







# Begin today.....









# Eat wise, Walk a mile, Live life with a smile, Test yourself once a while...



















# MUMBAI!

Begin today.....













#### Message

बृहन्मुंबई महानगरपालिका असांसर्गिक रोगांवर नियंत्रण ठेवण्यासंदर्भात करीत असलेल्या प्रयत्नांबद्दल मुंबईचा प्रथम नागरिक म्हणून मला अतिशय आनंद होत आहे.

दिवसेंदिवस मधुमेह, उच्च रक्तदाब आणि हृदयविकार हयांसारख्या असांसर्गिक रोगांमुळे जगभरात मृत्यूचे प्रमाण वाढलेले आहे. आजकालच्या बदलत्या जीवनशैलीमुळे आपल्या घरातील जवळची एखादी व्यक्ती, मित्र वा सहकारी मधुमेहग्रस्त आहे, हा आपला आजचा अनुभव आहे. एवढया मोठया प्रमाणात मधुमेहाचे प्रमाण वाढलेले असून ते निश्चितच चिंताजनक आहे.

माझ्या स्वतःच्या जवळचे असे कित्येक सहाकारी आज मधुमेहग्रस्त आणि हृदयविकाराने पीडीत असून त्यांच्या मनात या रोगांसंदर्भात अनेक प्रश्न निर्माण होतात. हा रोग झाल्यावर घ्यावयाच्या प्रतिबंधात्मक उपायांबद्दल व दैनंदिन काळजीबद्दलही कित्येक रोगी अनिभन्न असतात.

त्यांना सदर रोगांवर नियंत्रण ठेवण्याकरिता मार्गदर्शनाची आवश्यकता आहे.

बृहन्मुंबई महानगरपालिकेने मलेरिया आणि क्षयरोग नियंत्रण यासंदर्भात जनजागृती अभियान यशस्वीपणे राबविल्यानंतर असांसर्गिक रोगांसंदर्भात प्रसृत करण्यात येत असलेल्या हया पुस्तकामुळे सर्वसामान्य नागरिक आणि रोगपिडीत हयांना दैनंदिन दिनचर्या कशी असावी व या रोगांबाबत घ्यावयाची काळजी हयासंदर्भात उत्तम मार्गदर्शन मिळणार आहे.

हृदयविकार, उच्चरक्तदाब हयावर कशा प्रकारे नियंत्रण ठेवता येईल हयासंदर्भात सर्व बाबींचा सर्वकष उल्लेख हया पुस्तकामध्ये आहे. तसेच तरुणवर्गाने कोणत्या चांगल्या सवयी स्वतः अवलंबिल्या पाहिजेत, जेणेकरुन येणाऱ्या काळात आरोग्यदृष्ट्या सुदृढ समाज राहील, हयाबाबतही अत्यंत सोप्या पध्दतीने मार्गदर्शन यामध्ये करण्यात आले आहे.

या पुस्तक प्रकाशनाच्या निमित्ताने मुंबई शहरातील प्रत्येक नागरिकाचे आयुष्य निरोगी रहावे अशी मी सदिच्छा व्यक्त करीत आहे.

Shri. Sunil Prabhu
Mayor
Municipal Corporation of Greater, Mumbai











#### Message

I am delighted to present an Informative Hand book aimed at educating Mumbaikars about Hypertension, Diabetes and Heart disease. The booklet is aimed at inculcating Health Consciousness among the Mumbaikars.

Fast Track Life Style and Fast Food are primarily responsible for Hypertension, Diabetes and Heart Disease. The booklet Proactively guides to curb the vicious circle of Hypertension, Diabetes and Heart Disease.

The Booklet provides valuable but simple tips to Mumbaikars to safeguard themselves from the aforesaid ailments.

To provide well developed health infrastructure to the citizens is a primary responsibility of Civic Administration. As a part of its responsibility, Municipal Corporation of Greater Mumbai has released the booklet; which will be helpful to the patients as well as their family members. In order to facilitate the early detection of the foresaid ailments and to render timely treatment to Mumbaikars; a testing facility for checking blood sugar, blood pressure, stool, urine etc. are also provided in Municipal Dispensaries whose information is available in the Booklet.

I am sure, Mumbaikars will avail and appreciate these facilities rendered to them in the nearby vicinity of their residence and work place.

I am confident of long term utility of this Booklet and the Dispensaries in preventing pandemic of the ailments in Mumbai.

I wish Mumbaikars Workaholic but Wonderful Life Style.

Shri. Sitaram Kunte

Municipal Commissioner

Municipal Corporation of Greater, Mumbai









#### **Preface**

Public Health is not just an obligatory duty of Municipal Corporation of Greater Mumbai (M.C.G.M.), it is also amongst its topmost priorities.

Prevention & control of communicable diseases such as Malaria, Dengue, Tuberculosis and the like has always been a cause of concern, communicable diseases typically get the attention they deserve in communities and in the media alike.

It is, however, the Non Communicable Diseases (NCDs) which need to be a cause of equal concern, if not more. Because in today's age, NCDs are responsible for more deaths than the communicable diseases put together. The pace of life in Mumbai along with the inevitable stress, coupled with unhealthy eating habits and sedentary life styles are in themselves responsible for onset of silent killer diseases such as Diabetes & Hypertension at relatively early years.

Municipal Corporation of Greater Mumbai was the first Corporation in India to acknowledge the widespread prevalence of NCDs in the community, and has so far launched 55 dispensaries offering lifelong medication for Diabetes & Hypertension at Primary Health care level. This booklet is a part of M.C.G.M.'s commitment for lifelong care of NCDs. M.C.G.M. is also introducing a Central Database for Diabetes which will facilitate lifelong handholding of Diabetes patients.

This booklet focuses on **Prevention & Control** of NCDs such as Diabetes & Hypertension. It provides the basic fundamentals, and educates teachers, parents, children and home makers about prevention and control.

I am confident that by making suitable lifestyle modifications as the booklet advises, Mumbaikers will be able to better manage Diabetes & Hypertension or prevent altogether. I also take this opportunity to thank personally and on behalf of M.C.G.M., all those who helped in formulating this booklet.

Mumbai, Lets begin today, Eat wise, Walk a mile,

Live life with smile ... Test yourself once a while.

Manisha Patankar Mhaiskar

Additional Municipal Commissioner
Municipal Corporation of Greater, Mumbai









#### You must Read this book

Diabetes and Hypertension are lifelong conditions, usually caused by an unhealthy lifestyle.

Every individual should take charge of their health and family's health.

This is not very difficult! This book provides useful tips for everyone as to how to balance your life and prevent Diabetes & Hypertension.

This book also provides guidance to those who already have diabetes and hypertension & can still prevent the complications of these diseases.

It outlines the treatment principles & helps you to live your life fruitfully despite the disease.

With the support of your family, friends & your Doctor, you can take care of yourself & your family members.

