On Nov 5 2009, the Kidney Transplant Program at St. Michael’s celebrated its 40 year anniversary. The hospital performed its first kidney transplant in 1969. During the day a party was held at the hospital Marketeria for the recipients of kidney transplants followed at the St. Mikes transplant clinic. Over a 100 patients and family members attended, in addition to the transplant programs medical, nursing allied health, and other hospital staff. There was a very heartfelt video that was shown and a few of speeches by the staff. Many patients came up to the microphone to reflect on their own personnel experiences. A number of patients reconnected with each other after a long absence.

During the evening, the celebration continued with an event held at the Downtown Marriott. Thanks to the organizational skills of Nordia Hynes with support by the Diabetes Comprehensive Care Program and our Pharmaceutical partners it was a tremendous success. The Transplant program was showcased for our guests which included representation from our partner dialysis and transplant hospitals, The Kidney Foundation of Canada, Trillium Gift of Life, the HLA labs, The Ministry of Health and colleagues from St. Mikes. A number of former physicians and nurses from the program were also present.

Dr. Marc Goldstein was the M.C. and invited speakers included former SMH Transplant Nephrologists: Drs. Ed Cole and Bob Bear, SMH Transplant Surgical Director, Dr. Rob Stewart and Transplant Director, Dr. Jeff Zaltzman. All speakers highlighted the many accomplishments of the transplant program over the last 40 years. The guests had the opportunity to see the video and were treated to an excellent Key-note address from Dr. Sam Shemie. Dr. Shemie is a pediatric intensive care physician from Montreal who has dedicated his career to the promotion of organ donation. He gave an very insightful presentation on “Defining Death”, a topic very pertinent to organ donation.

The 40th anniversary of the Kidney Transplant Program at St. Michel’s was an important milestone. It was a joy to reflect on the many clinical and academic achievements.
FROM THE EDITOR’S DESK...

In a family’s life some years tend to stand out from the others. 2009 was one such year. The Transplant Program celebrated its 40th anniversary, and it was a record year with 127 kidney transplants performed. The waiting list for a transplant is actually shrinking. Many new and exciting programs to increase transplant numbers are maturing. Terms like dominos, paired exchange, list exchange, desensitization, flow crossmatches and donor-specific antibodies are part of the common medical jargon. St. Michael’s is proud to be at the forefront of modern transplantation medicine, ever in the service of our more than 1200 patients.

In this issue of Transplant Digest we have, for the first time, two articles from patients including an engaging short story from one of our kidney donors. This edition focuses on infections, with a description of tuberculosis by Dr. Kevin Gough, our Infectious Diseases consultant, and a discussion of cytomegalovirus infection in our ever-popular post-transplant chat. Our dietician Karen Burleigh provides all the detail you need to know about potassium. Some advice is also provided about bringing in donors from abroad. As always, feedback and comments are welcome.

Dr. Ramesh Prasad,
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 Disclaimer Note:
Views presented in this newsletter are those of the writers and do not necessarily reflect those of St. Michael's or the University of Toronto. Subject matter should not be construed as specific medical advice and may not be relevant to individual patient circumstances. For all questions related to your own health please contact your health care provider.
MY POTENTIAL KIDNEY DONOR LIVES OUTSIDE CANADA - WHAT SHOULD I DO NEXT?
By: Maureen Connelly, RN, BScN, C.Neph.C
SMH Living Donor Nurse Coordinator

This is a common question that is asked by patients who are in need of a kidney transplant. It does not have a simple answer.

The good news is that:
• There is a reimbursement program for some out of pocket expenses that donors may qualify for. The program called PRELOD – the “program to reimburse out of pocket expenses of living donors”, is provided by the Ontario government. It is managed by the province’s organ and tissue donation agency called Trillium Gift of Life Network. Your donor needs to save all receipts for travel to be reimbursed.
• The cost of the tests done here at St. Michael’s, the surgery and hospitalization are covered through your Ontario Health Insurance Plan (OHIP).
• You can receive a transplant sooner with a living donor versus waiting on the transplant waiting list (months versus years).
• If your donor lives near a transplant centre, we can arrange to have your donor seen closer to home before traveling here to Canada.

