BRIEF REPORT

Instructions for kidney recipients and donors (In English for medical providers and in Arabic for patients and donors)

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ABSTRACT

Medical providers are often asked by their kidney recipients and donors about what to do or to avoid. Common questions include medications, diet, isolation, return to work or school, pregnancy, fasting Ramadan, or hajj and *Omrah*. However, there is only scant information about these in English language and none in Arabic. Here, we present evidence-based education materials for medical providers (in English language) and for patients and donors (in Arabic language). These educational materials are prepared to be easy to print or adopt by patients, providers, and centers.

Key words: Arabic, education, instructions, kidney donors, kidney recipients, lifestyle, Muslim

INSTRUCTIONS FOR KIDNEY GRAFT RECIPIENTS (PROVIDERS' INFORMATION)

1. Medications:
   - Immunosuppression medications:
     - These medications are to protect against rejection of the transplanted kidney.
     - These medications include tacrolimus (Prograf or FK) and mycophenolate mofetil (MMF) (CellCept) and prednisolone.
     - These medications are to be maintained for the life of the graft.
     - Stopping these medications will lead to rejection and possibly loss of the graft.
     - These medications must be taken at the exact time prescribed by your doctor.
   - Prophylactic antimicrobial medications:
     - These medications are to decrease the risk of opportunistic viral, bacterial, and fungal infections.
     - These medications include valganciclovir (Valgan), nystatin, and Bactrim.[1,2]
2. Medication side effects:
   Tacrolimus (Prograf or FK) may cause diabetes, hypertension, alopecia, tremor, and renal insufficiency. MMF (CellCept) may cause low white blood count. Prednisolone may cause high blood sugar.[1-3]
3. Clinic follow-up and laboratory testing:
   - You need to keep your appointments for clinic visits and laboratory testing.
   - Do not take tacrolimus (Prograf or FK) in the morning of your labs but take it right away after the blood draw.
   - Remember to have an appointment for the stent removal, which is typically removed by urologist in

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1–2 months after transplant. Stent removal does not require overnight stay nor general anesthesia.
- Remember that staples are typically removed 3 weeks after the surgery.