In case of queries, please feel free to contact your nearest MCGM dispensaries listed in the last section of the book or call 022-24114000











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## Chapter 1 Introduction

- Diabetes & Hypertension have turned out to be the leading causes of ill health & Death, World wide & in INDIA.
- In India, 1 in every 3 adults have hypertension & 1 in every 6 adults have Diabetes.
- Most common cause of heart attacks & deaths in our country are Diabetes & Hypertension.
- They can affect anyone irrespective of Age, Race, Sex or Income levels.
- Both are life long disorders.
- Sedentary lifestyle & stress are the major reasons for developing these disorders.
- Indians develop Diabetes at an earlier age than Westerners.
- Central obesity (apple shape of the body) predisposes Indians to diabetes.
- They disorders are silent killers ---At least 50 % of people are asymptomatic & unaware of Diabetes & Hypertension.
- Diabetes & Hypertension touches every part of your life everyday.
- Diabetes & Hypertension can affect your eyes, kidneys, heart, brain, nerves & can cause problem of blood flow in your body.









# Chapter 2 **Basic Information On Diabetes**









#### What is Diabetes?

Diabetes is a condition where the blood glucose levels in the body of a person are higher than normal.

- Food we eat turns into glucose for our body to give us energy.
- Pancreas is an organ located near the stomach in our body which produces the hormone insulin.
- Insulin is needed for glucose to enter the cells and get converted into energy.
- In people with diabetes, the body does not produce enough insulin or often cannot use insulin properly.

#### What are the risk factors for Diabetes?

The following factors may increase your chance of getting diabetes:

- Family history of diabetes
- Being overweight
- Age > 40 years
- Sedentary lifestyle
- Emotional & Physical stress related to day to day work
- Taking certain medicines

# What are the chance of you getting Diabetes if there is a diabetic patient in the family?

•If 1 parent is Diabetic, a chance of developing Diabetes is 50 % & if both Parents are Diabetic, the chances are more than 90 %.









#### What are the most common signs and symptoms of diabetes?

- Frequent urination
- Being very thirsty
- · Intense hunger
- · Loosing weight without trying
- Blurred vision
- Numbness or tingling in hands and feet
- · Getting more infections than usual
- Repeated infections of private parts of body
- · Feeling tired
- Slow healing of cuts/bruises

However more than 50% of people are totally asymptomatic and are diagnosed only on testing.

#### Type 1 diabetes

- Starts at an early age, even in a child less than 6 month old.
- In this type, body produces little or no insulin.
- The child may become symptomatic very abruptly.
- A person with type 1 diabetes needs insulin injections right from beginning and for life!!

#### Type 2 diabetes

- This type occurs most often in people who are over 30-40 years old, but is now being seen in children.
- Insulin is produced in the body but it doesn't work as it should.
- Nine out of 10 people with diabetes have type 2 diabetes.

Gestational Diabetes
Other types

Diabetes in pregnancy
Rare types depending on the cause









#### Who should be tested for Diabetes

- If you have a family history
- If you are overweight, central obesity i.e. In man waist size 90 cm or more, in Women 80 cm or more
- If you are above 40 years of age
- If you have Sedentary lifestyle
- If you Loose weight without trying
- If you are Pregnant
- If you deliver a child with birth weight more than 3 kgs



If you are in above risk group check you sugars every year after the age of 30 years

If your sugars are abnormal, meet your doctor & follow advice strictly.

Many studies have shown that the best way to control diabetes is to act in first 10 years and not in last 10 years when it is too late.







#### How is Diabetes managed?

 The most important aspect of Diabetes management is maintaining a healthy lifestyle & reducing risk of developing complications.

#### Diabetes can be managed by:

- Developing healthy eating habits & following your diet plan
- Regular exercise
- Taking oral medication or insulin injections regularly as advised by your doctor
- · Regular testing of blood glucose

#### Can Diabetes be cured?

- No.
- A cure for diabetes has not been found. However, diabetes can be treated and controlled. Most people with diabetes manage their disease and lead normal lives.
- Diabetes will always be part of your life.

#### Is Diabetes Serious?

- Yes. Patients with diabetes are up to twice more likely to develop heart disease & stroke
- Vision impairment & blindness are also common
- Diabetes can cause kidney failure 3 times more compared to those without diabetes
- Gangrene and leg amputation are much higher in diabetes than any other disease which can lead to infection & death

What are the chances of having Diabetes & Hypertension both? More than 50 % of the patients have Diabetes & Hypertension both. Hence you should be careful & follow your doctors advice strictly.









# Range of blood glucose

#### What is the range of blood glucose for normal people & diabetics?

Normal level of blood glucose	Pre-Diabetes	Diabetes
Fasting sugar Less than 100 mg/dl	Fasting sugar 100-125 mg/dl	Fasting sugar 126 & More than 126 mg/dl
*2 hours after lunch Less than 140 mg/dl	2 hours after lunch 140-199 mg/dl	2 hours after lunch 200 & More than 200 mg/dl

<sup>\*</sup> In some patients Doctor may advice Post Glucose Test



If your blood sugar is in Pre-Diabetic or Diabetic range then see your doctor immediately.









Chapter 3
Pre Diabetes
&
10 Golden Rules
to prevent Diabetes











#### **Pre-Diabetes**

**Pre- Diabetes**: is a condition before Diabetes stage where blood glucose levels are higher than normal but not high enough for a diagnosis of Diabetes.

In a Pre-Diabetic Fasting blood sugar is between 100-125 mg/dl & 2 hours after lunch is 140-199 mg/dl.

A Person is fortunate if diagnosed in this stage because he/ she can adopt healthy lifestyle and prevent further development of diabetes.

If not taken care of at this stage, then person can become Diabetic over next 3-4 years.

Hence, everyone who is diagnosed as Pre-Diabetes should take proper precautions. 10 Golden Rules if observed will help in controlling blood sugar.



50 % of persons having high sugar values are in the Pre-Diabetic stage, where there are no signs or symptoms. If you are detected in this stage, you are lucky & a little care for yourself will keep you healthy.









#### 10 Golden Rules to Prevent Diabetes

- 1. Adopt "Eat Wise and Walk a mile" principle
- 2. If you are overweight, try to reduce your weight
- 3. Minimize sugar, sweets & salt in your diet
- 4. Eat plenty of green vegetables, grains and fruits
- 5. Avoid food rich in fats and oils
- 6. Avoid Tobacco & Alcohol
- 7. Walk at least 30-45 minutes daily
- Minimize T.V. watching and spend leisure time in activities like gardening or exercise
- Practice yoga, meditation and other relaxation techniques for stress control
- 10. Check your blood sugar and blood pressure if you are in the high risk group every 6 months



If you or your family member is in the Prediabetic stage, adopt a healthy lifestyle & follow up with your doctor every 6 months.









# Chapter 4 **Diabetic Patient care**











#### Diagnosis of Diabetes is done by testing blood sugar

Person having Fasting blood sugar level 126 & more than 126 mg/dl & sugar level 2 hours after lunch 200 & more than 200 mg/dl is diagnosed as Diabetes.

But, If you are diagnosed as a Diabetic there is no need to panic.