The downside of all this is that it is not an easy process. Here are some things to consider:
• Your donor needs to see a doctor and do some blood and urine tests before coming here. These tests have to be paid for by the donor in many countries.
• Can your donor read/speak English? If not, it can make it more difficult, but not impossible to relay information to them. Once they are here the hospital provides an interpreter for their appointments with the health care team.
• Will your donor be able to see a doctor after the surgery when they go home? It is important for donors to have a yearly check up with a doctor after kidney donation surgery.
• Can your donor afford to pay for a flight to come here and wait to be reimbursed after the surgery?

• Does your donor need to apply for a visa to travel to Canada? Your donor may not be able to get a visitor visa. Citizenship and Immigration decides this, not the Hospital.
• Once your donor is here, further testing may show health problems that did not show up in the testing done back home.

Here are the steps involved:
1) You need to be medically cleared to receive a transplant.
2) The donor needs to be the same blood type as you or blood group O.
3) Provide the name address, date of birth and the relationship of the donor to you to the living donor nurse coordinator.
4) An information package will be mailed directly to your donor. This will include:
   • Information on living kidney donation.
   • A health questionnaire to complete and mail back.
   • A letter of direction for the donor’s family doctor with a list of tests required.
   • A donor declaration to be signed and witnessed. The declaration states the donor is not being paid to be a donor because commercial kidney donation is illegal in Canada.
5) The test results need to be sent here for review by the kidney donor specialist. If the test results appear normal, a letter will be provided to support your donor’s visa application. The donor should apply for a six month visa to allow enough time for the evaluation, surgery and recovery. The hospital will not provide any letters of support for your donor to apply to stay in Canada.
6) If your donor’s tests results are abnormal, a letter will be provided for the donor to take to a doctor for follow up. You will be advised if your donor has been declined as a donor.
7) The donor should obtain travel medical insurance for any potential accident or injury not related to the kidney donation surgery.

While all of this may seem overwhelming, we are available to answer any questions you have.

For further information contact the Living Donor Program at 416-867-3676.
“Three cuts.” Dr Weinstein is my kidney specialist.
I look down at my belly.

“Three cuts will suffice. Three cuts, yes. It’s laparoscopic surgery: the surgeon will make two half-inch cuts—one for instruments, and one for the camera—and one four-inch cut so he can reach in and get the kidney.”

“You reach in with your hand?”

“Yes. The surgeon does.”

They do two hundred kidney transplants a year in Toronto.

“Scarring excellent. Back at work in two weeks. Outcomes excellent.”

Months later, I meet Dr Honey.

“Yes, I’m your surgeon. Two little scars, one a bit longer. Can’t cut into the belly button because the bowel’s in the way. Wish we could though. It would mean one less scar. So you’re going to give up a kidney. No dance class for a while eh?”

Bright light irritates my eyes. My left groin feels raw. The nurses wheel me to the elevator. I arrive in room 8022 and call home.

Three to five days in hospital. Room air-conditioned. Nurse Anna, twenty-six, brings me a glass of ice chips—no popsicle as I am on a liquid diet.

Mind skips. Call mother. She walks in with my father. I tell them to bring their chairs in close. It’s good. Tony has the kidney. I am well.

You will have to undergo many tests. The tests will determine whether or not you will be medically cleared for the transplant. Glucose tolerance test. Twenty-four hour urine test. Twenty-four hour blood pressure test, pap smear, mammogram, ultra-sound, cross match, CT scan, chest x-ray, psychosocial evaluation, ECG, hepatitis B & C, kidney function, liver function, anemia and HIV.

I wake up on Thursday August 13 at 5:25 am by my Uncle Bill’s alarm clock. He sees me to the waiting taxi. I arrive at St. Michael’s at 6:05. Five minutes later I am in the Sullivan Lounge with twenty others. No one talks. The lounge is done up to look like a large living room with blue and gold couches, ornately framed paintings, a chandelier and a fireplace. I open my Trollope and stare at page 315.

7:00 am. I am in the pre-op waiting area—a cavernous hallway—sitting in a large padded chair, like a barber’s chair only bigger. I am wearing slippers made of paper and a thin hospital gown. My glasses are gone. Medical students and residents arrive in scrubs with backpacks. I watch them sign in. Voices echo.

