

Where the world comes for answers

Welcome to the

eMPoWeR (Medical and Pharmacologic Weight Regulation) program

at Boston Children's Hospital

We aim to provide high quality, up-to-date, and evidence-based medical weight management therapy for children and adolescents. We hope to help patients achieve healthy weight and weight-related outcomes in a positive and supportive environment.





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Welcome!

Welcome to the *eMPoWeR* (Medical and Pharmacologic Weight Regulation) program at Boston Children's Hospital! Our goal is to provide excellent, evidence-based weight management in a positive and supportive environment.

Obesity is a chronic condition that requires long-term treatment and frequent clinical visits.

What we expect from patient/family:

- o Attendance at all scheduled appointments:
 - Medical visits with a medical doctor (MD) or nurse practionter (NP) every 3 months, or more often, if needed
 - Nutritional counseling at least once per quarter, in individual or group sessions
 - Mental health visit in our program one time per year
- o For all patients < 18 years old, a parent or guardian must be present for appointments.
 - We suggest that all patients should bring a support person, such as a parent or family member, to appointments (regardless of the patient's age).
- Lifestyle changes are an important part of any medical treatment plan and, therefore, we expect the patient to work toward nutrition and physical activity goals while in the program, in addition to taking a medication for weight management.

What patient/family can expect from us:

- o Clear communication throughout the patient's time in our program
- Regular appointments with the patient's medical team
- Opportunities for individual or group nutrition sessions
- Availability of our team mental health provider (psychologist or social worker) to meet with the patient at least one time per year
- The ability to communicate with us between visits (MyChildren's Patient Portal messages preferred for non-urgent issues)

Our program focuses on the use of medication to help with weight management. Some patients may not opt for this approach and we are happy to help facilitate referrals to the Optimal Wellness for Life (OWL) program (focuses on more intensive lifestyle management), the Adolescent Bariatric Surgery Program (provides consultations and preparation for "weight loss" surgery), or the Strategies for Teen Empowerment and Physical Health (STEP) Program through Adolescent/Young Adult Medicine (focus on helping patients with disordered eating) at Boston Children's Hospital, depending on the patient's needs. If any of these other programs seem like a better fit for the patient, please contact us to discuss options by sending a message to the patient's medical team through the MyChildren's Patient Portal or calling 617-355-5159.

Version Date: 3/3/2024





How to Contact Us

- To schedule, reschedule, or cancel an appointment, call our administrative team at 617-355-5159.
- For prescription refill requests or any non-urgent medical questions, please message the patient's MD and NP through the MyChildren's Patient Portal (available via computer or phone/tablet app).
 - Sign up here: https://apps.childrenshospital.org/mychildrens/index.html
- For any urgent medical problems related to the patient's care in our program, please page the patient's MD or NP (or the MD-on-call if after hours) by calling 617-355-6000.
- If the patient is experiencing a medical emergency, please call 911 or present to the nearest Emergency Department.

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Version Date: 3/3/2024





An Important Note

During your time in our program, you may hear providers use various terms to refer to weight and weight-related medical issues. We understand that some words like "obesity" may be uncomfortable for some people given negative past experiences. Our hope is to use words that are medically correct but also sensitive to your experience.

As providers, we will always do our best to communicate in a sensitive manner with you, recognizing that obesity and excess weight are medical conditions that, like any other medical condition, are due to many factors often outside of a patient's control. We encourage patients/families to communicate openly with their providers about what words feel right for them.

Some terms or words you may hear providers use are:

- Body Mass Index (BMI): This is a measure of how much someone weighs as compared to their height. Although this is not a perfect measure of how healthy one's weight might be, it is a measure that providers will track over time. "Healthy" BMI varies according to age and so providers might focus on BMI percentiles (how one's BMI compares to others of the same age) instead of the absolute value.
- **Obesity:** This is a term that you might hear a lot in the newspaper or other media, and it may or may not always be used correctly. This is actually a medical term used to refer to people with BMI that falls above a certain point, which is set based on studies that show a higher risk for other medical problems like heart disease, diabetes, and liver disease.
- **Overweight:** This is also a term that is used a lot outside of medicine but is actually a medical term. This refers to people with a higher BMI than is considered "healthy" but not high enough to be called "obesity."

Our providers know that weight and BMI do not define individuals. We aim to provide each patient with an individualized experience that addresses weight in a supportive and sensitive environment.

