

**DEPARTMENT OF ENDOCRINOLOGY,
DIABETES & METABOLISM**

**CHRISTIAN MEDICAL COLLEGE,
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**INFORMATION HAND - BOOK
FOR BARIATRICPATIENTS**

What is obesity?

Obesity is a serious health epidemic that affects a large number of people world wide. Obesity is a chronic disease characterized by excessive body fat or by having a BMI greater than 25 kg/m².

Obesity increases the likelihood of certain diseases and other related health problems. A big step towards bringing about a change in attitudes and behaviors is education. Let's get down to the real facts about obesity!

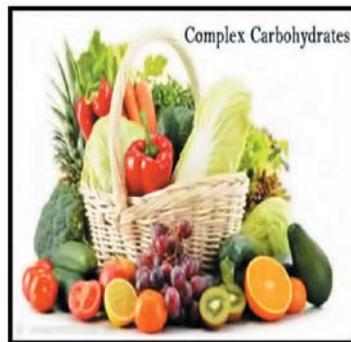
Obesity is a chronic and often progressive condition, similar to diabetes or high blood pressure. Many organizations including the Canadian Obesity Network, the Canadian Medical Association, the American Medical Association and the World Health Organisation now consider obesity to be a chronic disease.

Obesity is more than just what you eat and how much you move. Many people believe that the amount of fat in your body is only determined by what you eat and how much you exercise. But the reality is that obesity is a complex illness caused by a number of different factors, including your environment, genes, emotional health, lack of sleep, medical problems or even some medications you may be on. Even with the same diet or the same amount of exercise, people will vary widely in the amount of body fat or weight at which their bodies settle.

While short-term "quick-fix" solutions can sound appealing, they are usually unsustainable and are therefore linked to high rates of weight regain.

Controlling obesity with food choices is one of the simplest and sustained way to make a difference in your weight. One of the main causes of obesity is simply a high caloric intake, which many a time goes under-recognized.

- Carbohydrates- gives us energy
- Proteins- body building
- Fat- gives us energy and serve as our energy store
- Vitamins –regulates body functions
- Minerals- regulates body functions
- Fibre- regulates blood glucose levels and provide roughage
- Water- regulates various functions
- Carbohydrates are a source of energy and may be in the form of simple or complex carbohydrates.
- Highly refined carbohydrates such as sugar, sweets, jam, etc. are simple carbohydrates.
- Complex carbohydrates are contained in foods such as rice, bread, cereals, vegetables, beans, etc.



PROTEINS:

Proteins have an important role in growth and repair of body tissues. It provides satiety and helps to lose weight, Proteins also provide energy. Proteins are found in milk, eggs, dhal, meat, lentils, fish and such foods. Vegetables sources of protein do not contain cholesterol and also add roughage to the diet.

Fat

When it comes to dietary fat, what matters most is the type of fat you eat. When food manufacturers reduce fat, they often replace it with carbohydrates from sugar, refined grains, or other starches. Our bodies digest these refined carbohydrates and starches very quickly, affecting blood sugar and insulin levels and possibly resulting in weight gain and disease.

Focus on "good" fat, not low-fat

Rather than adopting a low-fat diet, it's more important to focus on eating beneficial "good" fats and avoiding harmful "bad" fats. Fat is an important part of a healthy diet. Choose foods with "good" unsaturated fats, limit foods high in saturated fat, and avoid "bad" transfat.

Foods high in good fats include vegetable oils (such as olive, canola, sunflower, soy, and corn), nuts, seeds, and fish.

"Bad" fats—Trans fats — increase disease risk, even when eaten in small quantities. Foods containing trans fats are primarily in processed foods made with trans fat from partially hydrogenated oil.

Transfats are unhealthy and must be kept to a minimum as they reduce HDL and increase total cholesterol. Foods rich in transfat are cream filled candies, doughnuts, fried fast foods, frozen pizza etc.,

Saturated fats are not as harmful as trans fats. Foods containing large amounts of saturated fat include red meat, butter, cheese, and ice cream. When you cut back on foods like red meat and butter, replace them with fish, beans, nuts, and healthy oils instead of refined carbohydrates

How much oil does a person require for good health?

A normal person requires 15-20g of oil per day. This equates to a maximum of 500ml of oil/month /person. So, a family of 4 requires 2kg/month. This includes all forms of oil, ghee, butter.

What is fibre? Is it good for health?

Fibre is a type of carbohydrates present in food which our body cannot digest. It gets evacuated with the faeces. But scientific studies have proved that fibre has a lot of advantages. The benefits of fibre are that it:

- ✓ Lowers sudden rise in blood sugars- Has a lower glycaemic index of foods
- ✓ Lowers cholesterol levels in blood
- ✓ Provides satiety
- ✓ Aids in easy bowel movements
- ✓ Helps in weight reduction

Which foods contain fibre?

