

How can I keep
my transplant
**for as long as
possible?**

**EATING HEALTHIER
AFTER AN ORGAN
TRANSPLANT**



How can I keep my transplant for as long as possible? How can I reduce the side effects of medications I need to take?

No matter your particular situation, you must carefully follow the instructions of your healthcare team in order to preserve your transplanted organ(s). Part of this is remembering that medication and precaution are the first line of defense in preventing the main complications associated with organ transplants, such as rejection and infection. This guide, developed by registered dietitians, will help you make healthy nutritional choices to prevent or control certain side effects caused by your medications after a solid organ transplant.

UNWANTED WEIGHT GAIN can be quite significant and happens in many people after a transplant. Excessive weight gain can have serious long-term consequences that are both physical and psychological in nature. Although weight can be managed to some extent by making healthy lifestyle changes, it is not the only factor that determines body weight. Accepting your new body image can help you avoid any negative feelings you may have in connection with changes to your body following a transplant surgery.

Possible side effects of post-transplant medications

THE SIDE EFFECTS OF MEDICATIONS needed after an organ transplant vary from person to person. However, certain healthy habits can prevent, stop or reduce some of these common side effects.

Managing side effects with nutrition

Side effect	Recommendations
Weight gain	Make HEALTHY LIFESTYLE CHOICES (BOX 1)
Glucose intolerance or diabetes	Control CARBOHYDRATES in your diet (BOX 2)
Increase in blood lipids	Keep the amount and type of LIPIDS under control (BOX 3)
High blood pressure	Reduce SALT in your diet (BOX 4)
Osteoporosis	Get enough CALCIUM and VITAMIN D (BOX 5)
Immunosuppression	Follow FOOD SAFETY recommendations (BOX 6)

Healthy lifestyle choices

Use the **Eat Well** plate

This tool helps you plan balanced meals and snacks, showing you the foods you should eat more of, and those you should have less often.

EAT MORE VEGETABLES AND FRUITS (ONE HALF OF THE PLATE)

Always have pre-cut vegetables (carrots, celery, peppers) in the fridge. Enjoy them as a snack, as part of your lunch, or in a stir fry for dinner. Try our salad recipe!



CHOOSE FOODS MADE WITH 100% WHOLE GRAINS (ONE-QUARTER OF THE PLATE), such as wild rice, quinoa or barley.

CHOOSE PLANT-BASED PROTEIN (ONE-QUARTER OF THE PLATE)

and fatty fish (salmon, mackerel) at least twice a week. Replace the ground meat in spaghetti sauce with beans or lentils.



CHOOSE PLANT-BASED FATS

Have a handful of nuts or seeds every day, as a snack, in oatmeal or salad, and make your own homemade salad dressing (see recipe).

GET MOVING!

- Get 30 minutes of aerobic exercise every day. Consider a fast walk, a bicycle ride or a run.
- Try to plan three sessions of resistance training per week, using weights or elastic bands.
- If possible, follow a personal training program designed by a professional to meet your needs.

**Don't
smoke!**

BE CAREFUL ABOUT ALCOHOL

- Some people who have had an organ transplant must not have any alcohol. If your healthcare team says you may drink, limit yourself to one occasional drink at dinner time.

STAY HYDRATED!

- Drink 1-2 litres of water every day to keep you hydrated. As a bonus, you will find that water helps you to better control food cravings during the day.
- Always have a water bottle with you and refill it during the day.
- Reduce the amount of caffeine you drink, and avoid soft and energy drinks.
- Add some flavour to your water and you will drink more! Here are some ideas:

SLICES OF LEMON,
LIME OR ORANGE

PIECES OF
WATERMELON AND
MINT LEAVES

SLICES OF
STRAWBERRIES
AND BASIL LEAVES

RASPBERRIES,
BLUEBERRIES OR
BLACKBERRIES

SOME MORE TIPS:

- Set yourself goals you can achieve. Do not try more than one or two healthy changes at a time – pace yourself!
- Spread meals and snacks over the whole day to keep your energy levels even and to avoid cravings at the end of the day.
- Be mindful about when you are hungry and when you are full, and take the time to enjoy each bite.
- Shop with the help of a list, and do not go grocery shopping on an empty stomach.

BOX 2: CARBOHYDRATES

- Eat three meals a day at fixed times. Leave 4-6 hours between meals. If necessary, have a snack 2-3 hours after a meal (e.g. yogurt, fresh fruit and nuts, or fresh vegetables and cheese).
- Prepare your food at home and avoid processed foods.
- Limit your intake of sweeteners such as aspartame and sucralose, and sweet foods such as white sugar, honey, brown sugar, jam, candy, chocolate, pastries, cookies, soft drinks and fruit drinks.

BOX 3: BLOOD LIPIDS

After an organ transplant, the levels of cholesterol and triglycerides in your blood may be outside a healthy range and put you at risk for cardiovascular disease.

