



المجلس الصحي السعودي  
Saudi Health Council

# Training Guide for the Escorts of Patients of Home Healthcare



**Saudi Health Council**  
Home Medicine Committee  
1444 AH, 2022 AD  
2nd Edition



**In the Name  
of Allah,  
the Most  
Gracious,  
the Most  
Merciful**

## ﴿And when I am ill, it is He who cures me.﴾

This book contains information and guidelines to help you dealing with your patient at home. The book subjects include the basics of home healthcare, starting with the personal care of patient, besides scientific subjects about some common diseases in home healthcare, and deals with certain issues that concern the escorts of patients and their psychological support.

This guide is meant to prepare trainers for training the escorts of patients of home healthcare. The guide has been revised by the members of Home Medicine Committee at Saudi Health Council. We hope this guide being beneficial for the providers of home healthcare services.

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**Note: Some of the content of this guide has been quoted, after obtaining the approval of the competent body of Home Healthcare Manual. Eastern Province: Al Dar AlMahalliyya Public Affairs. General Directorate of Health Affairs in Eastern Province (2013).**

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## Speech Delivered by the Chairperson of the Home Medicine Committee

Home healthcare is an accelerated program at the private sector around the world, and has become a main requirement for people. There is a shift in the healthcare system from the provision of health services at hospitals to provision health at home.

Home Healthcare helps families to adapt to the patient's new health condition, contributes to providing the care desired by the patient and patient's family, and gives better health outcomes for the patient at lower economic cost.

One of the most important and principal conditions for providing such service to the patient is to have an escort that is trained and capable of dealing with the health condition of the patient, and implementing the therapeutic plan developed by the medical team treating the patient.

Accordingly, Saudi Health Council issued a special guide for preparing trainers to qualify the patient escorts at home.

This Guide is meant to serve as a reference for the providers of home healthcare, and to raise the health awareness across the community. Moreover, the Guide provides the necessary tools for effectively managing home healthcare services. Every reasonable effort has been exerted as duly to write down this Guide to be applicable and to respond to the common aspects needed by the trainers of patient escorts at home.

I would like to take this opportunity to thank Saudi Health Council and the Teamwork that contributed to preparing this Guide. I ask God that everyone gets benefit from this Work.

**Chairperson of Home Medicine Committee**

**Dr. Aisha Ibrahim Al-Sagheer**

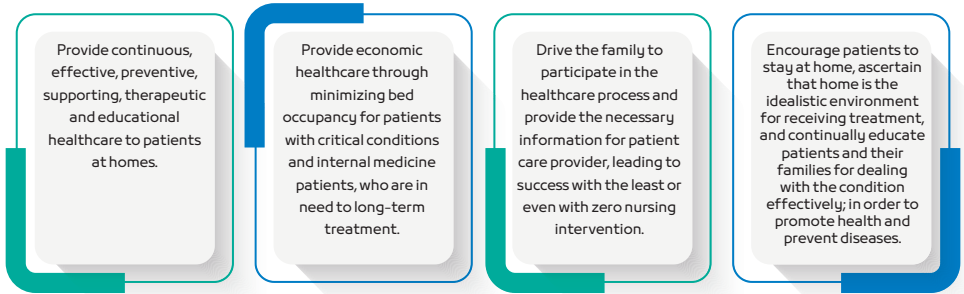


## Introduction to Home Healthcare

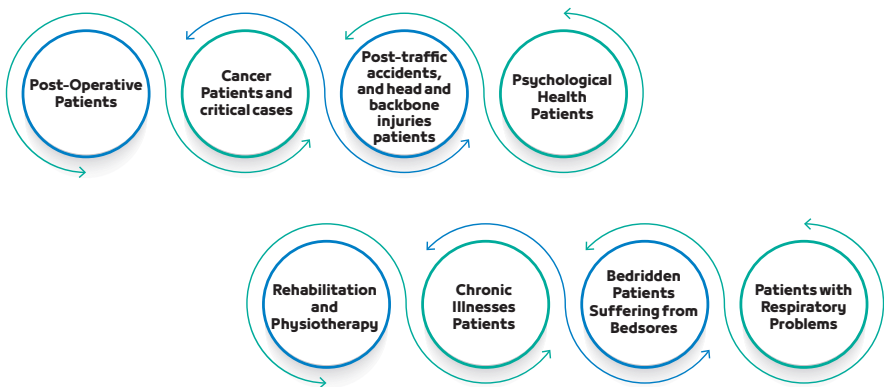
Home Healthcare is considered a recently applied health service with positive return at both social and health levels.