- Whole grains- unpolished rice, whole wheat flour chapath is, ragi preparations
- Whole gram pulses- sundal (channa) preparations
- Fruits with edible skin and seed (guava, grapes, banana, pomegranate, etc..)
- Vegetables- green leafy vegetables

USE MORE FIBRE RICH COMPLEX CARBOHYDRATE FOODS!



FIBRE RICH



The fibre present in these foods traps the sugars and only gradually releases it into the blood stream, thereby preventing a sudden rise of sugars in the blood stream. Thus it is important to include at least one serving (100gm) of fibre rich food with each meal.

What are the foods that are to be avoided? Why?

Sugary foods like cakes, pastries, carbonated drinks, sweets (laddoos, jabis etc.), ice-creams, lollipops, chocolates, jaggery and honey are high in simple sugars and are easily absorbed by the body resulting in a sudden raise in blood sugars. These are best avoided.

What is a balanced diet?

A diet that contains adequate carbohydrates, proteins, fats, vitamins & minerals and fibre is a balanced diet as it meets our daily requirement. A picture of a balanced lunch/dinner is given below. A diabetic diet is a balanced diet.



LUNCH



DINNER

SNACKS

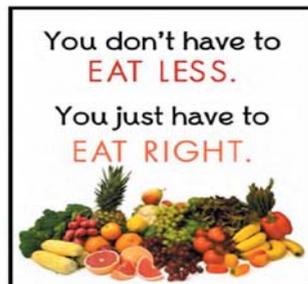
Are snacks important? When and why should I take snacks in between meals?

Snacks are very important to prevent hypoglycaemia in patients with diabetes. They should be taken three hours after meals. This prevents the blood sugars from going too low, that is below 70mg%.

In patients who are obese it provides a sense of satiety and a prolonged hungry hours.

What are the snacks I can take between meals?

Any of the foods below can be taken as a snack.



He, who takes food in proper measure lives a long life and lives without disease, gets strength and alertness of mind.

Physical activity and healthy eating

A good balance between exercise and food intake is important, as this helps to maintain muscle strength and a healthy body weight. At least 30 minutes of moderate intensity physical activity, such as walking, is recommended every day.

Benefits of Regular Exercise

Regular exercise (and proper nutrition) can help reduce body fat as well as protect against chronic diseases associated with obesity. If you are looking for a reason to start an exercise program, listed below are five of the many benefits of regular physical activity.

Exercise lowers risk for chronic metabolic diseases like obesity, diabetes mellitus, Dyslipidemia, Hypertension and Ischemic heart diseases. It will help to prevent or manage high blood pressure. It also raises high density lipoprotein (HDL) cholesterol, known as the “good” cholesterol, and lowers low density lipoprotein (LDL) or “bad” cholesterol. This combination will decrease the amount of harmful plaques that can buildup on your artery walls and keep blood flowing smoothly. Regular exercise can also help prevent type 2 diabetes, osteoporosis, and certain cancers.



Exercise improves your mood

Feeling a little edgy? A quick workout will help calm you down! Exercise stimulates chemicals in your brain that make you feel happy and relaxed. It also makes you feel better about yourself and helps reduce feelings of depression and anxiety.

Physical activity and mental health

Being physically active:

The infographic is set against an orange background and features several icons and text boxes. On the left, a brain icon is next to the text 'Protects against mental health problems'. Below it, a person icon is next to 'Decreases depression in older adults'. Further down, another person icon is next to 'Reduces the symptoms of post natal depression'. In the center, a heart icon is next to 'Is as effective as medication for mild to moderate anxiety and depression'. Below that, a person icon is next to 'Improves self-esteem and cognitive function in young people'. On the right, a hand icon is next to 'Playing sport reduces psychological distress by'. Below this, two percentages are shown: '34%' with '1-3 times a week' and a blue downward arrow, and '47%' with '4+ times a week' and a red downward arrow. To the far right, a house icon is next to 'People who participate in sports clubs and organised recreational activity enjoy better mental health.' and an icon of people playing a sport.

Exercise helps manage weight

It's a no-brainer. Exercise burns calories. The more you exercise, the easier it is to keep your weight under control. But remember that exercise is not a free pass to eat everything in sight! To burn 100 calories, most people need to walk or run about one mile. So be sure not to overestimate the amount of calories you're burning.

Exercise promotes better sleep

Having a hard time falling and staying asleep? A good night's sleep can improve your concentration and productivity throughout the day, and exercise might be the key to getting better sleep. It can help you fall asleep faster and sleep deeper.