To better control blood lipids:

- Opt for plant-based protein found in legumes, tofu, and nuts.
- Have a meal with fish 2-3 times every week. Reduce the portions of red meat that you eat, and choose lean cuts.
- Eat more water-soluble fibres, which are found in oats, barley, and psyllium.
- Choose milk and dairy products with less milk fat (MF), such as milk with 1% MF, or yogurt \leq 2% MF, cheese \leq 20% MF.
- Cook with little or no fat by using the barbecue, oven or steamer. When using fat, choose olive or canola oil.

BOX 4: SALT

- Do not keep a salt shaker on the table, and reduce salt when cooking. Use other seasonings, like onion and garlic powder, dried herbs, lemon zest or lemon juice, and ground pepper.
- Read the labels on food packages:
 - Try to choose products that have \leq 10% of sodium DV (daily value) or \leq 200 mg of sodium per serving
 - Select "no salt added" products
- Prepare your own meals if possible, in order to reduce or avoid processed, canned, and convenience foods in your diet.
- *If you have no potassium restrictions:* eat a bigger amount of higher-potassium foods like bananas, cantaloupe, oranges, dried fruits, potatoes with skin, tomato and spinach-based meals, legumes, nuts and seeds with no added salt.

BOX 5: CALCIUM AND VITAMIN D

Over the long term, the corticosteroids prescribed after an organ transplant cause bones to lose calcium, and increase the risk of osteoporosis and fractures.

- Try to have some foods high in calcium and vitamin D every day.
- These 5 foods are great sources of calcium:
 - ✓ Dairy products (milk, hard cheese, yogurt)
 - ✓ Canned salmon and sardines with bones
 - ✓ Almonds
 - ✓ Kale
 - ✓ Tofu containing calcium sulfate

If you are not able to meet your daily calcium and vitamin D needs through food alone, which is frequent for vitamin D, you may need to take a supplement.

BOX 6: GENERAL ADVICE

Food-borne infections

It is critical that you take the immunosuppressant medications you have been prescribed in order to avoid organ rejection after your transplant. However, these medications do weaken the immune system, leaving you more prone to infections. Preventing food-borne infections is very important and means there are some precautions you must take. (Refer to *Resources*)

Medication-nutrient interaction

After an organ transplant, you must avoid grapefruit, pomelo and Seville oranges, as well as their juices or any food products that contain traces of these fruits.

SPECIAL CONDITIONS

WEIGHT LOSS AND UNDERNUTRITION

If you are underweight and find it difficult to regain the weight you have lost, try to maximize your energy intake. Add high-calorie foods to your meals and drinks: cream, sour cream, cheese, oil, skim milk powder, honey, syrup, jam, nuts, eggs. Complete your meals or snacks with commercial or homemade nutritional supplements. Consult with a registered dietitian if you are struggling with undernutrition. (Refer to *Resources*)

HOMEMADE NUTRITIONAL SUPPLEMENT

Mix in a kitchen blender:

- ½ cup 3.25% milk (or enriched soy beverage)
- ½ cup ice cream (or Greek, Mediterranean yogurt 8-10% MF)
- ¼ cup fruit (fresh, frozen, dried or canned)
- 2 tablespoons skim milk powder
- 2 tablespoons oil



Multi-coloured salad

MAKES 4 ONE-CUP SERVINGS

Combine the following ingredients:

- 1 can chickpeas, no salt added, rinsed with water
- ¼ cup sliced almonds
- ½ English cucumber, diced
- ¾ cup cherry tomatoes, cut in halves
- 1 green onion, finely chopped
- ½ orange or yellow bell pepper, diced
- 2 tbsp fresh basil, chopped
- Ground black pepper to taste

Serve your salad with some homemade dressing or with your favourite olive oil.

Enjoy this salad as a meal or combine it with a piece of grilled fish or chicken breast.

Homemade dressing

MAKES 1 CUP

Mix the following ingredients:

- ¾ cup canola or olive oil
- ¼ cup white wine vinegar
- 1 tsp Dijon mustard
- 1 tsp maple syrup
- 1 garlic clove, minced
- 1 tsp dried basil or Italian herbs
- Ground black pepper to taste

Keep remaining vinaigrette in the fridge in a closed container for seven days.

RESOURCES

HEALTHY LIFESTYLE, WEIGHT LOSS, UNDERNUTRITION

- **Canada's food guide 2019** food-guide.canada.ca
- **Educalcool** educalcool.qc.ca
- **Can-restore** www.cntrp.ca
- **CHUM Health Sheets: Eating protein-rich, energy-dense foods** www.chumontreal.qc.ca/en/fiches-sante

DIABETES, BLOOD LIPIDS, SALT AND BONE HEALTH

- **Diabetes Canada** www.diabetes.ca
- **Heart and Stroke Foundation: 100 healthy things you can do in minutes** (Google search term for ebook) www.heartandstroke.ca
- **Osteoporosis Canada** osteoporosis.ca/bone-health-osteoporosis/nutrition/

FOOD SAFETY

- **Health Canada: Food safety for people with a weakened immune system** www.canada.ca
- **CHUM Health Sheets: Preventing food poisoning** www.chumontreal.qc.ca/en/fiches-sante

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Disclaimer: The information in this publication is not intended as medical or professional advice, nor should it replace advice, expertise and information given by a member of your healthcare team.

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