Version Date: 3/3/2024



Patient Agreement

By agreeing to join the *eMPoWeR* (Medical and Pharmacologic Weight Regulation) program at Boston Children's Hospital, I/we agree to the following:

- Attend all scheduled visits.
 - Since emergencies and schedule changes understandably happen, we ask that
 patients let us know as soon as possible if they cannot make an appointment. In
 some circumstances, we may be able to see the patient virtually during the
 scheduled session or to reschedule them on another day (although possibly with
 a different provider).
 - Patients who have 3 "no show" appointments (i.e., who do not cancel in advance
 of the visit) will be asked re-evaluate whether they are truly interested in this
 type of medical weight management and may be asked to leave the program if
 unable to commit to the recommended visits.
- Act and speak in a way that shows mutual consideration and respect for the care team, other patients and families, and clinic staff.
- Make and work toward lifestyle goals, including nutrition and physical activity.
- Be honest and forthcoming with the treatment team, especially regarding disordered eating behaviors such as binge eating or restrictive eating.
 - The treatment team is here to support the patient and understands that these types of eating behaviors are not uncommon and are not something to feel embarrassed or ashamed about.
 - Being honest is important to ensure that your team can make safe and helpful recommendations to help you reach your goals.
- Take all medications as prescribed. Let the treatment team know as soon as possible if:
 - The patient runs out of medications or needs a refill before their next scheduled appointment.
 - The patient has side effects that may be from their medications, which limit their ability to take the medications as prescribed or participate as usual in activities of daily living (e.g., school, work, sports, eating regular meals, etc.).
- Understand that the patient may be asked to make an appointment sooner than the scheduled sessions, especially if medical and/or medication issues arise between quarterly medical visits.
- Understand that medication refills will primarily be provided in the context of a medical visit, and that the treatment team will generally provide enough medication refills to get the patient to their next quarterly medical visit. If the patient misses an appointment, it may need to be rescheduled (virtual or in person) prior to receiving any medication refills.

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Example Schedule

Month	Visit
January	Medical, Mental
	Health
February/March	(optional 6 week
	check in)
	(attend virtual
	nutrition class)
April	Medical
May/June	(optional 6 week
	check in)
	(attend virtual
	nutrition class)
July	Medical
August/September	(optional 6 week
	check in)
	(attend virtual
	nutrition class)
October	Medical
November/December	(optional 6 week
	check in)
	(attend virtual
	nutrition class)

Social work will be offered at any time based on needs and/or upon patient/family request.



Obesity and Healthy Metabolism: What You Need To Know

What is obesity and why does it occur?

Obesity happens when someone's weight is elevated for someone of their height (elevated BMI). It is a <u>disease</u> that needs treatment because it can put people (kids and adults!) at risk for other conditions.

No one knows exactly why some people are more likely to have obesity, but many scientists are working on this problem and think that it is probably a combination of genetics and environment:

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Genetics

Differences in DNA (your genes, inherited from your family)



Environment

Events that a person may have before and after birth

Other things that can affect a person's weight include:



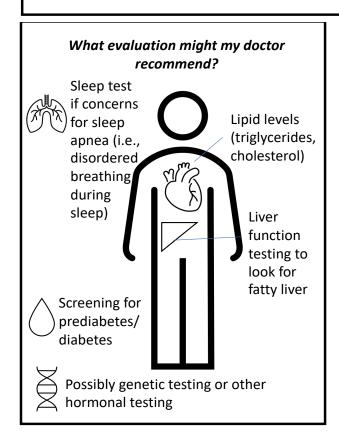
Energy Expenditure

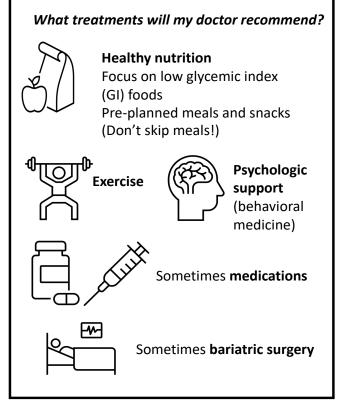
How much energy your body uses. This is increased by exercise but can be reduced by "crash" dieting or skipping meals.



Nutrition

How much and what one eats can affect their weight What we eat can also affect how hungry we feel.









Type 2 Diabetes: What You Need To Know

What is diabetes and why does it occur?

Diabetes is a disease characterized by high blood sugar. This can occur because your pancreas stops making enough insulin (your blood sugar-controlling hormone) or your body stops responding to insulin well enough to keep your blood sugar in the normal range.