4. Potential complications of renal transplant include rejection, infections, internal urine leak from ureter, renal artery stenosis, ureteric stricture, diabetes, tremor, recurrence of the original disease, bone disease, or cancer such as lymphoma.
5. Diet: Renal transplant recipients frequently encounter significant weight gain after transplantation. To prevent gaining weight after transplantation, you are strongly advised to balance the calorie intake with especial attention to the amount of carbohydrates consumed. You are advised also to drink enough fluid (2–3 L/day) but excessive fluid intake is not needed.[1,4-13] Low salt diet is advised in most of the patients. Magnesium- and phosphorous-rich diet are often recommended. Potassium restriction is not required in most of the patients.
   Examples of magnesium-rich food: dark leafy greens, seeds, beans, fish, whole grains, nuts, dark chocolate, yogurt, and bananas.
   Examples of phosphorous-rich food: protein-rich foods such as meats, poultry, fish, nuts, beans, and dairy products. Some bottled beverages may also have high content of phosphate additives.
   Examples of potassium-rich food: leafy greens, potato, dates, banana, tomato, orange juice, and cardamom.
6. Exercise and sports:
   - Exercise is associated with improved quality of life and patients are encouraged to follow regular exercise program.[14]
   - Walking is encouraged in the immediate postsurgical period.
   - Noncompetitive sports (such as cycling and jogging) can be resumed once the surgical pain resolves (after 1–2 months).
   - Competitive sports (such as boxing and karate) should be avoided because of risk of direct trauma to the kidney.
   - Driving can be resumed once the surgical pain resolves (after 1–2 months).
7. Work/school: Most of the renal transplant recipients will be able to go back to school/work in 2–3 months. Strenuous activity and exposure to the hot weather should be avoided.[1,15-19]
8. Isolation: You should avoid contact with sick. You should wash hands frequently and not share personal items with family. You are also advised to avoid crowded area; however, strict isolation in a single room is usually not necessary as it can lead to social isolation and depression.[1,15-19]
9. Fasting during Ramadan: Fasting Ramadan does not adversely affect kidney function as shown by several small studies. In these conditions, fasting might be allowed after the first 1–2 years. Special care might be given to the timing of medications and drug levels. You may try initially to fast every other day then advance as tolerated. You must break your fast if you feel exhausted or dehydrated. You must consult with your nephrologist before attempting to fast.[1,20-35]
10. Fasting of renal transplant patients with diabetes: In addition to the previously mentioned precautions, patients with diabetes on medications or insulin need to adjust their medications or insulin requirement, monitor their blood sugar closely, and never miss *Suhour*. Patients must consult with their provider before attempting to fast. Fasting by patients with renal transplant having type 1 diabetes mellitus is trickier and requires consultation from endocrinologist.[1,36-41]
11. *Omrah*: Owing to the risk of upper respiratory infection (URI), it is recommended to postpone *Omrah* for at least 6–12 months after renal transplant. *Omrah* during peak hours is not recommended. Extra precautions should be taken against airborne and foodborne infections.[1,42-46]
12. Hajj: Owing to the very high risk of URI, it is recommended to perform hajj before renal transplant. For those who have never performed the obligatory hajj, it is recommended to delay hajj at least 1-year posttransplant. Patients are to weigh their potential risks. Frail or elderly on immunosuppressants might be excused from hajj.[1,43-47]
13. Marital relations: In 2–3 months after transplant, most of the patients can resume marital relations once the surgical incision is healed and the urinary stent is removed.[1]
14. Fertility in male renal transplant recipients: Fertility improves after kidney transplantation in many patients. Certain medications should be avoided. For example, sirolimus (Mammalian target of rapamycin (mTOR) inhibitors) can affect sperm genesis and fertility. Patients are advised to consult with their doctor.[1,47-53]
15. Pregnancy after kidney transplant:
   - Women of childbearing age should be alerted that fertility may improve after kidney transplantation.
   - Oral contraceptive pills can be used as a contraceptive method after an appropriate medical consultation.
   - The intrauterine devices are generally discouraged because of increased risk of infection with immunosuppressants.

- Pregnancy after renal transplant can negatively affect both the transplanted kidney and the fetus (low birth weight and preterm delivery).
- Women should wait for at least 1–2 years before attempting pregnancy, renal function must be stable and without significant proteinuria nor a recent rejection.
- Many posttransplant women who already have children before transplant may prefer not to have any further children over risking the fetus and the transplanted kidney.
- Pregnant transplant recipient should be followed up by obstetrician experienced in high-risk pregnancies.
- With close medical follow-up, most of the pregnancies after renal transplantation have successful outcome.
- Some medications can negatively affect the fetus:
  - MMF is teratogenic and should be stopped or replaced with azathioprine before pregnancy is attempted (allow 12 weeks window before contemplating pregnancy after switching from MMF to AZA).
  - mTORi should be discontinued before pregnancy is attempted.
  - Angiotensin converting enzyme inhibitors (ACE) / angiotensin-receptor blockers (ARBs) should be discontinued or replaced with other class of medication during pregnancy.
  - Calcineurin inhibitor, prednisone, and AZA are generally safe during pregnancy.
- Delivery in transplanted patient can be through vaginal route if there is no indication for cesarian section.[1,54-68]

16. Vaccinations: Yearly vaccination against flu (inactive) is highly recommended. Pneumonia vaccination is also recommended.
17. Signs and symptoms of rejection: There are no specific signs or symptoms for rejection in most of the cases. Blood tests are the only ways to find out. Patients are strongly advised to adhere to their medications and their routinely scheduled laboratory tests. In early stages decreased urine output, fever, vomiting, pain at the site of the graft or lathery can appear in late stages.
18. You must report to the emergency room in case of fever, decreased amount of urine, vomiting, inability to take medications, or not feeling well in general [Tables 1 and 2].