If you have Diabetes, you need to keep a balance between 3 important things:

- 1. What you eat & drink
- 2. Amount of Physical activity you do
- 3. What Diabetes medicine you take

It is important that all Diabetic patients keep a track and record of their blood sugar & get it tested regularly.

In some patients whose blood sugars are not controlled and are on insulin need to check blood sugar frequently or as advised by their doctor & they can **use Glucometer** at home for such testing.

#### **Targets for blood sugar control for Diabetes:**

Before Meals: 70 to 130 mg/dl 2 hours After the meal: below 180 mg/dl



All Diabetics should check their blood sugar regularly or at least quarterly. HBA1c, lipids, urine, ECG & X-ray once a year.









# Tips about Food for Diabetics

# Diabetics can follow these tips in every day life to control their blood sugar

- Eat regular small meals every 4-5 hours, 2 being major meals.
- Eat whole grains cereals & legumes like dalia, oats, moong, chana.
- Eat different kinds of vegetables & fruits of different colors like red, purple, orange, green, white.
- Eat less fat & prefer food which are boiled/ steamed/ grilled/ roasted.
- Eat high fiber diet like vegetables, cereals, millets, fruits & beans.
- •Avoid refined & processed foods like maida, bakery products.
- Avoid foods with extra sugars like barfi, pedas & other sweets.
- Avoid foods with extra salt like pickles, papad, & chips, farsan.
- Drink water & other drinks with no added sugars.
- Diabetics should not consume alcohol.

See the detailed Food chart in the chapter "Lifestyle Modification" & you can also consult a dietitian.



Do Not Fast/ Over eat/ Skip your meal.









# Tips about Physical activity for Diabetics

# Regular Physical activity can control your blood glucose & blood pressure

Reduce & maintain weight
It improves Good Cholesterol & reduces Bad cholesterol
Prevents heart attack & blood flow problems
Prevent or delay complications of Diabetes

- Walk for at least half an hour daily or 150 minutes per week.
- Consult doctor before starting of exercise.
- Start with 4-5 min warm-up.
- Keep a check on Blood sugar & Blood Pressure.
- Avoid exercise if blood sugar & Blood pressure is high or low (uncontrolled).
- If you feel pain slow down or stop.
- Avoid heavy exercise ( weight lifting, running).
- Choose exercise you enjoy like swimming, cycling etc.
- Always Carry Sugar & snack in your pocket.
- Always have an identity card with you stating that you are diabetic.



Do Not do Heavy Exercise or Exert.









#### **Diabetes & Medications**

Diabetes medicines help to keep the blood glucose in normal range by helping body to produce insulin & act better.

You should never take these medicines over the counter without doctors consultation.

The common medicines are tablets & insulin.

#### Tablets:

- •There are 4 to 5 groups/Types of different tablets available to control the sugar
- •The tablets are usually taken once or twice a day
- •You may have to take other medicines in addition to your diabetic medicines for other diseases like control of hypertension, lipids, etc.

#### Insulin:

- •All patients with Type 1 Diabetes need insulin
- •Some patients of Type 2 Diabetes whose sugar are not controlled with tablets need to be started on insulin, around 10 % of patients will need Insulin.
- •Some patients who are sick or undergoing surgery & also some women with gestational Diabetes will need insulin. These patients will need insulin for few days or months.
- •Only a few patients may need insulin for lifetime.

Insulins are usually taken by injections & patients can learn taking injection on their own.

It is important to follow Diet & Exercise as advised by doctor & Dietician along with Medicines.











#### **Diabetes & Medications**

- Understand from your doctor how the medicine works.
- Get Involved in your Treatment.
- Always carry your medicine with you wherever you go.
- Follow your Doctors advice.
- Report if there are any side effects.
- Never Miss your meals while on medicines.
- Always take your medicines regularly on time.
- Do not take medicine over the counter without Doctors advise.
- Do not go to Quacks & be careful about claims to cure Diabetes.
- Do not discontinue your medicine or change the dose without consulting your doctor.

#### Do not become "self Doctor"

One patient's medicine may be different from another patient.

#### **Most Important**

Tell your doctor about your illness & medicines taken from the very beginning.

Keep all your reports carefully!!

Inform your Doctor even if you are taking other remedies e.g. Ayurveda or Unani etc.









# Low Blood Sugar

# Low Blood sugar is a common phenomenon which occurs in diabetic patients in case of:

- Missing or delaying a meal
- too much exercise
- drinking alcoholic beverages
- excessive use of diabetic medicines
- medicines taken for some other illness

When your blood sugar is low, your body gives out signs that you need food.

You must look for the following symptoms.

#### Early symptoms

- Feel weak, giddy, hungry, shaky, cranky
- Have Sweating, pale skin
- Feel frightened or anxious, confused
- Have bad dreams
- Be unable to focus
- Blackouts

#### Late symptoms

- Convulsions
- Coma

Always have an identity card with you stating that you are diabetic

What to do
3 tablespoon of sugar
or
½ to 1 cup of available fruit juices
Or
Sugar candy / Glucose Biscuits

Check with your Doctor









## Care to be taken by Diabetics when Sick

- Diabetics are prone to have repeated skin & soft tissue infections & hence you must be careful & inform your doctor immediately in case of any injury or infection
- $\bullet$  Tuberculosis is one of the common infections in diabetics. If there is cough for more than 7 10 days duration, you must consult your doctor immediately.

#### If you are sick:

- Keep Taking Medicine
- Keep Eating
- Drink Extra liquids
- Check for weight-loosing weight is a sign of high blood sugar
- Check the temperature- Fever may be a sign of infection

#### Visit nearby hospital:

- If you feel too sick
- Have severe diarrhea
- Loose Weight
- Have temperature
- Troubled breathing
- Feel sleepy
- Cant think clearly

# Care to be taken by Diabetics when Travel

- Keep Sugar/glucose, dry snacks & extra food or drink with you
- Always carry your medicines with you
- Carry your identification/ diabetic card
- Carry First aid kit & torch light







#### Stress reduction for Diabetics

- Do Yoga & Meditation to relieve the stress
- Deep breathing exercises
- Regular practice of relaxation like listening to music

#### What you should do if you feel low & depressed?

Often diabetic patient feel very sad & gloomy because they suffer from complications or they do not have any one to care for or share with.

If you are diabetic It is important to:

- Have positive outlook towards life
- Share with other diabetic patients & make friends
- Do activities which you enjoy
- Adopt relaxation & breathing techniques to relax your mind
- Meditate regularly

Take professional help or consult your doctor if you feel depressed.









## Diabetes & Pregnancy

- Gestational diabetes is a form of diabetes that occurs in around five per cent of pregnancies.
- In the majority of women it usually resolves after the delivery.
- Diabetic women if desire to conceive can do so but, must consult endocrinologist & Gynaecologist.
- Gestational diabetes significantly increases a woman's risk of developing type 2 diabetes later in life.
- If a woman has had gestational diabetes in previous pregnancies she is more at risk of developing gestational diabetes in subsequent pregnancies.
- Babies born to diabetic mothers are usually big babies and are at risk of developing diabetes in their lifetime.