Usually, type 2 diabetes is due initially to insulin resistance. Over time, the pancreas can become stressed and start making less insulin.

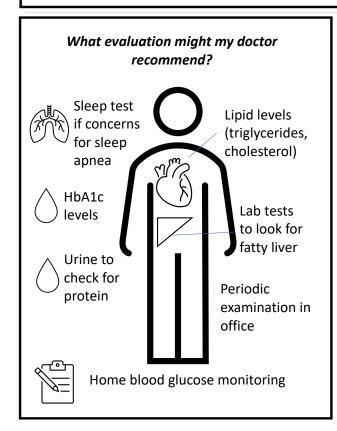
Insulin resistance can be related to excess weight in many cases, although this is not always the case. Sometimes, medications like steroids or immunosuppressants can contribute.

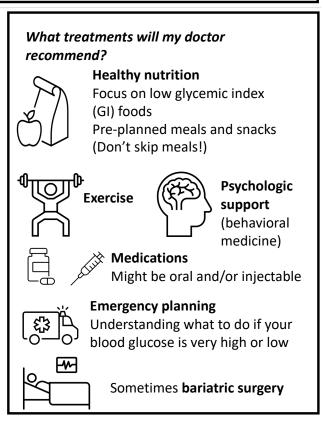
Will my diabetes go away?

Diabetes is a lifetime diagnosis, but can go into remission, meaning that patients do not always require medications to keep blood glucose levels normal.

Weight loss with diet and exercise or with bariatric surgery can cause remission of diabetes. However, many patients are unable to achieve remission even with a lot of hard work. The good news is that good blood glucose control is associated with excellent outcomes, including reduced risk for diabetes-associated problems like kidney, heart, nerve and eye disease. Your doctor will work with you to develop an individualized treatment plan.

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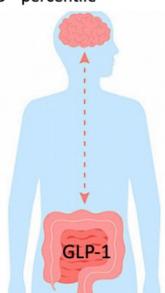


Semaglutide for Weight Management (Wegovy, Ozempic)

The goal of treatment is weight loss for patients with a body mass index (BMI) > 95th percentile

How does Semaglutide work?

- GLP-1 (Glucagon-like peptide-1) is a hormone produced by the intestines after meals that tells your brain and stomach when you've eaten enough.
- Semaglutide acts like GLP-1 to:
 - help your child feel less hungry.
 - slow down emptying of the stomach, to help your child feel satisfied longer after meals.
 - help improve the body's insulin response to reduce high blood sugar levels after eating.



What are the risks?

- Semaglutide is usually welltolerated by children and adolescents, but there can be side effects like:
 - Abdominal discomfort
 - nausea, vomiting
 These are common at the beginning, but they usually go away after a few weeks.
- Rare side effects include gallstones, gallbladder inflammation, and acute pancreatitis, more commonly seen in adults with other health conditions.

What to expect?

- Semaglutide is given by weekly injection under the skin (subcutaneous)
- We will prescribe the medication and you will pick it up from your local pharmacy
- Once you have your medication, please call 617-355-7476 to schedule a Nursing Visit to learn how to inject your medication.

- Family history of medullary thyroid cancer or a genetic syndrome called MEN2
- Personal history of pancreatitis

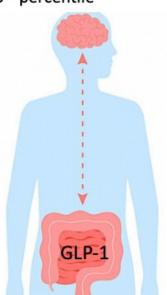


Liraglutide for Weight Management (Saxenda, Victoza)

The goal of treatment is weight loss for patients with a body mass index (BMI) > 95th percentile

How does Liraglutide work?

- GLP-1 (Glucagon-like peptide-1) is a hormone produced by the intestines after meals that tells your brain and stomach when you've eaten enough.
- Liraglutide acts like GLP-1 to:
 - · help your child feel less hungry.
 - slow down emptying of the stomach, to help your child feel satisfied longer after meals.
 - help improve the body's insulin response to reduce high blood sugar levels after eating.



What are the risks?

- Liraglutide is usually welltolerated by children and adolescents, but there can be side effects like:
 - Abdominal discomfort
 - nausea, vomiting
 These are common at the beginning, but they usually go away after a few weeks.
- Rare side effects include gallstones, gallbladder inflammation, and acute pancreatitis, more commonly seen in adults with other health conditions.

What to expect?

- Liraglutide is given by <u>daily</u> injection under the skin (subcutaneous)
- We will prescribe the medication and you will pick it up from your local pharmacy
- Once you have your medication, please call 617-355-7476 to schedule a Nursing Visit to learn how to inject your medication.