INSTRUCTIONS FOR KIDNEY DONORS (PROVIDERS' INFORMATION)

1. Work: You can return to work once the surgical pain resolves (after 1–2 months). Please consult with your surgeon.
2. Donors should avoid heavy lifting.
3. Sport:
   - Walking is encouraged immediately after surgery.
   - Noncompetitive sports (walking and cycling) can be resumed once the surgical pain resolves (after 1–2 months).
   - Competitive sports such as boxing and karate should be avoided.
   - Please consult with your surgeon for further instructions.
4. Driving can be resumed once the surgical pain resolves (after 1–2 months).
5. Medications:
   - Acetaminophen is considered as a safe painkiller that can be used after kidney donation.
   - Frequent use of nonsteroidal anti-inflammatory drugs is discouraged but sporadic use is likely to be safe in most of the donors.
   - Please alert your doctor if you are undergoing imaging with intravenous contrast (even though oral contrast is mostly okay if clinically needed).
6. Fasting:
   - Most of the donors can enjoy fasting once their renal functions stabilize (2–3 months after kidney donation).
   - Donors might initially try to fast every other day and then progress to daily fasting.
   - Donors must break their fast if they are exhausted or dehydrated.
   - Donors should not miss *Suhour* and should have enough fluid intake after iftar [Tables 3 and 4].[1,69,70]

Disclaimer: This educational material was designed to aid the renal transplant team to provide written educational material to their renal transplant recipients. This document should not be construed as dictating exclusive courses of recommendations. Patients are advised to consult with their health providers for more specific advice. Variations from these educational materials may be warranted in actual practice based on individual patient characteristics and clinical judgment in unique care circumstances.

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There are no conflicts of interest.

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Table 1:

Instructions for Kidney Graft Recipients (Provider's Information)

1- **Medications:**
- **Immunosuppression medications:**
  - These medications are to protect against rejection of the transplanted kidney.
  - These medications include Tacrolimus (Prograf or FK) and Mycophenolate (CellCept) and Prednisolone.
  - These medications are to be maintained for the life of the graft.
  - Stopping these medications will lead to rejection and possibly loss of the graft.
  - These medications must be taken at the exact time prescribed by your doctor.
- **Prophylactic Antimicrobial medications:**
  - These medications are to decrease the risk of opportunistic viral, bacterial and fungal infections.
  - These medications include Valganciclovir (Valgan), Nystatin and Bactrim. (1-2)

2- **Medications side effects:**
Tacrolimus (Prograf or FK) may cause diabetes, hypertension, alopecia, tremor and renal insufficiency.
Mycophenolate (CellCept): may cause low white blood count.
Prednisolone: may cause high blood sugar. (1-2)

3- **Clinic follow up and laboratory testing:**
- You need to keep your appointments for clinic visits and laboratory testing.
- Do not take you Tacrolimus (Prograf or FK) in the morning of your labs but take it right away after the blood draw.
- Remember to have an appointment for the stent removal which is typically removed by urology in 1-2 months after transplant. Stent removal does not require overnight stay nor general anesthesia.
- Remember that staples are typically removed 3 weeks after the surgery.
-

4- **Potential complications of renal transplant** include rejection, infections, internal urine leak from ureter, renal artery stenosis, ureteric stricture, diabetes, and tremor, recurrence of the original disease, bone disease or cancer such as lymphoma.

5- **Diet:** Renal transplant recipients frequently encounter significant weight gain after transplantation. To prevent gaining weight post transplantation, you are strongly advised to balance their calorie intake with especial attention to the amount of carbohydrates consumed. You are advised also to drink enough fluid (2-3 L/day) but excessive fluid intake is not needed. (1, 4-13) Low salt diet is advised in most of the patients. Magnesium and phosphorous- rich diet are often recommended. Potassium restriction is not required in most of the patients.

Examples of magnesium- rich food: dark leafy greens, seeds, beans, fish, whole grains, nuts, dark chocolate, yogurt, bananas and more.