Always consult your doctor if you are pregnant & Diabetic.

All women having high sugars during any of the pregnancy must check their blood glucose later regularly.









#### Children with Diabetes

#### How to take care of children who have Diabetes?



#### Usually children has Type 1 diabetes & need Insulin

This is a condition in which your child's pancreas no longer produces insulin.

The child needs insulin to survive, and treatment is to replace the missing insulin.

The diagnosis of type 1 diabetes in children can be traumatic, at first.

You and your child — must learn how to take injections, control diet and monitor blood sugar.

Type 1 diabetes in children requires consistent care. And this must not affect the child's physical and mental growth.



Children with Diabetes need special care when sick:

Check blood sugars... if blood sugars are not low do not stop insulin even if the child does not eat Seek medical attention immediately.









# Chapter 5 Complications of Diabetes & Ways to Prevent

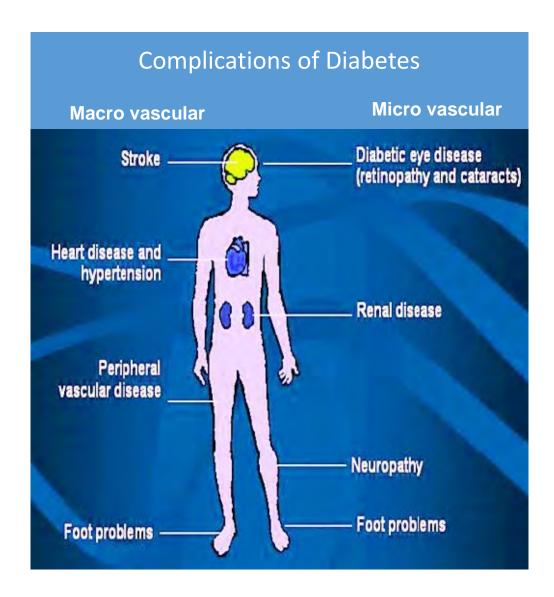




















# Complications of Diabetes & Ways to Prevent

Common complications seen in diabetic patients follows:

- Heart & blood vessels
- Foot Problems
- Eye (Retinopathy)
- Kidney (Nephropathy)
- Neuropathy

These are discussed in detail further in this section.

All Diabetic Patients should check their feet daily.



All Diabetics should consult their doctor if they notice any of these complications









### **Heart & Blood vessels**

Heart & blood vessels problems are the main cause of sickness & death among diabetics.

High uncontrolled sugar can lead to blocking of small blood vessels of heart, brain, legs & feet.

It can lead to high blood pressure, heart attacks & stroke.

#### Symptoms:

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- Chest pain/heaviness
- Palpitation
- Shortness of breath
- Swollen ankles

#### Brain (stroke)

- Feel dizzy
- Slurred speech
- Feel numb or weak in 1 arm or leg

#### Feet

 Pain/ cramping in calves, thighs or buttocks during physical activity

#### How to Prevent:

- Control your blood pressure
- Control your blood sugar
- Eat foods low in salt or sodium
- Stop smoking & use of tobacco
- Check your ECG once in a year



All Diabetics should consult their doctor if they notice any of the symptoms.









#### **Foot Problems**

If Diabetes is left uncontrolled for long, then high sugar can affect nerves & blood vessels of the feet & cause damage leading to infections, gangrene & ulcers on feet.

#### **Symptoms:**

- Tingling /burning or hurting sensation
- Loss of sensation touch, heat or cold
- · Change in colour or temperature of the feet
- Deform or misshape the feet
- Sores or blisters or ulcers on feet
- Loose hair, Dry skin & crack skin
- Fungal infection between the toes

#### Care of feet:

- Check your feet every day for sensation, ulcer, etc
- Wash your feet every day, Don't soak
- Apply lotion or cream foot to avoid dryness
- Trim your toe nails carefully
- Check for corns & callosities
- Protect your feet from heat & cold
- Always wear shoes & socks, Don't use Plastic chappals
- Don't Walk bare foot
- Control your blood pressure
- Control your sugar



All Diabetics should not neglect these symptoms and should consult their doctor immediately.









# Eye (Retinopathy)

If Diabetes is left uncontrolled for long, then high sugar can affect our lens which can became opaque (cataract), eye fluid pressure can increase leading to damage to optical nerve (glaucoma) or eye screen (retina) can bleed & cause retinopathy, which will lead to Blindness.

#### Symptoms:

- Vision changes
- Troubled reading
- Blurred vision
- Dark spots & flashing

#### What should be done:

- Check your eyes once in a year with a eye doctor
- Control your blood pressure
- Control your sugar



Eyes are precious do not neglect any of these symptoms consult your doctor immediately.









# Kidney (Nephropathy)

Kidney help to maintain right amount of water & salt & filter harmful waste & throw it out of the body.

If diabetes is left uncontrolled for long, then high sugar can affect blood vessels of the kidney disturbing its function leading to accumulation of waste in body & leading to kidney failure.

#### **Symptoms:**

- High Blood Pressure
- Lower back pain
- In case of infection, fever with chills

#### **How to Prevent:**

- Control your blood pressure
- Control your sugar
- Eat foods low in salt or sodium
- Get your blood & urine checked once in a year for any kidney problems



All Diabetics should consult their doctor if they notice any of the symptoms related to these complications.









# Neuropathy

High Blood Sugar can damage the nerve which can lead to many problems in different organs.

#### Symptoms:

- Burning & tingling of hands & feet
- Loss of sensation
- Bowel problems
- Difficulty in urination / Dribbling
- Loss of Libido

#### What to do:

- Control your sugar
- Numbness or tingling in your feet should be reported to your doctor at your regular visits
- Check your feet daily for redness, calluses, cracks or skin breakdown



All Diabetics should consult their doctor if they notice any of the symptoms related to these complications.









# Chapter 6 Frequently asked questions by Diabetic patients.









# Question on other remedies

#### Are alternate methods effective in Diabetes?

Alternative system have medications which have been shown to have effects on reducing blood sugars.

Some simple ingredients that have been shown to have blood sugar lowering effects are:

Jamun seeds, Methi seeds, Karela.

Cinnamon, Flax seeds, Turmeric & Ginger.

However all these agents have a minimal effect on blood sugar and should not replace modern medicines or insulin.







# Question on Artificial Sweetener

#### What is the role of Artificial sweetener available? Should you use it?

When you have diabetes, sugar and sweets are ideally avoided.

Though it may be difficult to curb the craving for sweets, you must try to control your craving for sweets on special occasions.

Foods and drinks that use artificial sweeteners are possibly the solution to your problems.

They can be used to sweeten food and drinks for less calories and carbohydrate when they replace sugar.

**Some artificial sweeteners e.g.** aspartame, saccharin and sucralose are approved by the FDA. Their sweetening power is at least 100 times more intense than regular sugar, so only a small amount is needed. But They are costly.

