing his "Make A Difference" message. To support his campaign, there will be a challenge and a link to the ODF registration page. Think ALS Ice Bucket Challenge, but with greater appeal (more fun and less ice). Eric, together with friends, donor recipients and 'celebrities' will promote organ donor awareness and more donor registrations.