This Service provides a facilitated home healthcare, as well as all-inclusive continuous follow-up for patients at their residences by a trained medical team in coordination with the treating health entity on a permanent and continuous basis.

### Objectives



### Target Audience



## Selecting a Patient Escort

Patient Escort is responsible for providing the medical care to the patient. The escort is often a family member, a close friend, a nurse or a house keeper.

### Conditions of being a Patient Escort

1. To be qualified and desirous for rendering the service.
2. Accompany the patient around the clock.
3. Have a good health.
4. Act positively at hard times.
5. To be prepared for fulfilling obligations.
6. To be adult and mature.
7. To be patient and strong, and respect the patient and his/her privacy.
8. Take care of the patient's personal hygiene daily as well as the surrounding environment.
9. Follow up the patient medications precisely.
10. Provide the patient with healthy and balanced meals, and correctly use the nasogastric tube.
11. Correctly give Oxygen and steam to the needy patients.
12. Pay attention to the natural ventilation of home permanently.
13. If the patient is bedridden, escort should turn the patient over every two hours to avoid bedsores.
14. Help the patient to do exercises.
15. Provide the psychological support to the patient for avoiding stress and depression.
16. If the patient is young and paralyzed, patient needs to be engaged in several activities in an attempt to develop his/her skills and hobbies.

**All such aspects boost the patient morale and strength the self-confidence, thus patient's psychological condition is improved, which is deemed half of the treatment.**

## Skills to be trained on by Escort

01

Personal care of patient, particularly if bedridden.

02

Deal with blood pressure patients.

03

Be aware of the enteral nutrition.

04

Deal with Dementia patients.

05

Feeding patients

06

Deal with the high-cholesterol patients.

07

Be aware of the therapeutic nutrition for constipation for the elderly.

08

Deal with the patients of bedsores.

09

Patient's purification and prayers.

10

Patient's use of toilet.

11

Be aware of the healthy life styles.

12

Urinary catheter care.

13

Deal with the patients of diabetic foot.

14

How to evaluate patient condition at home

15

Deal with the diabetes patients (measure the blood sugar level)

16

Be aware of the food safety at home and the healthy food for patient.

17

Elder care.

18

Deal with the patients in need to oxygen therapy at home.

## Patient Escort's Psychological Burnout

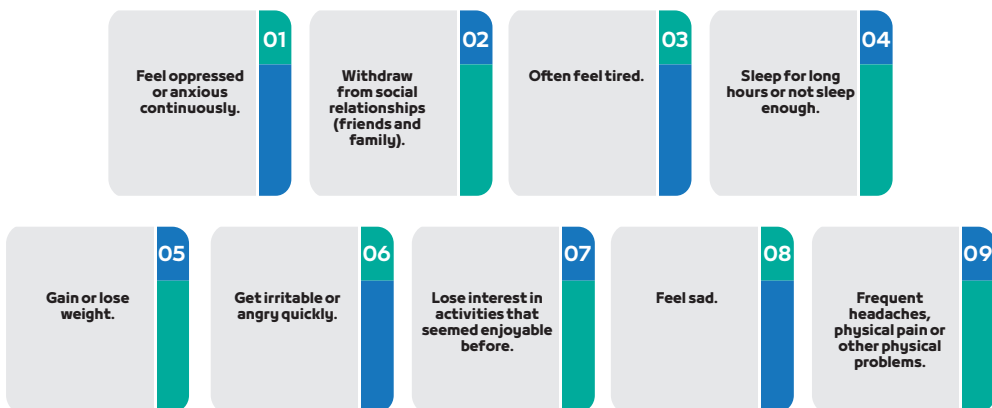
### What is the Patient Escort's Psychological Burnout?