However, many foods containing artificial sweeteners still have calories and carbohydrates. Discuss with your dietician or doctor before you consume these foods.









# **Questions on Cholesterol**

#### What is Cholesterol? What are the different types of cholesterol?

• Cholesterol is a fat-like substance which is required for normal functioning of our body which is prepared by our body & we also get it from certain foods.

The major types of cholesterol are:

- Low-density lipoproteins (LDL) can lead to heart disease and stroke, hence called "bad cholesterol"
- High-density lipoproteins (HDL) removes bad cholesterol from the body & reduce the risk for heart disease and stroke, hence called "good cholesterol".
- **Triglycerides** are a different type of fat & high levels of it can raise the risk for heart disease.

## What causes high blood cholesterol?

## Factors which lead to high blood cholesterol:

- Old Age, Heredity, Female Hormones
- Unhealthy lifestyle i.e. excess fat in diet or faulty diet, lack of exercise & smoking
- Diabetes disturbs the balance between different type of cholesterol & can lead to high blood cholesterol









# **Questions on Cholesterol**

#### What is the effect of high blood cholesterol on your body?

If the balance of cholesterol in body is disturbed, excess cholesterol can get deposited in arteries blocking them leading to heart attacks & stroke.

#### What should you do to prevent high blood cholesterol?

• As high cholesterol itself doesn't present with symptoms, you may not know that your cholesterol is high.

Hence certain things are to be followed to keep your cholesterol in check:

- Get a blood test done for lipids annually.
- Eat a healthy diet.
- Maintain a healthy weight.
- Exercise regularly.
- Don't smoke.
- In case, you are diagnosed to have high cholesterol, treat it & follow your doctors advice strictly



Diabetes & High Cholesterol together can lead to serious heart problems & it can be without any symptoms.









# Chapter 7 **All about Hypertension**









#### What is Blood Pressure?

• Blood pressure is the force of blood against your artery walls as it circulates through your body. Your blood pressure is recorded as two figures. For example, 120/80 mm Hg.

The upper side (120) is the systolic pressure. This is the pressure in the arteries when the heart contracts.

**The lower side (80) is the diastolic pressure**. This is the pressure in the arteries when the heart rests between each heartbeat.

Range of Blood Pressure: Normal & Hypertension

For adults the values are given in the chart below.

(Some patients may have only systolic or Only Diastolic Hypertension. Discuss your child's values with your doctor.)

Grade	Systolic pressure (mm Hg)	Diastolic pressure (mm Hg)
Normal blood pressure	Less than 120 &	Less than 80
Pre-hypertension	120-139	80-89
Stage 1 Hypertension	140-159	90-99
Stage 2 Hypertension	160 & above	100 & above









## What Causes High Blood Pressure?

Risk factors which increase the blood pressure are:

- Salty diet, obesity, older age, hereditary & certain medicines
- Diabetes, High cholesterol & Smoking

# Health Problems Associated With High Blood Pressure is given below.

Organ involved	Effects of High blood pressure
Arteries (Atherosclerosis)	a disease of the <b>arteries</b> where there is deposition of plaque, or fatty material, on the inside walls of the blood vessels
Heart Disease	can lead to conditions interfering with adequate functioning of <b>heart</b> like heart failure, Ischemic heart disease, etc.
Kidney Disease	can damage the blood vessels and filters in the kidneys, so that the <b>kidneys</b> cannot excrete waste properly.
Brain (stroke)	can lead to blockages and/or clots in blood vessels of <b>brain</b> , or by weakening the blood vessel wall and causing it to rupture leading to Brain Hemorrhage.
Eye Disease	can damage the very small blood vessels in the retina of the <b>eye</b> leading to visual complaints







#### How do you know that you have High Blood Pressure?

High blood pressure often doesn't have any symptoms

Some cases of high blood pressure may have symptoms like

- unusually strong headache,
- chest pain,
- difficulty in breathing, or tiredness.
- Giddiness
- Vomiting
- Hypertension is usually diagnosed by a health care professional during a routine checkup.
- If you have any of above symptoms, check your Blood pressure.
- Also, it is very important that once diagnosed you should visit your doctor on a regular basis.

## Is High Blood Pressure treatable?

Yes.

#### Do all Patients require medications?

- Treatment of hypertension usually involves lifestyle changes
- Patients who are not controlled by lifestyle changes need to take medicines







#### What can you do to prevent High Blood Pressure?

#### **Adopting a Healthy Lifestyle:**

- · Reducing weight if you are overweight
- Quitting smoking & Avoiding alcohol
- Eating healthy diet, which is high in fruits, vegetables, protein and whole grains and low in salt & fats
- Regular exercise like walking
- Practicing Relaxation techniques, breathing techniques, Yoga
- or meditation to relieve stress

#### Get your blood pressure checked regularly.

#### Medicines that you need to take for High Blood Pressure

- If you are suffering from High Blood Pressure, it is very important that you see a doctor & never take any drug over the counter.
- There are 4-5 groups of medicines which are helpful in reduction of blood pressure.
- Note that these drugs have to be taken lifelong and hence should not be stopped even if your blood pressure comes in normal range.
- Follow the dosage as strictly advised by your doctor
- Please ensure your blood pressure is in the range of 140/90 mm of Hg & if u are also a diabetic it should be maintained in the range 130/80.









# **High Blood Pressure & Pregnancy**

- Out of 6 pregnant women 1 is Hypertensive.
- Hypertension in pregnancy if untreated can lead to pre-term deliveries & may also cause death of the mother or child .

Hypertension in pregnancy if diagnosed early can be monitored and treated ensuring safe delivery and there is no need to get scared.

#### Hence

- All pregnant women or Any pregnant women showing signs like pain in abdomen, headache, swelling over feet, visual complaints, fits etc during pregnancy OR
- Women on oral contraceptive pills

# SHOULD CONSULT A DOCTOR AND TAKE PRESCRIBED MEDICATIONS REGULARLY!!!

• Never take any drug across the counter without prescription as not all drugs are safe in pregnancy.



Women who develop hypertension during pregnancy are at a risk of developing hypertension in later life. Hence after delivery they must do regular blood pressure check ups.









# Chapter 8

# **Lifestyle Modification**

A: Food

**B: Exercise** 

C: Stress Management











# Food for diabetics

- Eat regular thali as 2 major meal.
- Fruits in between meals & not with or after meals.
- Avoid direct sugars or sweets like pedas, barfis, chocolates etc.