“Hi, Ms Graham! I’m Dr Wong, the anesthesiology resident!” She sits in the next chair, takes a quick medical history and asks if I have any allergies. Another buoyant student sits to my right and shows me the surgical consent form I signed on May 15. I read it and nod.

A Personal Care Attendant walks me down the hall. Gigantic steel sinks line one wall.

“Are those the sinks the surgeons use to scrub before surgery?”

“They look rusty.”

The PCA laughs.

“Oh that’s not rust,” she says. “It’s iodine.”

“I can’t see without my glasses.”

“That’s just as well.”

We continue down the hall.

“You have the biggest operating room in the hospital. OR 11.”

We step into the enormous room. There are no windows and no observation gallery. The walls are painted green. Three or four video screens float above the operating table. They are attached to the 30-foot high ceiling.

Dr. Wong is already there, as are several medical students, residents, and nurses.

“Are you sure you don’t have any allergies?” says Dr Wong.

“Yes.”

“This is your operating table. The top layer contains jelly. You’ll feel it take the shape of your body when you lie down.”

The table is narrow, soft, and cold. I ask her if there will be music during my operation.

“It depends on the surgeon,” she says. “They’ve done studies that show that surgeons perform better when they choose the music.”
The surgeon shakes my hand as I lie prone on the table. I’m meeting him for the first time. Plans have changed: Dr Honey will perform Tony’s transplant later in the day.

“I’m Dr. Pace. Do you have any questions?”

“Will this operation be recorded?”

“No. It’s too routine.”

“It’s not routine to me!”

The company laughs.

“It’s better for you that it’s routine. You wouldn’t want to be number one—or in the first hundred,” he says. “Ms. Graham, we want you to be comfortable. You’ll stay as long as you need to—until Sunday or Monday.”

The attending anesthetist looks down at me with a Patch Adams grin. He squeezes my arm. “We’re here to take care of you. It’s going to be great.”

Anxiety is an obstacle. First, yours. Then your family’s—or that of whatever sort of makeshift family you may have. Your loved ones will not like it at first. Mine said, “You are not responsible for Tony’s life.” Give them time. Suggest that they see Steel Magnolias.

Can’t eat till you fart. Bowels shut down by anesthetic. I get a liquid dinner. Hot broth, hot tea, cold jello and water. It’s Thursday night. No food for twenty-four hours. My father says, “What kind of soup is it?” God only knows.

Speaking of God, I thank her. Thank God for success. Tony doing well. Thank God. I write it down. Thank you. Thank you. Tony is ok.


1988: I take my first yoga class, get my music degree and meet Tony at a screening of slides from India. Tony hands me a book: Autobiography of a Yogi. Over the years I see two of his shows. He influences me, and encourages me to deepen my yoga practice. We lose touch.

When I hear he is in need I read, ponder, read, talk, read, make the first move.

I am too shy to contact Tony directly. On Friday August 8, 2008, I ask my uncle to speak to Tony’s father. David Molesworth relays the message, and calls me to say that Tony is interested. Three days later, I call Tony from my parents’ country retreat near Bewdley. My forty-ninth birthday.

I haven’t spoken to him for seven or eight years.

“What made you want to do this?”

“Jean Milner told me you had been on the waiting list for five years. She said it was confidential.”

Mrs. Milner is my uncle’s neighbour—a woman in her eighties—a scientist who has meditated all her life. It was she who introduced Tony and me at a screening of the slides of her trip to India in 1988.

“It’s all right. I’m not concerned about confidentiality.”

“I’m doing it because I wanted to help a friend.”

“Thanks.”

August 13, 2009 3:27 p.m. Emily and Azziz and Raj visit me in my room. Emily is a radiology resident. Azziz is a fourth-year medical student. Raj is a chief resident. My parents and Uncle Bill are in the room but Raj addresses himself to me.

“The surgery went well,” he says. “It took about four hours—7:45 to 12:00. Everything went great.”

“No complications?”

“None. The kidney turned pink when it filled up with blood and it started working right away.”

Started working right away. Thank you kidney.