Examples of phosphorous - rich food: protein-rich foods such as meats, poultry, fish, nuts, beans and dairy products. Some bottled beverages may also have high content of phosphate additives.

Examples of potassium- rich food: leafy greens, potato, dates, banana, tomato, orange juice, cardamom.

Table 1: Continued

6- **Exercise and sports**: - Exercise is associated with improved quality of life and pts are encouraged to follow regular exercise program (14).
- Walking is encouraged in the immediate post-surgery period.
- None competitive sports (as Cycling, joking) can be resumed once the surgical pain resolves (after 1-2 month).
- Competitive sports (such as boxing and karate) should be avoided because of risk of direct trauma to the kidney.
- Driving can be resumed once the surgical pain resolves (after 1-2 month)

7- **Work/ School:** Most of the renal transplant recipients will be able to go back to school / work in 2-3 months. Strenuous activity and exposure to the hot weather should be avoided (1, 15-19).

8- **Isolation:** You should avoid sick contact. You should wash hands frequently and not share personal items with family. You are also advised to avoid crowded area whoever strict isolation in a single room is usually not necessary and can to lead to social isolation and depression (1, 15-19).

9- **Fasting Ramadan:** There are several small studies that showed fasting Ramadan does not adversely affect kidney function in patients who are more than one-year post transplant and with stable graft function. In these conditions, fasting might be allowed after the first 1-2 yrs. Special care to the timing of medications and drug levels. You may try initially to fast every other day then advance as tolerated. You must break your fast if you feel exhausted or dehydrated. You must consult with your nephrologist before attempting to fast (1, 20-35).

10- **Fasting of renal transplant pts with diabetes**: In addition to the previously mentioned precautions, patients with diabetes on or medications or insulin needs to adjust their medications or Insulin requirement down, monitor their blood sugar closely and never miss Suhour. Patients must consult with their provider before attempting to fast. Fasting of renal transplant with DM 1 is more tricky and requires consultation from endocrinology (1, 36-41)

11- **Omrah**: due to the risk of upper airway infection (URI), it is recommended to postpone Omrah for at least 6-12 months after renal transplant. Omrah during peak hours is not recommended. Extra precautions should be taken against airborne and foodborne infections (1, 42-46).

12- **Hajj:** due to the very high risk of URI, it is recommended to do hajj before renal transplant. For those who never performed the obligatory Hajj, it is recommended to delay hajj at least one-year post-transplant. Patients are to weight the potential risks. Frail or elderly on immunosuppression might be excused from Haj (1, 43-47).

13- **Marital relations:** In 2-3 months post-transplant, most of the patients can resume marital relations once the surgical incision healed and the urinary stent is removed (1).

14- **Fertility in male renal transplant recipients**: Fertility improves after kidney transplantation in many patients. Certain medications should be avoided. For example, Sirolimus (mTORi) can affect sperm genesis and fertility. Patients are advised to consult with their doctor (1, 47-53).

15- **Pregnancy post kidney transplant:**
- Women of child bearing age should be alerted that fertility may improve after kidney transplantation.
- Oral contraceptive pills (OCP) can be used as a contraceptive method after the appropriate medical consultation.
- The intrauterine devices are generally discouraged because of increased risk of infection with immunosuppression.
- Pregnancy post renal transplant can negatively affect both the transplanted kidney the fetus (low birth weight & preterm delivery).
- Women should wait at least 1- 2 year before attempting pregnancy, renal function must be stable and without

Table 1: Continued

significant proteinuria nor a recent rejection.
- Many post-transplant women who are already have children prior transplant may prefer not to have any further children over risking the fetus and the transplanted kidney.
- Pregnant transplant recipient should be followed by obstetrician experienced in high risk pregnancies.
- With close medical follow-up, most of the pregnancies post renal transplantation have successful outcome.
- Some medications can negatively affect the fetus:
    - Mycophenolate (MMF) is teratogenic and should be stopped or replaced with AZA before pregnancy is attempted (allow 12 weeks window before contemplating pregnancy after switching from MMF to AZA).
    - mTORi should be discontinued before pregnancy is attempted.
    - Ace/ARBs should be discontinued or replaced with other class of medication during pregnancy.
    - CNI, prednisone, and AZA are generally safe during pregnancy
- Delivery in transplanted patient can be through vaginal rout if there is no indication for caesarian section (1, 54-68).