Type of Food	What to eat	What to Avoid
Cereals	Whole wheat, whole grains, hand pound rice, oats, corn, millets (Jowar, bajra, nachni)	Polished rice, maida (bakery items) all Instant refined products
Pulses	Dals or grams with outer cover(skin) & sprouts	Fried items like bhajji, vada & farsans
Vegetables	Green Vegetables , rich in fibre, brinjal, cauliflower, gourds, salads & soups	Vegetables grown below ground like potato, sweet potato, suran, arvi & all root vegetables
Fruits	Low sugar fruits like apple, orange, mosambi, pomegranates or guava, plums, peaches. papaya	High sugar fruits like mango, grapes, chikoo, green bananas, sitafal, fanus (jackfruit) & fruit juices
Dairy Products	Low fat milk, buttermilk, curd & unsweetened yoghurt	Ghee, paneer, cheese, lassi & ice cream
Meat Products	Egg white, Lean meat or chiken once a week, oily fish like bangda 2pieces twice a week. (To be boiled, roasted or grilled)	Egg yolk, mutton, organ meat like liver, heart, pork, beef (Avoid frying or deep frying)
Others	Unsalted nuts , especially walnuts, almonds, dried apricots, manuka or mix of all	Alcohol, soft drinks, icecream, tea, coffee, Diet Colas, samosas, sev puri, panipuri & all ready to eat snacks like chips & chivda









## SAMPLE THALI FOR DIABETIC



# Recommended Salt Intake for Hypertension & Diabetes patients

- Restrict daily salt intake per person to 4 gm i.e. 1 leveled Teaspoon
- Avoid salt rich foods like papad, pickles, etc.
- Use herbs and spices rather than salt to flavour food.



- Eat lot of vegetables in your diet. It should be 50 % of your daily meal.
- Eat a rich fiber diet using whole grains & cereals up to 25 % of your meal.
- Rest 25 % should be protein.
- Different colors & kinds of vegetables & fruits should be included in your whole day diet plan.

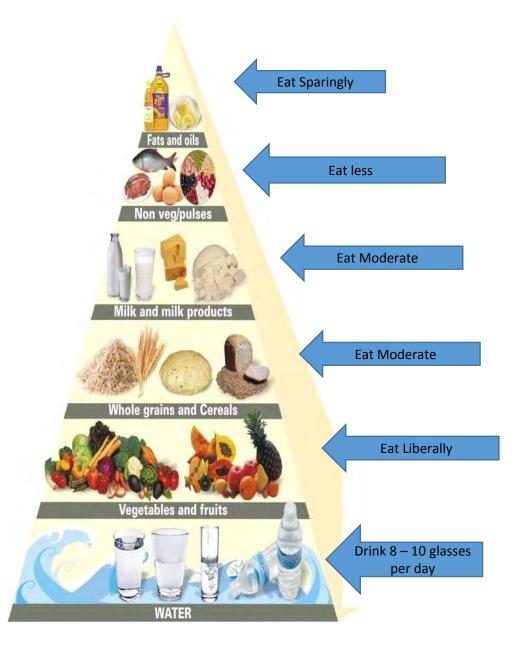








# Food Guide Pyramid For ALL











## **FATS AND OILS**



- Groundnut oil
- Rice bran Oil
- Mustard oil
- Olive oil



# HEART NON FRIENDLY OIL

- Ghee/Butter
- Margarine/Vanaspati
- Palm Oil (Goda Tel)
- Coconut Oil
- Sunflower oil\*
- Safflower oil\*
- Soyabean oil
- Consume 3 teaspoon of oil per day/ Half Liter oil per person per month
- Healthy oils can be rotated on monthly basis
- \*20% to be used with friendly oils as it is rich in PUFA alone
- \*\* Rich in MUFA Universally recommended



If your diabetic/ hypertensive consult your dietician

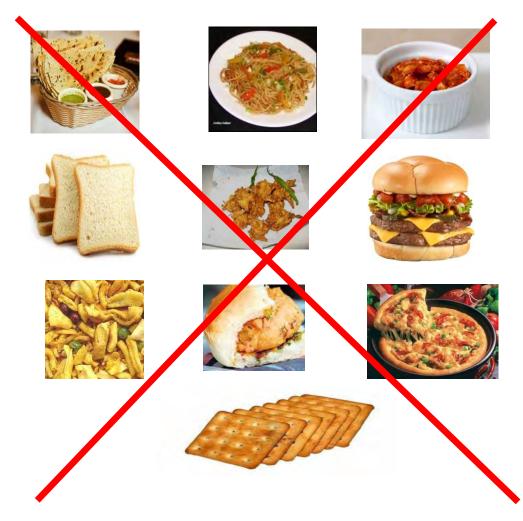








# AVOID junk food items











# **BALANCED DIET**



# Control Diabetes & Hypertension Act now









## Exercise

- Regular Physical activity can control your blood glucose & blood pressure
- Reduce & maintain weight
- It improves Good Cholesterol & reduces Bad cholesterol
- Prevents heart attack & blood flow problems
- Prevent or delay complications of Diabetes
- Prevents joint stiffness, pains & aches

#### Exercise for different age group:

- 5-17 years: At least 60 min of moderate to intensive physical activity daily
- 18 years & above: At least 150 min of moderate intensity aerobic physical activity throughout the week

## REGULAR EXERCISE











# **Stress Management**

- Everyone is affected by stress may it be rich or poor, man or woman & people of all races and ages
- Excessive stress can lead to many disorders like diabetes & hypertension
- Avoid unhealthy practices like alcohol, tobacco, sleeping pills to release the stress

#### • Ways of stress management:

# Adopt Healthy attitude towards life

- Understand why you are stressed try to find solutions
- Adopt positive thinking & attitudes
- Accept people & things the way they are
- Don't try to control everything & everyone
- Feel good about yourself
- Express your feelings instead of bothering self
- Give Importance to good things in life
- Prepare a " to do list " Manage your time
- Change your behavior towards others
- Be Grateful to God

Be happy, Relax & Smile

#### Things to do in day to day life

- Take out time for yourself to relax
- Take enough sleep
- Take regular walks like on beach
- Visit places of worship
- Spend time in nature
- Spend time with family & friends
- Listen to music you like
- Develop hobbies like dancing, singing, drawing
- Laugh or watch comedy shows

Practice yoga, meditation or relaxation techniques









# Chapter 9 Protect Your Children











# Protecting our children from ill effects of Diabetes & Hypertension

Survey in school children revealed "there is rise in obese & overweight children".

10% of newly diagnosed Diabetics are in age group of 10 – 18 years & are asymptomatic.

These young adults can also have Hypertension, heart problems leading to premature deaths.

The seeds for these disorders are sown early in childhood... like:

Eating calorie dense foods ,unhealthy eating habits & consumption of processed foods, Limited physical activity, sedentary interests like computers, TV etc.

Unhealthy food (Junk food) promoted by Media also has effects on young child.