- Family history of medullary thyroid cancer or a genetic syndrome called MEN2
- Personal history of pancreatitis

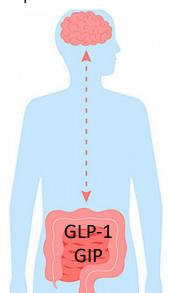


Tirzepatide for Weight Management (Zepbound, Monjauro)

The goal of treatment is weight loss for patients with a body mass index (BMI) > 95th percentile

How does Tirzepatide work?

- GLP-1 (Glucagon-like peptide-1) and GIP (Gastric inhibitory peptide) are hormonse produced by the intestines after meals that tells your brain and stomach when you've eaten enough.
- Tirzepatide acts like both GLP-1 and GIP to:
 - · help your child feel less hungry.
 - slow down emptying of the stomach, to help your child feel satisfied longer after meals.
 - help improve the body's insulin response to reduce high blood sugar levels after eating.



What are the risks?

- Tirzepatide is usually welltolerated by children and adolescents, but there can be side effects like:
 - Abdominal discomfort
 - nausea, vomiting
 These are common at the beginning, but they usually go away after a few weeks.
- Rare side effects include gallstones, gallbladder inflammation, and acute pancreatitis, more commonly seen in adults with other health conditions.

What to expect?

- Tirzepatide is given by weekly injection under the skin (subcutaneous)
- We will prescribe the medication and you will pick it up from your local pharmacy
- Once you have your medication, please call 617-355-7476 to schedule a Nursing Visit to learn how to inject your medication.

- Family history of medullary thyroid cancer or a genetic syndrome called MEN2
- Personal history of pancreatitis





Phentermine for Weight Management

The goal of treatment is to elicit weight loss for patients with a body mass index (BMI) > 95th percentile

How does Phentermine work?

 Phentermine stimulates areas of the brain that register feelings of fullness in the brain. This helps to reduce hunger and to reduce body weight.



What are the risks?

- Phentermine alone is not yet FDA-approved for pediatric obesity (i.e., <18yo), but has been shown in combination with topiramate to be safe and effective in children ages 12 and up.
- Possible side effects include:
 - Headache
 - High blood pressure
 - Dry mouth
 - Constipation
 - Difficulty sleeping
 - Gallstones
 - Acute glaucoma (rare)

What to expect?

- Phentermine is medication taken by mouth once daily
- We will prescribe the medication and you will pick it up from your local pharmacy

- Uncontrolled high blood pressure
- History of heart disease
- Use of certain medications used for depression or certain other simulant medications
- History of substance abuse
- Hyperthyroidism
- Uncontrolled anxiety
- Glaucoma





Topiramate for Weight Management

The goal of treatment is to elicit weight loss for patients with a body mass index (BMI) > 95th percentile

How does Topiramate work?

 Topiramate is traditionally used as an antiseizure medication, but because it act in the brain can also work to help reduce appetite and control body weight



What are the risks?

- Topiramate alone is not yet FDA approved for pediatric obesity (i.e., <18yo), but has been shown in combination with phentermine to be safe and effective in children ages 12 and up.
- Possible side effects include:
 - "Brain fog"
 - Acidosis
 - Gallstones
 - Kidney stones
 - Risk of overheating due reduced sweating
 - Certain EKG changes (long QT interval)

What to expect?

- Topiramate is an medication taken by mouth once daily
- We will prescribe the medication and you will pick it up from your local pharmacy

- Kidney disease
- Use of the medication acetazolamide
- Problems with focusing in school
- · Active suicidal ideation
- Plan to become pregnant (topiramate can be dangerous for baby)





GETTING STARTED WITH EXERCISE

How Much Exercise is Recommended for Kids?

60 minutes or more per day of exercise

Including 30 minutes, 3 days per week of vigorous-intensity exercise

Reference: Physical Activity Guidelines Scientific Report (USDHHS 2018)









Tips to Get Started

1. Do something active everyday.

Find an activity that you enjoy doing and gradually work your way up to 60 minutes each day. Exercise doesn't have to be done all at once; you can add it up over the course of the day. Here are some ideas:

- Walk
- Bike

- Swim/row
- Try a fitness class

- Play catch/frisbee
- Rollerblade/skate
- Dance
- Do jumping jacks

- Play on playground
- Rake leaves/garden
- Jump rope
- Go to the gym

- Play a sport or tag
- Go sledding
- Push-ups
- Try an exercise video

2. Get your heart beating faster & work up a sweat!

When you're ready, step up your game by including more **vigorous**-intensity exercise. One way to tell if you're exercising at vigorous intensity is by doing a talk test- if you can't say more than a few words without pausing for a breath, that's likely vigorous intensity!