After surgery you must walk. Walk, walk, walk. Down the hall, down the street, around the schoolyard, Edward’s Gardens, 1k, 2k, 3k, 4k, 5k. Walk every day. Kidney growing bigger. This will be your routine: sleep, eat, walk.

It will take from three to five weeks to fully recover. At first you will feel weak. You won’t be able to do a headstand. Experiment with your body. Ask it what it can do that day. Ask it what it would like to eat. Find a friend to cook for you and to take you for your walks. Eat popsicles.

Thursday September 3, 2009. Tony and I see Enlighten Up! A Skeptic’s Journey into the World of Yoga at the Cumberland Four. Tony drops his wallet and strains to pick it up. “It’s the stent,” he says, “a plastic tube they insert temporarily to hold the ureter open until it heals. Dr. Honey will remove it in another week.”

After the film, we sit at a sidewalk café, order hot chocolate and discuss the film. Tony gives me a book by Paramahansa Hariharananda. It’s a sunny day in Yorkville. I am a lucky woman.
Tuberculosis (TB) is an infection caused by the bacterium *Mycobacterium tuberculosis*. Although it is best known for causing lung infection, it can also disseminate and cause disease throughout the body, particularly in patients who are immunosuppressed, including renal transplant patients.

Tuberculosis is found everywhere in the world, though some countries have much more TB than others. TB rates are very high in African and Asian countries and although rates are lower in Canada, there were 1547 new cases of TB in Canada in 2007. Ontario has the highest number of cases in Canada at 654 new cases reported in 2007.

Tuberculosis is most often transmitted from one person to another through infected respiratory secretions. When a person with active TB in their lung coughs or sneezes, TB bacteria are discharged into the air where they can then be breathed in by another person, and the infection is spread.

When TB enters the lung of a new host, their healthy immune system works to contain the infection in the lung, the bacteria remain dormant, and active TB does not usually develop. This condition is referred to as “latent tuberculosis infection” and occurs in about 90% of cases of TB exposure. Whereas people with a normal immune system have a 10% lifetime risk of ‘reactivating’ latent TB and developing active TB, patients with a compromised immune system (e.g. HIV infection, those receiving chemotherapy and immunosuppressant medications), have a risk of 10% per year of reactivating latent TB.

At St. Michael’s, all renal transplant patients are tested for latent TB before transplantation. This will tell your doctor if you have been exposed to tuberculosis at any time in the past and therefore, at increased risk for developing active TB when you take immunosuppressant medications. The tuberculin skin test (TST) involves having a doctor or nurse inject a small amount of protein under the skin and measure for a skin reaction 48-72 hours later. If you have been exposed to TB in past, the skin at the injection site will become red and indurated (slightly raised). You cannot develop TB by having this test done. A chest X-ray is also done looking for signs of latent or active TB infection.

**Latent** TB, if present, is treated with 9 months of a medication called isoniazid (INH). Your transplant is not usually delayed because of a positive TB skin test, but you will require treatment.

The signs and symptoms of active tuberculosis are variable and depend on which parts of the body are involved. TB in the lung typically causes persistent cough, fever and night sweats, with bloody sputum, loss of appetite, and weight loss occurring in more advanced disease.
TB outside of the lung can present with swollen lymph nodes, or headache and neck stiffness, or bone or back/spine pain depending on where the infection is. TB in the urinary tract can cause white blood cells to appear in the urine suggesting infection, but tests for the usual causes of urinary tract infection are negative.

Active TB is diagnosed by testing samples from areas of suspected infection (e.g. sputum, blood, urine, bone, spinal fluid, etc). Active TB is usually treated with 4 drugs for 2 months, followed by 2 drugs to complete a total of 6 to 12 months of treatment, depending on the site and extent of disease.

TB medications and transplant medications can interact, altering drug levels in your body and potentially increasing toxic effects of the drugs. Your transplant team and TB specialists will follow you closely if you are being treated for latent or active TB to make sure that you are responding to treatment and that you are tolerating the medications well.

Although untreated TB can be fatal, the good news is that TB is both treatable and curable. Detecting latent TB infection before your transplant will allow proper treatment to be given and will reduce the risk of developing active TB while taking immunosuppressant medications.