13- **Vaccinations:** Yearly vaccination against Flu (inactive) is highly recommended. Pneumonia vaccination is also recommended.
14. **Signs and symptoms of rejection:** There are no specific signs or symptoms for rejection in most of the cases. Blood tests are the only way to find it out. Patients are strongly advised to adhere to their medications and the routinely scheduled laboratory tests. Decreased urine output, fever, vomiting, pain at the site of the graft or lathery can appear in late stages.
15. **You must report to the emergency room** in the case of fever, decreased the amount of urine, vomiting, inability to take medications or not feeling well in general.

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Table 2:

تعليمات ما بعد زراعـــــة الكلية
(إرشادات موجهة للمريض)

1- الادوية:

1- **مثبطات المناعة (الأدوية المضادة للرفض):**

- **ومنها التكرولمس (البروغراف) والسلسيبت:**
- مهمة هذه الأدوية هو منع الجسم من رفض الكلية الجديدة.
- يجب المواظبة على هذه الادوية مدى الحياة.
- من المهم ان تأخذ هذه الادوية في نفس الوقت المحدد من الطبيب.
- ايقاف هذه الادوية من غير استشارة الطبيب يؤدي الى رفض وخسارة الكلية المزروعة.

2- **الكورتيزون (البريدنزولون):** هو أحد الادوية المثبطة للمناعة التي تمنع تليف الكلية المزروعة.

3- **الادوية المضادة للميكروبات:** وظيفتها هو الحد من العدوى الفيروسية والفطرية والبكتيرية.

2- المتابعة في العيادة والتحاليل المخبرية:

- يجب الالتزام بالمواعيد الطبية والتحاليل المخبرية.
- لا تأخذ التكرولمس (البروغراف) صباح يوم التحليل بل خذه مباشرة بعد الانتهاء من التحاليل.
- يتم إزالة الدعامة البولية الداخلية من قبل الطبيب المختص بالمسالك البولية خلال الشهر الأول ما بعد الزراعة وإزالتها عادة لا تحتاج الى تنويم.
- يتم إزالة المشابك الجراحية من مكان العملية بعد 3 أسابيع من العملية.

3- مضاعفات زراعة الكلية:

- رفض الكلية
- امراض انتانية
- تسرب البول من الحالبين بعد العملية
- تضيق اوعية الكلية المزروعة او تخثرها
- تكرار المرضى الكلوي الأصلي
- اختلال في الاملاح
- -انسداد الحالب وتجمع البول في الكلية
- - ارتفاع الضغط
- -السكر
- -الرعشة
- - السرطانات أواللمفوما
- -امراض العظام

4- الاثار الجانبية للأدوية

- **التكرولمس (بروغراف):** داء السكري وارتفاع الضغط وسقوط الشعر والرعشة.
- **بريد نيزولون:** زيادة الوزن.

5- الحمية الغذائية:

- زيادة الوزن ما بعد الزراعة امرا شائع، ولذلك ينصح مرضى ما بعد الزراعة لإتباع حمية غذائية متوازنة من حيث كمية السعات الحرارية وبشكل خاص كمية النشويات (الكربوهيدرات) المتناولة.
- ينصح مرضى ما بعد الزراعة بتناول 2-3 ليتر من السوائل يوميا غير ان تناول السوائل بشكل مفرط غير مفيد.
- ينصح المرضى بالتحديد كمية الملح المضاف الى الطعام.
- كثيرا ما يحتاج مرضى ما بعد الزراعة الى حمية غنية بالمغنيسيوم والفسفور وبإمكان كثير من المرضى تناول كمية معتدلة من البوتاسيوم.
- من الاغذية الغنية بالمغنيزيوم: الخضار و الورقيات الخضراء و البذريات والبقوليات والمكسرات واللبن والموز.
- من الأغذية الغنية بالفوسفور: الأغذية الغنية بالبروتينات مثل اللحوم والدواجن والاسماك والالبان والمكسرات والبقوليات. قد تحتوي المشروبات المعلبة على كميات من الفوسفور المضاف.
- من الأغذية الغنية بالبوتاسيوم: الورقيات الخضراء والبطاطس والتمور والموز وعصير البرتقال والهيل.

Table 2: Continued

- وقد تتغير الحمية الموصوفة حسب التحاليل المخبرية وينصح باتباع إرشادات الطبيب..

6- الرياضة:

- في معظم الأحيان ينصح بالمشي مباشرة في اليوم التالي من العمل الجراحي.
- ينصح المرضى بممارسة النشاط الرياضي يوميا وهذا يساعد على تحسين الحالة العامة للمرضى.
- بإمكان معظم المرضى بممارسة الرياضات غير التنافسية (كركوب الدراجة والهرولة) بعد شهر او شهرين من الزارعة.
- ينصح المرضى بتجنب الرياضات التنافسية (كلعبة القدم او المصارعة) خوفا من أي اذية مباشرة للكلية المزروعة.

7- العودة الى المرسة او العمل:

- يتمكن معظم المرضى بعد الزراعة الكلية من العودة الى المدرسة او العمل خلال شهرين او ثلاثة أشهر من الزراعة ويتبع ذلك لطبيعة العمل.
- ينصح بتجنب الاشغال المرهقة او التي تعرض صاحبها الى الحر الشديد.

8- العزل الطبي بعد زراعة الكلية:

- يجب تجنب الأشخاص المصابين بأمراض معدية كالمصابين بالزكام او الامراض الشبيه بالأنفلونزا.
- اغسل يديك بشكل مستمر وتجنب استخدام الحاجات الشخصية لأفراد اسرتك.
- تجنب الأماكن المزدحمة مالم يكن هناك ضرورة لذلك.
- لا داع لان تعزل نفسك بغرفة منفردة فان ذلك يسبب انعزالا اجتماعيا.

9- صيام رمضان:

- أظهرت عدة دراسات بان صيام رمضان ممكن ما بعد الزراعة الكلية (غير ان هذه الدراسات تعتبر صغيرة الحجم نسبيا).
- بشكل عام ينصح بتأجيل الصيام لمدة سنة أو أكثر ما بعد الزراعة.
- يجب الحرص قدر الإمكان على توقيت الادوية والتحاليل الطبية.
- لا ينصح بالصيام مالم تكن وظيفة الكلية ثابتة ومناسبة، ويجب استشارة الطبيب قبل الصيام.
- بإمكانك ان تجرب الصيام بشكل متقطع حسب الاستطاعة.
- يجب إيقاف الصيام في حال الإرهاق.
- مرة أخرى يجب استشارة الطبيب قبل الشروع بصيام رمضان.

10- الصيام بالنسبة لمرضى زراعة الكلية المصابين بداء السكري:

- بالإضافة الى التعليمات السابقة يجب على المرضى تعديل ادوية السكري والانسولين حسب تعليمات الطبيب.
- يجب مراقبة سكر الدم بشكل متكرر خلال اليوم.
- يجب عدم اهمال وجبة السحور.
- مرة ثانية يجب استشارة الطبيب قبل الشروع بصيام رمضان.
- يجب على المرضى المصابين بالسكري من النمط الأول استشارة الطبيب المختص بالداء السكري قبل الروع في صيام رمضان.

11- العمرة:

- ينصح بتأخير العمرة لمدة ستة أشهر او سنة من الزراعة مع اخذ الاحتياطات الممكنة لتجنب العدوى من الامراض التنفسية.
- تجنب أوقات الازدحام الشديد.
- تجنب الأغذية المعدة بشكل غير صحي.