It is a state of psychological, physical and mental stress that may be accompanied by a change to behavior, whereas the person that used to be caring and positive, becomes uncaring and negative.

Burnout occurs when the patient escort does not get the needed assistance or when he/she attempts doing almost more than what he/she can bear whether physically or financially in which case, the patient escort becomes prone to stress, psychological pressure, anxiety and depression.

### Symptoms of the Patient Escort's Psychological Burnout?

As a care provider, you may completely focus on the patient that is considered very precious to you, thus you do not realize your suffering and do not get comfort as needed. Watch for the following signs indicating care provider stress:



Intense stress may harm your health, particularly if lasts longer. As a care provider, you will probably suffer from the symptoms of depression or anxiety. In addition, you may not sleep enough, do the required exercises nor eat balanced food, which in turn increases the risk of being prone to health problems such as heart diseases and diabetes.

## Strategies for Dealing with Care Providers Stress

Meeting the emotional and physical needs as a care provider could cause stress even to the most enduring persons. Therefore, it is required to benefit from the multiple resources and tools that could help you providing care to your close person. Always remember that not caring for yourself will render you incapable of taking care of any other person.

### Enablers for Dealing with the Stress of Care Providers

#### Tolerance and Patience

Accept the consequences of patient accompanying that has greater reward in life and the hereafter, and act as a role model for your children in terms of filial piety.

#### Belief in God

Belief in God and worship practice give deep spiritual energy, tranquility, affection, mercy and intimacy.

#### Accept Care

Prepare a list including all means for getting help from others, and let an assistant person chooses what he/she would like to do.

#### Focus on What you are Capable of Providing

It is normal to feel guilty occasionally, however you need to know that there is no “full” care provider. Trust that you can do your best and make the best decisions at some point.

## Set Realistic Targets

Divide the large tasks into smaller steps, so that you can take every step separately. Set priorities, prepare lists and follow up a daily routine.

## Time Management

By giving the escort a time schedule on the basis that others will cooperate with the escort in shifts for the patient care, taking into account also breaks that can be spent with friends and family members in order to restore activity.

## Set Personal Health Targets

For example, set targets for following healthy sleep schedule, dedicating time for physical exercises in most days of the week, following up healthy diet and drinking large amount of water. Many care providers suffer from sleeping problems. Not sleeping enough over a long period of time could cause health troubles. If you face a problem in getting a good night's sleep, talk to your physician.

## Training

Accept the consequences of patient accompanying that has greater reward in life and the hereafter, and act as a role model for your children in terms of filial piety.

## Visit a Doctor

Get vaccinations and conduct the recommended examinations. Tell your doctor that you are a care provider. Do not hesitate about mentioning any concerns or symptoms.

## Reduce Stress Burdens

Any person assigned to certain task particularly among the patients' care providers might undergo stress; due to care long term, and closeness and significance of that person in your own life. During your free time, you should practice your hobbies and visit friends and family members. It is also preferred to have another person available sometimes besides the patient, provided being trained to care about the patient, enabling the principal care provider to have some spare time.

## Psychological Pressures when Escorting a Patient at Home

Psychological Pressures are defined as external factors affecting the individuals (escorts) while taking care of their patients, since the existence of a patient at home requires superior care, particularly if the disease is chronic and the patient is disabled simultaneously.

### Enablers for Dealing with the Stress of Care Providers

#### Financial Factors

Taking care of a patient at home requires the escort availability at all times besides the patient, which affects that escort's productivity, work or business.

#### Social Factors

When the escort is the only one that accompanies and takes care of the patient in the absence of other family members, that causes the escort isolated from the community, friends and entertainment activities, and also might cause troubles with the spouse and children, if the patient is one of the parents.

#### Psychological Factors

The psychological factors leading to increasing the patient escort's pressure include psychological disorders such as: depression and anxiety.