References:


POST-TRANSPLANT CHAT
By: Jennie Huckle, RN, Fernanda Shamy, RN, Thelma Carino, RN

CYTOMEGALOVIRUS (CMV)

1. What is Cytomegalovirus or CMV?

It is a common virus infecting a lot of people worldwide that belongs to the same family as chicken pox and infectious mononucleosis. It is quite common for donor and/or recipient to be positive at time of transplantation. CMV infection is rarely serious in healthy kids and adults but can be a problem for certain high risk groups whose immune system has been weakened by disease or drugs such as in organ transplant recipients.

2. How do I know if I have the virus in my blood?

This virus can be detected by finding antibodies or antigens in the blood. If antibodies are detected, this means that the virus is present but it is inactive. This virus may reactivate and causes illness when the immune system is weakened, as in kidney transplant recipients. If the antigen is present in the blood, however, this means that the person has active viral infection either from newly acquired virus or re-activation of the virus.

3. What are the signs and symptoms of active infection from CMV?

Some signs and symptoms are fever, unusual fatigue or tiredness, muscle aches, flu like symptoms, and headaches. This is called “CMV viral syndrome”. Rarely, the virus can cause “tissue invasive disease”, with inflammation of the esophagus, colon, liver, lungs, and other organs including the transplanted organ itself.

4. How is the virus transmitted?

Transmission can occur from mother to her fetus or newborn, as well as by sexual contact, blood transfusion and organ transplantation. Direct person-to-person transmission can occur in daycare centres. At least 60% of all people have had the infection by the time they become adults, but their immune system can keep the virus quiet within their bodies.
Will CMV infection affect my transplanted kidney?

Active CMV infection can cause injury to the kidney. The virus may form lesions in the kidney tissue resulting in decreased graft survival. Many doctors believe that CMV infection can cause or accelerate rejection of the kidney. The kidney may also become injured from dehydration or volume depletion. However, this is not common, and most of the time patients recover from CMV without serious kidney damage. Most CMV infection occurs between 1 and 6 months after the transplant. So it is very important to do your bloodwork very regularly, keep all your clinic appointments, and promptly report to us or the emergency room if you are feeling unwell so that early action can be taken.

Do you know if I have had CMV infection before the transplant?

Yes. The transplant clinic checks your CMV antibody “status” as positive or negative before the transplant. The status of the donor is usually known as well. This knowledge helps the transplant team design your transplant medication and monitoring regimen.

How is CMV infection detected after the transplant?

Especially between months 1 and 6 after the transplant, a very high index of suspicion is kept about the possibility that you might get an infection from CMV. If you are a “CMV mismatch”, meaning your donor was positive but you are negative; or if you have had more powerful immunosuppressive drugs than usual, such as to treat or prevent a rejection, then your chances for developing CMV infection are higher. Especially when you have symptoms of CMV, a low WBC count suggests of active infection. Infection itself is confirmed by doing CMV antigen testing. It is very important that you come to the hospital early in the day, in order for the lab to accept your blood specimen for CMV testing. If you come late, a day will be unnecessarily lost.

Can Cytomegalovirus infection be prevented? How is it treated?

For high risk patients, you may be prescribed an antiviral drug such as valganciclovir to be taken daily for 3 to 6 months for prevention. If you have already had an infection after the transplant, even if you were not high risk earlier, you may be prescribed this drug for prevention. Some doctors may prescribe an IV immunoglobulin to give you temporary immunity against CMV. CMV infection can also be treated with oral valganciclovir, at higher doses. Sometimes treatment with IV ganciclovir is needed, and you may need to be admitted to the hospital. Very rarely, CMV can be resistant to these drugs and then agents like foscarnet may need to be used.
WHY A LOW POTASSIUM DIET MAY STILL BE NEEDED AFTER A KIDNEY TRANSPLANT
By: Karen Burleigh, MSc., RD

Sometimes kidney transplant recipients expect their transplant to work well right away, so they can be free of diet restrictions. Sometimes the transplant does work right away, and the patient is still advised to follow a low potassium diet. It can be frustrating or disappointing to discover that your kidney isn’t keeping your blood potassium levels under control and you still have to avoid those high potassium foods you love. Here are answers to some questions transplant recipients ask about a low potassium diet:

Why is a high blood potassium level dangerous?
Potassium is involved in the contraction and relaxation of muscles including the heart muscle. When blood potassium levels drop very low or become very high, it can cause muscles to contract in a disorganized way. If the heart does not contract and relax according to the proper rhythm, the heart can stop working and we have a “heart attack”. So very low or very high blood potassium levels are serious problems. Luckily you can prevent a heart attack by closely following the low potassium diet, when your blood potassium levels start increasing above 5.0 mmol/L.