To reach this intensity and keep you motivated, it's best to sign up for a structured program, club, or team. Here are some ideas:

- Soccer
- Baseball or softball
- Cardio or strength classes

- Basketball
- Track or cross-country
- Personal training

- Swimming
- Gymnastics, dance, zumba
- YMCA exercise programs

- Rowing
- Karate, martial arts, kickboxing
- OWL's exercise programs

To learn more about OWL's exercise programs, speak to your OWL team or contact our resource specialist, Steven Coletti at 617-919-6566 or steven.coletti@childrens.harvard.edu

Courtesy of the Optimal Wellness for Life (OWL) program



GETTING STARTED WITH HEALTHFUL EATING

1. Create a "FOOD SAFE HOUSE"

Keep your fridge and pantry stocked with a variety of healthy foods; fruits, vegetables, whole grains, beans, proteins, nuts, cheese, and milk. On the other hand, keep unhealthy snack foods, sweets, and sugary beverages out of sight- it's easier to make healthy choices if there are less tempting treats in the house. Start with removing soda and juice (even 100% juice) from the home. Choose Og sugar drinks and water.

2. It's a "FAMILY AFFAIR"

Expecting one person to eat healthfully can cause stigma, limit success – and deprive the entire family of the opportunity to improve health. Instead, make it a family affair! Healthy eating benefits everyone's health, regardless of weight or body size.

3. Revisit ROLES AND RESPONSIBILITIES

Change can be difficult. Your child and other family members may be temporarily unhappy about the changes you make in your home with regard to food. *This is normal.* This is a good time to think about roles and responsibilities.

- Parent's role: You decide what, where and when kids eat. Do not make a separate meal if your child doesn't like what is offered.
- Kid's role: They decide what to choose from the foods you provide. If they don't want to eat what you've prepared, it's okay, but don't jump up to serve something else.

4. Make this an ADVENTURE!

Preparing and trying new foods can be fun. Involve your child in meal planning, grocery shopping, meal preparation and cooking. Be positive and think about how this can improve your child's health, as well as that of the whole family.

5. BALANCED MEALS = HEALTHY MEALS

Try to make half of the meal fruits and veggies. If children are still hungry after the meal, offer more fruits or veggies. Including a protein and a healthful fat will also help balance out meals, helping he or she feel full and satisfied.

Here is a general guideline to help when planning meals and snacks:

Eat Plenty of	Eat Some	Eat Less
Fruits	Whole grains	Sugar-sweetened drinks and juice
Vegetables	Beans & proteins	Processed carbohydrates
	Fats	Fried foods

Courtesy of the Optimal Wellness for Life (OWL) program





Paired Snacks

Having one or two paired snacks (carbs + protein or fat) each day can help keep your body fueled and hold you over between meals. Below are some tasty snack ideas to get you started:

Celery sticks with peanut butter Apple slices with Greek yogurt mixed with cinnamon Grapes with BabyBel cheese or cheese stick Carrots or cucumbers with ranch dressing Strawberries with chocolate hummus Edamame pods with a hard-boiled egg Whole-grain crackers with guacamole Clementines and almonds or peanuts Fruit salad (berries, grapes, oranges) with cottage cheese Sliced melon with low-sugar yogurt Carrots with Tzatziki yogurt dip or veggie dip Fruit smoothie (frozen fruit, milk, yogurt) Whole-wheat English muffin with peanut butter or sunbutter 1 cup of low-sugar, high fiber cereal with milk Mini quesadilla: 6" whole-wheat wrap, cheese, beans and salsa Pear with pistachios or cashews Oatmeal with old-fashioned oats, milk, and cinnamon Apple with peanut butter or sunbutter Cherry tomatoes with ricotta cheese or feta cheese Low sugar, high fiber granola bar with a cheese stick Whole-wheat English muffin with tomato sauce and melted mozzarella Triscuit Thin Crisps with sliced cheddar cheese Low sodium vegetable soup with whole wheat toast and melted cheese Cherries with walnuts or almonds Snap peas or bell peppers with hummus