#### Ensure health of a Child:

- Ensure your child carries home made food in tiffin to school
- Preparing home made food is cheap tasty and nutritious
- Bring variety & innovation in daily meals & snacks giving healthy options.
- Avoid soft drinks, junk food, fried snacks like chinese bhel, bhajjis, vadas, pizzas & burgers.
- Teach adolescents to stay away from smoking and alcohol
- Children should be made to engage in adequate physical activity, like playing outdoor sports, cycling ,Dance, Swimming etc

Inculcate healthy food habits in family









# FOOD GUIDE TO PARENTS FOR HEALTHY CHOICES OF FOOD



<sup>\*</sup> PREFER FOOD ITEMS WHICH ARE HOMEMADE

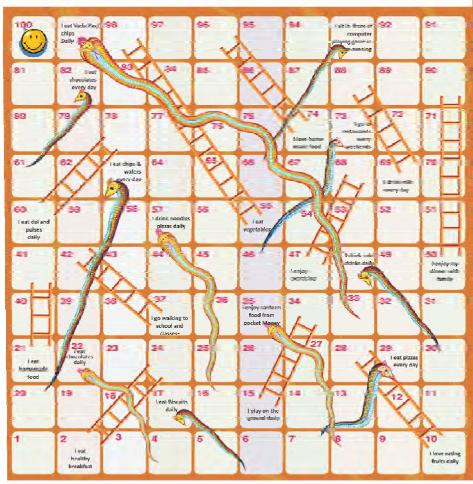








# Play tool to involve children in Healthy Food Habits









Eat wise, Walk a mile, Live life with a smile, Test yourself once a while...









# Chapter 10 Patient diary











# **Patient Dairy**

Patient can note details of his/her visit to the doctor in a diary so that he/ she has a record & also he/ she can monitor the disease by self.

Name of the patient: Year:

Month	Date of Visit/s	Blood Pressure	Blood sugar	Any fresh complaint	Treatment









# **Food Dairy**

Patient can note details of his/her daily food routine in a diary so that he/ she has a record & also he/ she can monitor the Symptoms by self.

Name of the patient: Year/ Month:

	Food Diary Week of							
	SUN	MON	TUE	WED	THU	FRI	SAT	SYMPTOMS
BREAKFAST								Time:
SNACK Time:								Time:
LUNCH								Time:
SNACK Time:								Time:
DINNER Time:								Time:
SNACK Time:								Time:









# Chapter 11 Services of MCGM









# MCGM is providing services for control of Diabetes & Hypertension as follows:

- **❖3 Major hospitals** (KEM, Sion & Nair hospital) : Facilities like blood testing, treatment & advanced treatment & consultation is available
- **❖16 Peripheral hospitals**: Facilities available are checking blood pressure & blood sugar, blood tests & treatment
- ❖ 55 dispensaries: Facilities available are checking blood pressure & blood sugar, treatment and dietician consultation
- At Present, over 8000 patients in Mumbai are taking treatment at MCGM dispensaries alone.
- The list of centers where above mentioned facilities are provided by MCGM is given in next few pages of this book.
- In addition, Community Screening camps are being held at various places & House to House Surveillance By HEALTH staff is also Undertaken in slums.









# 3 Major MCGM hospitals

Sr.no	Address	Name of the Major hospital	Diabetes OPD Days & Timings
1	Parel	K.E.M.Hosp & Seth G.S. Medical college	Mon/ Thu 8.30 am to 1 pm
2	Sion	Lokmanya Tilak Mun. Gen Hosp & Medical college	Fri 8.30 am to 12.30 pm & 1.30 pm to 3.30 pm
3	Mumbai Central	B.Y.L. Nair Hosp & T.N. Medical college	Mon/ Thu 8.30 am to 1 pm









# 16 MCGM run Peripheral hospitals

Sr.no	Address	Name of the Peripheral hospital	Diabetes OPD Days & Timings
1	Santacruz E	V.N. Desai Mun. Gen Hospital	Mon /Thu 10 am to 12 pm
2	Bandra W	K.B.Bhabha Hosp , Bandra	Tue/ Thu 1 pm to 3 pm
3	Vileparle W	Cooper Hospital	Tue/ Fri 1 pm to 3 pm
4	Goregaon W	Siddharth Hospital	Wed/ Fri 1.30 pm to 3.30 pm
5	Malad E	S.K. Patil Mun. Gen Hospital	Tue/ Fri 11 am to 1 pm
6	Malad E	·	Tue/ Thu 1 pm to 3 pm
7	Kandivali W	Centenary Mun. Gen Hospital, kandivali	Wed/ Fri 1 pm to 3 pm
8	Borivali W	Bhagwati Mun. Gen Hospital	Mon/ Fri 1 pm to 3.30 pm
9	Kurla W	K.B.H.K.Bhabh Hospital, kurla	Tue/ Fri 1 pm to 3 pm
10	Govandi	Centenary Mun. Gen Hospital, Govandi	Tue/ Wed 2pm to 4 pm
11	Chembur	MAA Hospital	Tue/ Fri 1 pm to 3 pm
12	Ghatkopar	Rajawadi Hospital	Tue/ Fri 1 pm to 3 pm
13	Ghatkopar W	Sant Muktabai Mun. Gen Hosp	Tue/ Thu 1.30 pm to 3.30 pm
14	Vikroli E	Mahatma Jyotibah Phule Hospital	Tue/ Fri 1 pm to 3 pm
15	Mulund W	Smt. M.T. Agarwal Mun. Gen Hospital	Mon/ Wed/ Fri 9 am to 12 pm
16	Mulund E	S. V.D. Savarkar Mun. Gen. Hospital.	Tue/ Thu 1 pm to 3 pm









# List of Dispensaries timings: 9 am to 4 pm Contact your nearest dispensary for further details

Sr.no	Ward	Name of dispensary	Address
1	Α	Colaba Municipal dispensary	Colaba Mun. School, 1st Floor, Lala Ligam Road, Colaba, Mumbai-01
2	В	S.V.P. dispensary	Bldg, no. 259, S.V.P. Road, BMC Urdu School, Gr. Floor, Masjid Bunder, Mumbai
3	С	Chandanwadi Municipal dispensary	Ground floor, Chandanwadi Municipal school, Marine lines, Mumbai-02
4	D	Bane compound dispensary	Sane guruji marg, Tulshiwadi, Tardev, Mumbai-34
5	E	Tadwadi dispensary	1st floor, Excel residency, Near Maharana Pratap chowk, Majgaon, Mumbai-10
6	E	Gaurabai dispensary	Kamathipura, 13th lane, Nagpada, Mumbai









Sr.no	Ward	Name of dispensary	Address
7	F/S	Parel dispensary	F/S Municipal ward office, 1st floor, Room no 12, Parel (E), Mumbai-12
8	F/N	Korba Mithagar dispensary	Near Nadkarni Park, Korba Mithagar, Wadala (E), Mumbai-37
9	G/S	Currey Road dispensary	Sakharam Balaji Pawar Marg, Opp Vaishnav Sadhan, Near Currey Road station, Mumbai-13
10	G/N	Shahu nagar dispensary	Building no 14, in front of shahu nagar fire brigade, Mahim (E), Mumbai-17
11	H/E	Kherwadi dispensary	Kherwadi, behind Ram mandir, Near Kherwadi signal, Bandra (E), Mumbai-51
12	H/E	Kalina dispensary	Near Kalina Market, Geeta vihar Hotel, Santacruz (E), Mumbai-55
13	H/E	Bharat nagar dispensary	Bandra kurla complex, Patthar nagar, Bharat nagar, Near Municipal school, Bandra (E), Mumbai-51