What causes the blood potassium levels to increase after a kidney transplant?
Several factors can prevent the kidney from excreting enough potassium to keep the blood potassium levels within the normal limits (3.5 – 5mmol/L):

1. The immunosuppressant medications Prograf, Advagraf, and Cyclosporine can cause your blood potassium levels to rise.
2. Some blood pressure medication eg. Altace and the antibiotic Septra can also cause blood potassium levels to rise.
3. The diet is providing more potassium than the kidney is able to excrete.
4. High blood sugar levels cause blood potassium levels to rise.

The kidney transplant may be able to excrete some potassium, but not as much potassium as we are obtaining from our food. Eating several high potassium fruits, vegetables, juice and dairy products in the same day can give our body more potassium than the kidney can remove from our blood. The chart at the end of this section shows the amount of potassium found in different foods and juices, in typical portions of foods.

Which juice is safe to drink when blood potassium levels are high?
Preferably none. Generally we only eat 1-2 fruit at one time. But we may use 2-4 fruit to make 1 cup of juice, so drinking juice (even from low potassium fruits eg. apples, pineapples, and grapes) can give our body much more (2-4 times more) potassium than eating the fruit itself. So we recommend eating low potassium fruit, and drink gingerale, 7 Up, Sprite, or Crystal Light instead of drinking juice when our blood potassium levels are high.

Why are raw spinach and mushrooms on the “Low Potassium” list to choose, but cooked spinach or mushrooms are on the “High Potassium” list to avoid?
Cooking spinach and mushrooms leads them to shrink. So 4-5 fresh small raw mushrooms may fill 1 cup, but 4-5 cooked mushrooms may only fill ¼ cup. Often when we eat cooked mushrooms or spinach, we eat much more than ¼ cup. Therefore, we obtain much more potassium from the cooked vegetable because we’re eating much more actual mushrooms or spinach leaves when they’re cooked than when we eat them raw.
**Why are some canned fruit lower in potassium than fresh fruit?**

In the canning process, the fruit is cut up, and sits in the canning water or juice. Then potassium leaks out of the cells of the fruit into the canning water or juice. The smaller the pieces of fruit, the more potassium is lost into the water or juice. So the amount of potassium left in the canned fruit is less than in fresh fruit. Since potassium leaks out of the fruit into the canning water or juice, it’s not advised to drink that canning water or juice.

**Why is it better to eat boiled potatoes than baked potatoes or French fries?**

Just like the potassium is lost when fruit is cut up and sits in water, potassium is also lost from potatoes when they are peeled and cut up into chunks, and boiled in water. But no potassium is lost when a potato is baked or when raw potato is fried to make French fries.

It is recommended to peel potatoes, cut them into ~1 inch cubes, and boil them in a pot of water for 5-10 minutes. While boiling, potassium leaks from the potato into the water. Then throw out that cooking water and add fresh water to the pot. Continue boiling the potatoes until cooked. In this way, more potassium is lost from the potatoes to make them much lower in potassium. It’s not a good idea to cook the potato in soup or stews, because the potassium will leak out of the potato into the soup or stew. Instead, fully cook the potatoes in their own pot of water, then you can mash the potatoes, fry them like “hash browns” or add them to soup, stews, or curries.

**Why are we advised to limit milk, yogurt and ice cream to 1 cup per day when blood potassium levels are high?**

Remember, 1 cup of yogurt or milk gives us as much potassium as we find in 1 banana! (see table on following page). Because the potassium is dissolved in the water part of the milk, (not in the fatty cream part), there is much less potassium in cream and in cheese. So having Half and Half on our cereal will give less potassium than using milk. We can also eat cheese instead of yogurt for a snack.