The infographic has a purple header with the text 'WHY SHOULD I EXERCISE?'. Below the header, there are ten rows, each with a benefit and an illustration. The benefits are: 'MY STAMINA IS INCREASED' (runner), 'I SLEEP BETTER' (hanging hammock), 'It makes me Feel Fit and Healthy' (squirrel and person), 'IT SHARPENS MY THINKING' (brain), 'MY BODY GETS LEANER' (person on exercise ball), 'IT GIVES ME MORE ENERGY' (person running), 'MY MUSCLES AND BONES GET STRONGER' (robot), 'IT HELPS ME TO RELAX' (person on lounge chair), 'IT RELIEVES STRESS IN MY LIFE' (person with stress ball), and 'MY HEART BECOMES MORE EFFICIENT' (heart with gears).

Despite all your inclinations to monitor your weight on the bathroom scale, try to resist focusing on weight loss. The body has a tendency to gain muscle or lean weight initially, so although your body is benefiting from the exercise, the pounds might not drop off right away. Focus on the quality and quantity of the exercise instead.

Engage in activity that puts minimal stress on the joints, such as walking, swimming or water exercises, and cycling.

- Ease into your workout. Start slowly for the first five minutes to give your body time to adjust to the activity.
- Work at a comfortable pace that allows you to talk without too much difficulty.
- Focus on increasing duration first, then increasing intensity.
- Slow down for the last five minutes to allow your body to ease back into its resting state
- Finish with stretching exercises.



Precautions

- It is important to gradually increase the duration and intensity of the exercises, while understanding that you will have to build up to longer and more strenuous workouts.
- Jogging can cause stress on the knees and joints and is generally not recommended for the obese because of risk for injury. Instead, stick to lower impact aerobic activities until you are in better shape.
- Obese people should be especially careful about heat exhaustion given that they are less able to adapt to temperature changes. Wearing light clothing will allow for better heat exchange while exercising.
- Hydration is very important since they are susceptible to dehydration. Be sure to drink fluids frequently before, during, and after exercise.
- Slow down or stop if you experience chest pains, shortness of breath, palpitations, nausea, pain in the neck or jaw, or major muscle or joint pain.

Integrate physical activity into daily activity:

- Take the stairs.
- Park farther from the door.
- Take a short walk at lunch.
- Turn off the TV.
- Take walk breaks from work.
- Wear a pedometer for monitoring your activity

People don't just have time to exercise... they MAKE time to exercise.
Be in control of your life. Make exercise a part of your day, everyday!



TIPS FOR HEALTHY EATING

Choose minimally processed, whole foods :

- Whole grains (whole wheat, oats, brown rice)
- Whole fruits (not fruit juices).
- Nuts, seeds, beans, and other healthful sources of protein (fish, poultry)



Things you can do:

- ✓ Choose whole grain foods such as brown rice and whole wheat bread.
- ✓ Weigh and measure food to gain an understanding of portion sizes.
- ✓ Exercise, even moderately, for at least 30 minutes a day
- ✓ Avoid intake of fatty and sugary foods.
- ✓ Eat at regular times.
- ✓ Eat a balanced meal.
- ✓ Avoid long gap between meals.
- ✓ Choose good carbs, not no carbs. Whole grains are your best bet.
- ✓ Pay attention to the protein package. Fish, poultry, nuts, and beans are the best choices.
- ✓ Choose foods with healthy fats, limit foods high in saturated fat, and avoid foods with trans fat. Plant oils, nuts, and fish are the healthiest sources.
- ✓ Choose a fiber-filled diet, rich in whole grains, vegetables, and fruits.
- ✓ Eat more vegetables and fruits. Go for color and variety - dark green, yellow, orange, and red
- ✓ Water is best to quench your thirst(drink 2 to 3 litres per day) Skip the sugary drinks.

DIET PLAN

TIME	MENU	AMOUNT
Early Morning: 6.30AM-7.00AM	Milk ____ Tea ____ Coffee ____	
Breakfast : 8.00AM-8.30AM	Idli ____ Dosa ____ Chappathi ____ Ragidosa ____ wheatravaupma ____ Sambar /chutney Vegetable ____	
Mid-Morning : 10.00AM-11.00AM	Skimmed-Buttermilk ____ Vegsoup ____ fruit ____ sundal ____	
LUNCH: 12.30PM-1PM	Chappathi ____ Rice ____ Dhal ____ Vegetables ____ Salad ____ Curd ____	
TEA-TIME: 4.00PM-5.00PM	Milk ____ Tea ____ Coffee ____ Sundal ____ Salad ____ Sprouts ____	
DINNER: 7.30PM-8.00PM	Chappathi ____ Wheatdosa ____ Wheatravaupma ____ Sambar ____ dhal ____ Vegetables ____	
BED-TIME: 10.00PM-10.30PM	Milk _____	

Contact Us

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