#### Skill Factors

The ignorance of basics and skills for accompanying a patient might cause psychological stress to the escort.

## Results of Showing off Skills of Dealing with Pressures:

Psychological pressures are defined as external factors affecting the individuals (escorts) while taking care of their patients, since the existence of a patient at home requires superior care, particularly if an illness is chronic and a patient is disabled simultaneously.

### Psychologically

Feel self-control, self-esteem, psychological health, growth of zest for life, today seems enjoyable, feel happy, time is blessed.

### Physically

Resistance to diseases - general health

### Socially

Avoid troubles and establish good relationships with everyone.

**Benefits from acquiring skills for dealing with pressures:**

1. Achievement and productivity maximization leading to fostering the sense of happiness and satisfaction.
2. Empathy, others' love and the closeness of family relationships.



## Solutions for Pressure Factors Facing the Care Provider at Home

### For Financial Factors

Apply for all-inclusive qualification via the respective official website or address the social specialist to contribute to financial support. If the escort works, it is required as much as possible to provide another escort while being preoccupied.

### For Social Factors

Everyone that is adult and capable at home is required to help as much as possible and share the care burdens.

### For Psychological Factors

It is recommended to practice sport and personal hobbies during the patient escort's free time and avoid over-thinking.

### For Skill Factors

If the escort faces a situation in which he/she cannot act, the medical team should be contacted to get the correct directions.

## Patients' Rights & Duties at Home Healthcare Program

Home Healthcare Program provides all health services to patients at homes without discrimination for any reason, acknowledges the rights of patients and their families, and expects all patients and their families to bear their responsibilities and stick to the Home Healthcare Program through which, they are serviced.

The personnel of home healthcare are committed to take care of patients and are aware that they are the program focus point, thus they should stick to appropriate Islamic and social ethics when directly dealing with the patient and the family members at patient's home.

### Patients' Rights

(The Home Healthcare Team's Responsibilities towards Patients and their Families)

1. Provide Home Healthcare at a safe environment in a manner that serves the patient privacy and respects patients' beliefs, using simple phrases.
2. Get sufficient and accurate information on the disease and the treatment suggested by the medical team based on the diagnosis.
3. Treat the patient properly.
4. Know the attending physician's name, specialization and contact details.
5. Recognize and discuss the treatment plan, alternates, complications and risks with the medical team.
6. Get continuous and regular care, and refer to various treatment levels.
7. Maintain patient's information confidential, and never disclose any information unless the patient consent is obtained.
8. Reject meeting any person who has nothing to do with the provision of healthcare.
9. Patient may get another medical consultation if the patient so desires.
10. Patient has the right to obtain a report about his/her health condition, as well as the investigations' results accurately and objectively.
11. Get the appropriate and available healthcare at the hospital's medical facilities.
12. Take part in the treatment plan by signing the treatment's general approval, and get sufficient explanation about the case.
13. Get the guidance, awareness and education about the provided treatment.

## Patient and Family's Duties:

1. Adhere to patient cleanliness on a daily basis.
2. Provide the correct personal information (telephone - address - personal ID number).
3. Maintain the devices dispensed by the Home Healthcare Program.
4. Stick to the diet advised by the medical team.
5. Keep the home medical file.
6. Treat the medical team well during the visit.
7. Notify the medical team about any changes to the home address, or if the family is unable to receive the team on time.
8. Give the correct information to the medical team clearly and explicitly.
9. Refrain from taking any medications not prescribed by the attending medical team with the necessity of keeping the physician always updated
10. about the medications being received by the patient.

## What does the escort have to do with the patient at home?

1. The escort is required to help the patient from the health and psychological respects, depending on the instructions of therapeutic team.
2. The escort is required to help the nursing crew when required, as follows:
  - Take care of the patient and help patient in bathing and general hygiene.
  - Feed the patient if unable to feed himself/herself.
  - Help the patient to rise and go to toilet, depending on patient's ability.
  - Take cognizance of and abide by all instructions set forth in the form of service terms.
  - Inform the therapeutic team about any changes to the patient's health condition or any medical needs.