For more advice on a low potassium diet, contact the Registered Dietitian at your clinic. You can also look up the nutritional content of the foods yourself online at:

http://www.nal.usda.gov/fnic/foodcomp/search/
<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>PORTION SIZE</th>
<th>WEIGHT</th>
<th>POTASSIUM (MG)</th>
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<tr>
<td>green snap beans - boiled</td>
<td>1/2 cup</td>
<td>2 oz.</td>
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<td>1/2 cup</td>
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<td>broccoli - raw or steamed</td>
<td>3 flowerettes</td>
<td>1 oz</td>
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<td>1 cup</td>
<td>1 oz.</td>
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<tr>
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<td>1 cup</td>
<td>6 oz.</td>
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<td>white mushrooms - fresh</td>
<td>1 cup sliced</td>
<td>2 1/2 oz</td>
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<td>white mushrooms - stir fried</td>
<td>1 cup sliced</td>
<td>3 1/2 oz</td>
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</tr>
<tr>
<td>cantaloupe melon - fresh</td>
<td>1 cup cubes</td>
<td>6 oz.</td>
<td>427</td>
</tr>
<tr>
<td>banana</td>
<td>1 medium</td>
<td>4 oz.</td>
<td>422</td>
</tr>
<tr>
<td>milk 2% MF</td>
<td>1 cup</td>
<td>8 oz.</td>
<td>446</td>
</tr>
<tr>
<td>Rice drink with added calcium</td>
<td>1 cup</td>
<td>8 oz.</td>
<td>65</td>
</tr>
<tr>
<td>milk 2% MF</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>223</td>
</tr>
<tr>
<td>Half and Half creamer</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>146</td>
</tr>
<tr>
<td>yogurt 3% MF</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>194</td>
</tr>
<tr>
<td>yogurt skim 0% MF</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>213</td>
</tr>
<tr>
<td>ice cream - regular fat</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>131</td>
</tr>
<tr>
<td>ice cream - light</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>158</td>
</tr>
<tr>
<td>Mozarella cheese - regular fat</td>
<td>1 inch cube</td>
<td>1 oz.</td>
<td>22</td>
</tr>
<tr>
<td>Swiss cheese - regular fat</td>
<td>1 inch cube</td>
<td>1 oz.</td>
<td>22</td>
</tr>
<tr>
<td>cottage cheese - 1% MF</td>
<td>1/2 cup</td>
<td>4 oz.</td>
<td>97</td>
</tr>
<tr>
<td>nuts - pecans</td>
<td>20 halves</td>
<td>1 oz.</td>
<td>116</td>
</tr>
<tr>
<td>nuts - cashew, roasted</td>
<td>18 nuts</td>
<td>1 oz.</td>
<td>179</td>
</tr>
<tr>
<td>almonds, peanuts - roasted</td>
<td>24 nuts</td>
<td>1 oz.</td>
<td>206</td>
</tr>
<tr>
<td>popcorn - microwave popped</td>
<td>3 cups</td>
<td>1 oz.</td>
<td>62</td>
</tr>
</tbody>
</table>
The Toronto Chapter of the International Transplant Nurses Society (ITNS) shared its experience in ITNS Chapter Development at a dinner event held in Montreal, Quebec this past September. Galo Meliton, RN, Renal Transplant Nurse Coordinator at St. Michael’s and current (Interim) President of the ITNS, gave a talk to Transplant Nurses and Transplant Coordinators from several Transplant Centers in Montreal outlining the steps in ITNS Chapter Development. This dinner event was kindly sponsored by Pharma Canada, Inc.

ITNS was founded in 1992 as the first professional nursing organization to focus on the professional growth and development of transplant nurses, coordinators and Allied Health professionals who are interested in and participate in the care of solid organ transplant patients. ITNS is committed to the promotion of excellence in transplant nursing through the provision of educational and professional growth opportunities, interdisciplinary networking and collaborative activities, and transplant nursing research.

The Toronto, Ontario ITNS Chapter is the first chapter outside of the U.S, and it has a tri-Hospital Executive, with representation from St. Michael’s, Toronto General Hospital and Sick Children’s Hospital.

We wish the Montreal Transplant Nurses Group all the best in developing their own ITNS Chapter!!!