12- الحج:

- لتجنب خطورة العدوى التنفسية ينصح المرضى الراغبين بالحج بالقيام بهذا الركن قبل الزراعة.
- ينصح بتأخير الحج سنة او أكثر ما بعد الزراعة.
- قد ينصح الطبيب بعدم تكرار الحج (إذا كان قد قام بهذا الركن من قبل).
- ينصح باستشارة الطبيب قبل الشروع برحلة الحج.
- قد ينصح الطبيب المسنين وضعاف البينة بتجنب الحج.

13- العلاقة الزوجية:

- ينصح معظم مرضى ما بعد الزراعة الى تجنب العلاقات الزوجية حتى تتألم الجروح بشكل تام ويتم نزع الداعمة البولية الداخلية.

Table 2: Continued

14- الانجاب عند الرجال ما بعد زراعة الكلية:

- تتحسن القدرة على الانجاب عند معظم المرضى.
- يجب استشارة الطبيب بخصوص الادوية لان بعضها قد يؤثر على الانجاب.

15- الحمل ما بعد زراعة الكلية:

- يجب على النساء في سن الحمل ان تكون على دراية بان القدرة على الانجاب تتحسن ما بعد الزراعة الكلية.
- قد يعرض الحمل الكلية المزروعة والجنين الى خطر لذلك على المرأة الحامل ما بعد الزراعة اتباع تعليمات اطبائها بدقة.
- ينصح ا لنساء بتأجيل الحمل سنة او أكثر ما بعد الزراعة.
- يجب ان تكون وظائف الكلية ثابتة ومناسبة من غير أي رفض حديث.
- يجب على المرأة استشارة الطبيبة في حالة رغبتها باستخدام حبوب مانعه للحمل.
- لا ينصح باستخدام اللولب الواقي للحمل في الرحم.
- معظم الحمول ما بعد الزراعة تمر بأمان مع المراقبة الطبيبة الدقيقة.
- **بعض الادوية تعتبر ضارة بالحمل:**
  - **مايكوفينوليات (سيلسبت):** قد يحدث هذا الدواء تشوهات خطيرة بالجنين، يجب إيقاف هذا الدواء قبل الحمل بثلاثة أشهر، يستبدل هذا الدواء ب **(اذاثيوبرين(اميوارن))** قبل وخلال الحمل.
  - **سيروليماس (رابامیون)** يجب إيقاف هذا الدواء قبل الحمل.
  - يجب مراجعة ادوية الضغط مع الطبيب.

16- التطعيمات:

- ينصح كل المرضى ما بعد الزراعة بأخذ التطعيم السنوي المضاد للأنفلونزا وتطعيم المضاد لذات الرئة.

17- يجب مراجعة المشفى في حال وجود:

- انخفاض مفاجئ في كمية البول.
- عدم التمكن من اخذ الادوية
- الحمى او التقيؤ او الاسهال.
- الم حول مكان الكلية المزروعة.
- الشعور بالألم وعدم الارتياح عند التبول.
- إذا شعرت انا الجرح يبدو ملتهبا.

18- علامات الرفض:

- لا توجد اعراض في اغلب حالات الرفض ولا يمكن اكتشافه الا في وقت متأخر بعد ظهور نتائج فحوصات الدم، لذلك ينصح بتجنب ايقاف الدواء مهما كان السبب. كما ينصح بإجراء التحاليل الدموية بشكل دور وحسب إرشادات الطبيب.
- في الحالات المتأخرة قد يحدث: انخفاض مفاجئ في كمية البول، اكتساب وزن مفاجئ، ارتفاع ضغط الدم، نقص في الطاقة، ارتفاع في مستوى السموم بالدم، حمى، تقيؤ، أو الام حول مكان الكلية المزروعة.
- هذه العلامات قد تعني مرحله متقدمة من الرفض الذي قد يؤدي الى الفشل الدائم للكلية المزروعة.