# Level 1

Training of daily activities  
exercised by the patient

## Home Safety Rules

In order to guaranty the patient safety at home, there are certain measures to be taken:

### Patient Room

01

Patient Room should be well-ventilated with sunlight penetration reasonably.

02

Patient Room should be quiet and away from any noise to guaranty comfort and privacy for the patient.

03

Protect the patient from cold air currents to avoid flu infections or body lower temperature.

04

Clear the floor from any obstacles that might impede patient walking like carpet.

05

Remove any furniture with sharp edges from patient room.

06

An extinguishing system should be available in cases of fire - may God forbid - including multi-use fire extinguisher and fire detector.

07

Patient room's lighting should be easy to be controlled by the patient.

08

Minimize mirrors in the room in the event of Dementia patients.



Patient Healthy Room should be clean and well-ventilated with sunlight penetration for a sufficient period of time. Moreover, the room needs to be spacious and away from sources of noise as much as possible.

## Home Safety Rules

In order to ensure patient safety at home, there are certain measures to be taken:

### Patient Room

**Patient Room should be well-ventilated with sunlight penetration reasonably.**

**Handles should be provided.**

**Toilet door to be opened outward, and the door width should be at least 82 cm.**

**Toilet seat should be western style and height should not be less than 36 cm.**



1. Patient water closet should be safe to protect patient from fall.
2. Floors should be dry and not slippery.
3. It is not preferred to use bathtub, and it is sufficient to use shower and place brackets around it, as shown in the picture.
4. Place brackets also around the toilet as shown in the picture.

### Patient Bed

**Easy to be cleaned and lightweight.**

**The bed should have barriers to prevent falling.**

**The bed needs to be easy to be moved on the ground to help the escort taking care of the patient.**

## Home Safety

### Oxygen Cylinder

If there is Oxygen cylinder at home, the following instructions should be followed:

01

The cylinder should be kept well to avoid falling or hitting anything else.

02

The cylinder should be lifted carefully and should not be moved by rolling on the ground.

03

Refrain from using inflammables besides the cylinder, or using it besides a fire source or smoking.

04

The cylinder should not be exposed to sun or high temperature.

05

Check the regulator and pressure valves prior to using.

06

Cylinder regulator should be opened gradually.

07

Refrain from using vaseline, oils or soap around the cylinder valve to avoid explosion.

08

Check the Oxygen's expiry date.

### Safety Measures while Moving or Carrying the Patient at Home

1. Assure moving a patient safely to avoid falling, and seek others' assistance when needed.
2. When carrying a patient, his/her feet should be fixed wide-open, whereas one foot is to be put in front of the other, bending the knees slightly.
3. Keep patient's back upright while carrying or moving a patient, then carrying a patient so as its body should be attached to the carrier's body.
4. Lift the patient using the strength of feet and legs' muscles.
5. It is preferred to pull or push the patient as much as possible rather than lifting to avoid falling, with the possibility of using a bed sheet.

## Infection Control Measures

In order to prevent infection and maintain patient safety, the following measures should be taken into account for the purpose of infection control:

**Wash hands before and after dealing with the patient.**

**Change patient clothes and bedding daily or when needed.**

**Use gloves and masks when doing anything concerning the patient.**

**Constantly ventilating the room.**

**Patient's personal tools should be healthy and clean, and not used by others.**

**Keep patient's room clean.**

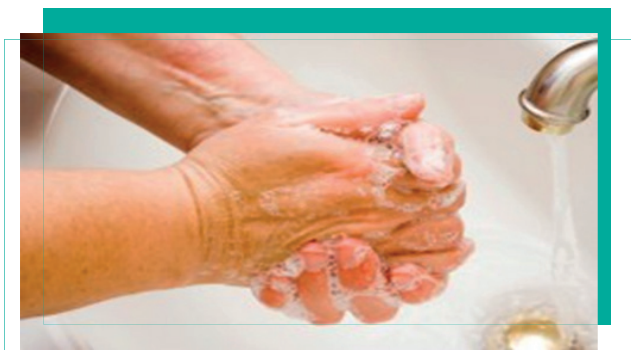
**Pay attention to patient's hygiene, and it is preferred that a patient should have a bath daily.**