For more information on ITNS visit [www.itns.org](http://www.itns.org)

### ABOUT THE TRANSPLANT ADHERENCE PROGRAM

The Transplant Adherence Program is a national, bilingual education program encouraging and supporting kidney recipients’ adherence to prescribed post-transplant treatment regimens. Registration and membership are free and can be completed online at [www.transplantadherence.ca](http://www.transplantadherence.ca) or by telephone at 1-877-691-7455.

Its sister program, Transplant Companions is aimed at pre-transplant kidney patients and follows an interactive, information workshop model. The program is now offered at 14 Canadian transplant and care centres.
CURBING THE COST OF POST-TRANSPLANT PRESCRIPTIONS AND OTHER MEDICAL EXPENSES

By: Gordon Haslam

After your transplant, the cost of anti-rejection drugs and other necessary medications can be quite high, sometimes in excess of $500 per month or even more. Even if you qualify for the Trillium Drug Program, the deductible, which is based upon your household income, can be equally large.

Under the Income Tax Act, you may qualify for the medical expense credit, however, the credit (non-refundable) is only 15% of the amount you spent in excess of another deductible amount. In 2008, the deductible was equal to the lesser of 3% of your total income or $1,962. In other words, if you earn $50,000 per year, you would be eligible for a tax credit of 15% of the amount of medical related expenses you incur that are in excess of $1,500 ($50,000 x 3%). If you had spent $2,000 in medical related bills, your credit would be a mere $75.

Group insurance of course is another option; however, with the current status of the economy, a great deal of employers, especially small businesses have cut back on benefits, leaving you to pay your medical bills with after tax dollars. Using the same example above, to pay the $2,000 in medical bills, you would have to earn in the neighbourhood of $2,400 before taxes to cover the costs.

What if there was a better way? There is. It is called a “Health Spending Account” (HSA) or “Personal Health Services Plan” (PHSP). A Health Spending Account is a great tool for transferring the costs of any medical services performed by or prescribed by a licensed practitioner to your business or your employer. In other words, through the use of an HSA, you can claim items such as Chiropractors, Opticians, eyeglasses, orthodontics, massage therapy, prescription drugs etc. for yourself and any of your immediate family members to your business or your employer to be paid with pre-tax, corporate dollars. One of the most significant benefits of this structure is that the payments made to the trust are not taxable income to the recipient and are 100% tax deductible for the business.

To understand an HSA, think of it as a simple bank account (held by a trust company). Each month the corporation ‘deposits’ funds into the bank account, and then when you incur a medical related expense, you submit the receipt to the trust company who then reimburses you from the bank account you had setup. Unlike group insurance, if you have funds remaining in the bank account at the end of the year, those funds belong to you and can be used in future years to pay for other medical expenses, with insurance any excess funds are the property (income) of the insurance company.

Your HSA must have a pre-defined rate of contribution, meaning you must decide how much money the business will ‘deposit’ each month into your account, this amount can be adjusted once per year. You can also make lump-sum deposits. In addition to the amount deposited, the Trust Company will also charge a small administration fee, generally 10% for their services. This administration fee is also tax deductible for the business. For example, if your company were to make deposits of $500 per month, they would actually incur a tax-deductible expense of roughly $550.

If you are qualified for the Trillium Drug Program, the addition of an HSA can be of great benefit. Trillium will still calculate your deductible amount based upon your household income, however, the amounts you have to pay net of Trillium, plus any other medical related expenses can be reimbursed by the HSA with no tax consequences. Your tax savings can amount to hundreds, if not thousands of dollars. For more information contact Gordon Haslam, sales@ledgers.com.
Upon the shoulders of giants is progress made. This was my overall impression of the function held recently that commemorated the 40th Anniversary of the Renal Transplant Program at St. Michael’s. It was indeed enlightening and humbling for me to meet, in one case for the first time, those physicians who had built up this great program from scratch. I doubt it would have been possible to accomplish everything we have until now without the efforts of these pioneers. The function was a celebration of the great successes we had, and at the same time a reminder of all the work that still remains to be done. To take up the challenge of one speaker, I hope I can be around to be part of these successes for the 50th, 60th, and subsequent celebrations.