مع دعائنا لك بدوام الصحة والعافية

أعدت هذه الارشادات الطبية العامة من اجل مرضى زراعة الكلية بشكل عام. يجب استشارة طبيبك لمزيد من المعلومات الخاصة بحالتك الصحية

Table 3:

Instructions for Kidney Donors (Medical provider's Information)

1- **Work:** You can be return to work once the surgical pain resolves (after 1-2 month). Please consult with your surgeon.

2- **Heavy lifting** should be avoided especially. Please consult with your surgeon.

3- Sport:
- Walking is encouraged in the immediate post-surgery.
- Noncompetitive sports (Walking, Cycling) can be resumed once the surgical pain resolves (after 1-2 month)
- Competitive sports such as boxing, and karate should be avoided.
- Please consult with your surgeon.

4- Driving can be resumed once the surgical pain resolves (after 1-2 month).

5- Medications:
- Acetaminophen is considered a safe painkiller post kidney donation.
- Frequent use of NSAIDS is discouraged but sporadic use is likely to be safe in most of the donors.
- Please alert your doctor is you are going for imaging with IV contrast (even though oral contrast is mostly okay if clinically needed).

6- **Fasting:**
- -Most of the donors can enjoy fasting once their renal functions stabilize (2- 3 months after kidney donation).
- Donors might initially try to fast every other day then progress to daily fasting.
- Donors must break his fast if he exhausted or dehydrated.
- Donors should not miss Suhour and should keep enough fluid intake post iftaar (1, 69-70).

Disclaimer: This educational material was designed to aid the renal transplant team to provide written educational material to their kidney donors. This document should not be construed as dictating exclusive courses of recommendations. Kidney donors are advised to consult with their health provides for more specific advice. Variations from these educational materials may be warranted in actual practice based upon individual patient characteristics and clinical judgment in unique care circumstances.

Table 4:

تعليمات ما بعد التبـرع بالكلية
(إرشادات موجهة للمتبرع)

1- **العودة الى العمل:**
- بإمكان معظم المتبرعين بالكلية العودة الى العمل عندما يلتئم الجرح ويزول الألم (شهر او شهرين من العملية الجراحية).
- يجب استشارة الطبيب الجراح بهذا الخصوص.

2- **تجنب حمل الاوزان الزائدة.**

3- **الرياضة:**
- ينصح بالمشي بعد العملية الجراحية.
- بإمكانك ممارسة الرياضات الغير تنافسية (كركوب الدراجة) متى زال الألم الجراحي خلال شهر او شهرين.
- ينصح بتجنب الرياضات التنافسية (ككرة القدم).

4- **بإمكانك العودة لقيادة السيارة** متى زال الالام الجراحي خلال شهر او شهرين.

5- **الادوية:**
- يعتر تناول **أسيتامينوفين (بنادول)** آمنا بعد التبـرع بالكلية.
- ينصح بتجنب التناول المتكرر للأدوية المضادة للالتهاب غير الستيرويدية.
- يجب استشارة الطبيب قبل إجراء أي تصوير اشعاعي يحتوي على مادة ظليلة (مع انه يعتبر آمنا في معظم الأحيان).

6- **الصيام:**
- بإمكان معظم المتبرعين الراغبين بالصيام من القيام ذلك عندما تستقر وظائف الكلية بعد شهرين او ثلاثة.
- يجب استشارة الطبيب.
- بإمكان المتبرع بالتجربة الصيام المتقطع (أيام متناوبة) ثم الصيام كل يوم او حسب الاستطاعة.
- يجب على المتبرع ان لا يهمل شرب كمية كافية من السوائل ووجبة السحور.
- يجب على المتبرع وقف الصيام إذا شعر بالإنهاك الشديد او العطش الشديد.

أعدت هذه الارشادات الطبية العامة من اجل المتبرعين بالكلية بشكل عام. يجب استشارة طبيبك لمزيد من المعلومات الخاصة بحالتك الصحية