Turkey, veggie, and cheese roll-ups (turkey, provolone cheese, sliced bell peppers)
Roasted chickpeas with a cheese stick or cheese cubes
Zucchini sticks or cucumber sticks with laughing cow cheese wedge
Fro-yo bites (blueberries, low-sugar yogurt, mix together and freeze)
Small baked sweet potato with 1 tablespoon of almond butter and dash of cinnamon
Tuna lettuce wraps (lettuce leaves filled with tuna salad)



Courtesy of the Optimal Wellness for Life (OWL) program



Personalized Worksheet

<u>Patient</u>	's appointments:	
0	First medical appointment	
	Date:	
	Provider:	
0	Second medical appointment	
	Date:	
	Provider:	
0	Third medical appointment	
	Date:	
	Provider:	
0	Fourth medical appointment	
	Date:	
	Provider:	
Nutriti	on classes attended (attend at least 4 per year):	
1.	Date:	
2.	Date:	
3.	Date:	
4.	Date:	
Mental Health/ Social Work Visit(s):		
	1. Date:	



Starting on Weight Management Medications

What is the process required prior to starting on treatment?

- 1. Your provider will provide a prescription and will ask the office to begin a process called *prior authorization,* which is a request for the insurance company to cover the medication.
 - A single PA can take up to 7 business days, and I may not hear from the team regarding a decision for 7-10 days.
 - In most instances a maximum 2 PAs will be sent by our office. We have found that, in general, insurance plans will either cover most weight management medications or will not cover any of these medications.
 - We generally will not send PAs intended to cover a different medication during a short-term supply issue.
- 2. Call your pharmacy to find out if the medication is in stock.
 - Presently, most of the medications are in short supply and many pharmacies may only receive a small amount of the medication per month. As a result, you may need to call several pharmacies to find one that has your prescribed medication in stock. Our office unfortunately does not have the capacity to do this on behalf of patients.
 - Due to these supply issues, please understand that you may need to wait several weeks (sometimes even months) to start the medication. We are hoping that this situation improves in the near future.
- 3. When you have the medication in hand, please call our office at 617-355-7476 to schedule a nurse visit to learn how to inject the medication (only applicable to injectable medications).
- 4. Take all medications as prescribed. Let the treatment team know as soon as possible if:
 - You/your child runs out of medications or needs a refill before their next scheduled appointment.
 - You/your child patient has side effects that may be from their medications, which limit their ability to take the medications as prescribed or participate as usual in activities of daily living (e.g., school, work, sports, eating regular meals, etc.).

What can I do to speed up the process?

- 1. Contact my insurance company to inquire about coverage for the following medications:
 - a. Zepbound
 - b. Wegovy
 - c. Saxenda
 - d. Monjauro (ask whether coverage requires diagnosis of diabetes)
 - e. Ozempic (ask whether coverage requires diagnosis of diabetes)
 - f. Liraglutide (ask whether coverage requires diagnosis of diabetes)
 - g. Phentermine
 - h. Topiramate
 - i. Qsymia



2. Contact many different pharmacies to find one that has your prescribed medication in stock. Supply at any one pharmacy could change on a day-to-day basis.

Once I start on medication, how should I request refills?

- Medication refills will be provided in the context of your medical visits, which will occur at least quarterly. The treatment team will generally provide enough medication refills to get a patient to their next medical visit.
 - If the patient misses an appointment, it may need to be rescheduled (virtual or in person) prior to receiving any medication refills.
 - Understand that MyChildren's messages will be reviewed and responded to once every 24 hours, and prescriptions cannot be sent in real-time.





Important contacts

Boston Children's Hospital eMPoWeR Program

Phone: 617-355-5159

Boston Children's Hospital Optimal Wellness for Life (OWL) Program

https://www.childrenshospital.org/programs/optimal-wellness-life-owl

Phone: 617-355-5159

Boston Children's Hospital Adolescent Bariatric Surgery Program

https://www.childrenshospital.org/programs/adolescent-weight-loss-bariatric-surgery-program

Phone: 617-355-2458

Boston Children's Hospital Strategies for Teen Empowerment and Physical Health (STEP)

Program

https://www.childrenshospital.org/programs/step-program

Phone: 617-355-7181

Boston Children's Hospital Preventative Cardiology Program

www.childrenshospital.org/departments/cardiology

Phone: 617-738-6289

Boston Children's Hospital Fatty Liver Interdisciplinary Program (FLIP)

https://www.childrenshospital.org/programs/fatty-liver-interdisciplinary-program

Phone: 617-355-5837

Boston Children's Hospital Sleep Medicine Clinic

www.childrenshospital.org/programs/sleep-center

Phone: 617-216-2570