Sr.no	Ward	Name of dispensary	Address
14	H/W	Gurunanak Municipal dispensary (Station road dispensary)	Station road, Near Dharmashala, Bandra (W), Mumbai-50
15	H/W	Gurunanak Municipal dispensary (Ambedkar road dispensary)	Dr Ambedkar rd, Near Dr Ambedkar statue, Khar (W), Mumbai-52
16	H/W	Shastri nagar Municipal dispensary	Nurses staff quarters, linking rd, Santacruz (W), Mumbai-54
17	K/E	Marol Dispensary	Marol church road, Marol village, Near BMC Municipal Market, Pipeline, Andheri (E), Mumbai-57
18	K/E	Koldongari dispensary	Opp Garware, Sahar Road, Andheri (E) , Mumbai-57
19	K/E	Hari Nagar dispensary	Hari Nagar, Municipal School compound, Near Manish Park, Jogeshwari (E), Mumbai
20	K/E	Sundar nagar dispensary	Mahakali caves, Opp veravalli water station, Andheri (E), Mumbai
21	K/W	N.J.Wadia dispensary	Opposite Andheri Railway station, SV Road, Andheri (W), Mumbai









Sr.no	Ward	Name of dispensary	Address
22	K/W	Oshiwara dispensary	Behind ajit class, Opp Municipal school, Oshiwara, Jogeshwari (W), Mumbai-102
23	K/W	Parle dispensary	Parle Municipal Market, Opp vile Parle station, Station road, Vile parle (W), Mumbai
24	P/S	Chincholi squaters colony Municipal dispensary	Govind nagar, Chincholi squaters colony, Goregaon (E), Mumbai
25	P/S	Topivala Municipal dispensary	B wing, Herambh chaya, Riddhi Siddhi complex, Opp fish market, Unnat nagar, Rd no 2, Yashwant nagar, Goregaon (W), Mumbai
26	P/N	Choksy Municipal dispensary	Opp Nutan high school, Marve road, Malad (W), Mumbai-64
27	P/N	Kurar village municipal dispensary	Behind ramesh hotel, kurar village, Malad (E), Mumbai-97
28	P/N	Goshala road Municipal dispensary	Near ram lila maidan, goshala road, Malad (E), Mumbai-97









Sr.no	Ward	Name of dispensary	Address
29	P/N	Malwani Municipal dispensary	Malwani, Gate no.6, Malad (W), Mumbai-95
30	P/N	Manori Municipal dispensary	Manori village, koliwada, Malad (W), Mumbai-95
31	R/S	Charkop dispensary	Charkop sector no 1, Charkop, Kandivali (W), Mumbai
32	R/S	Hanuman nagar dispensary	Near ESI hospital, Damu nagar, Kandivali (E), Mumbai-101
33	R/S	Babrekar nagar dispensary	Near Ganesh nagar, Kandivali (W), Mumbai-101
34	R/C	Gorai dispensary	Gorai Mhada dispensary, Opp suvidyalay school, Borivali (W), Mumbai
35	R/C	K K Municipal dispensary	Opp Borivali Telephone Exchange, S V Road, Borivali Bus depot, Borivali (W), Mumbai-92









Sr.no	Ward	Name of dispensary	Address
36	R/C	Eksar village dispensary	Eksar Municipal school, Near Eksar talao, Eksar village, Eksar road, Borivali (W), Mumbai-92
37	R/N	L T Road Municipal dispensary	Near Dahisar station, Dahisar (W), Mumbai-68
38	R/N	Y R Tawade Marg dispensary	Opp Dahisar station, Dahisar (E), Mumbai-68
39	L	Christian Village dispensary	Father Peter Periera road, Off LBS Marg, Christian village, Kurla (W), Mumbai-70
40	L	Sangharsh Nagar Municipal dispensary	PPH 30 A/1/13 , Near Palatial height tower, vijay farm road, Kurla (W), Mumbai-72
41	L	Chunabhatti Municipal dispensary	V.N.Purav marg, Sion (E), Mumbai-22
42	L	Nehru nagar Municipal dispensary	Mother dairy road, Nehru nagar, Kurla (W), Mumbai-24









Sr.no	Ward	Name of dispensary	Address
43	M/E	Deonar colony dispensary	Bhausaheb Gaikwad circle, Near Devnar post office, Doenar Municipal Colony, Mumbai-43
44	M/E	Cheeta camp dispensary	Cheeta camp, Urban Health centre, Near Cheeta camp police station, Mankhurd (W), Mumbai
45	M/E	Anik nagar dispensary	1st floor, Suraksha soc., MMRDA, Vashi naka, Chembur, Mumbai- 74
46	M/W	Chembur naka dispensary	Chembur naka, Ramabai Maternity hospital, Chembur (E), Mumbai-71
47	M/W	Chembur colony dispensary	Chembur colony, Near BJP office, Chembur (E), Mumbai-71
48	N	Ramabai Colony Municipal dispensary	Near Municipal Fish Market, Eastern Express Highway, Ghatkopar (E), Mumbai-75
49	N	Matoshri Ramabai Thakare Maternity Home	Sainath Nagar road, Ghatkopar (W), Mumbai-86









Sr.no	Ward	Name of dispensary	Address
50	N	Sarvodaya dispensary	Sarvodaya hospital compound, Golibar road, Ghatkopar (W), Mumbai-86
51	S	MVR shinde Marg dispensary	Near Bhandup Municipal school, MVR shinde marg, Near MSEB office, Bhandup (W), Mumbai-78
52	S	Kanjur village dispensary	Kanjur village, Near Vatsalya trust, Near Police station, Kanjurmarg (E), Mumbai
53	S	Tembhi Pada dispensary	Shivaji Nagar, Near Naradas Nagar, Bhandup (W), Mumbai- 78
54	Т	Mulund Colony dispensary	Opp Mulund colony, Opp Jai bharat school, Mulund (W), Mumbai-80
55	т	PJK dispensary	M W Maternity home compound, M G Road, Opp Kirti Mahal Hotel, Mulund (W), Mumbai-80







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- Website WHO.int-- Publications

Acknowledgements : Endocrine Faculty of Nair Hospital Dietitians Nair Hospital Mumbai.

# Watch your plate and your weight



Blood pressure - take control





# Stay physically active at every age

## 5-17 years

At least 60 minutes of moderate-to -intensive physical activity daily



## 18-64 years

At least 150 minutes of moderate-intensity aerobic physical activity throughout the week



#### 65 years and above

At least 150 minutes of moderate-intensity aerobic physical activity throughout the week



Blood pressure - take control



# Cut down on salt



sauces and ketchup



pickles and chutneys







WHO recommends reducing salt intake to less than 5 grams per day per person

1 level teaspoon = 5 grams







canned and processed food

Blood pressure - take control











# STRESS IS INEVITABLE



# LIVE Life With a SMILE



NCD CELL
Public Health Department

Municipal Corporation Of Greater Mumbai