**Get rid of used syringes and sharp tools, and place them in a particular container.**

**Get rid of excretions and wound dressing, and place them in a particular bag.**

**Coordinate with the medical team as regards how to finally dispose of medical waste.**

**Receive the necessary vaccines as guided by the physician.**

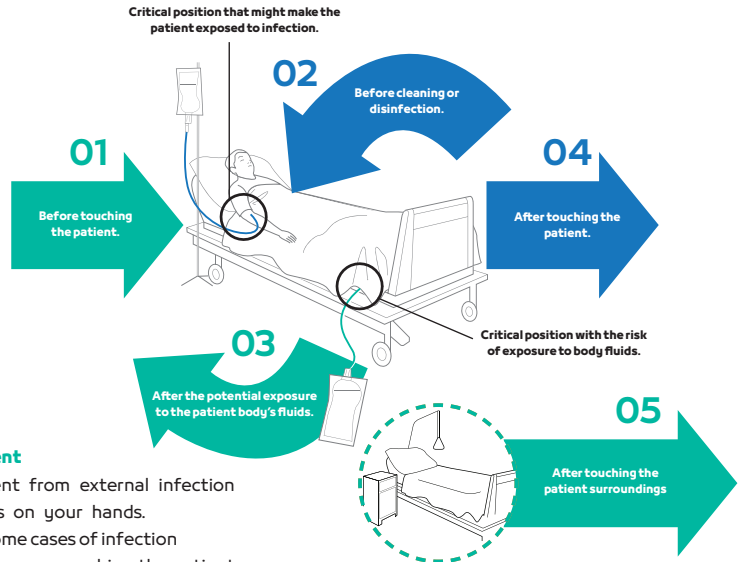




## Handwashing Steps

Hands are usually the contact points between the patient and persons dealing with him/her. Washing hands carefully prevents the transmission of pathogenic germs to/from the patient and exposed persons. Being aware of the correct steps for washing hands is important, to control the infection as follows:

### The Five Moments of Hands Washing



#### 1. Before touching the patient

**Why?** To protect the patient from external infection arising from harmful germs on your hands.

From local infection and in some cases of infection

**When?** Clean your hands when approaching the patient before touching him/her.

#### 2. Before cleaning or disinfection

**Why?** To protect the patient from the transmission of harmful germs to him/her, including the germs of patient himself/herself.

**When?** Clean your hands directly before touching any critical position that might make the patient exposed to the infection (such as: mucous membranes, improper skin or a medical appliance penetrating the skin).

#### 3. After the Risk of Exposure to Body Fluids

**Why?** To protect you from the local infection or infection with the patient's harmful germs, and protect the healthcare environment from the spread of germs.

**When?** Clean your hands immediately after completing any procedure involving the risk of exposure to body fluids (and after taking off gloves).

#### 4. After touching a patient

**Why?** To protect you from the local infection with patient germs that might be on the surfaces/surroundings of patient, and protect the healthcare environment from germ spread.

**When?** Clean your hands when leaving the patient area and after touching the patient.

#### 5. After touching patient surroundings

**Why?** To protect you from the colonization of patient germs that might be on the surfaces/surroundings of the patient, and protect the healthcare environment against germ spread.

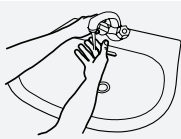
**When?** Clean your hands after touching object or any furniture when leaving the patient surrounding without having touched the patient.

## How to Wash your Hands with Water and Soap?

Wash your hands in case of apparent dirtiness, and rub down well for hands hygiene.

 Duration of the procedure is 40 - 60 seconds

01



Wet hands with water.

02



Place a sufficient amount of soap for covering both hands.

03



Rub your own palms.

04



Rub your left-hand dorsum with the right palm with finger interlocking, then do the same with the right hand.

05



Interlock fingers and rub palms.

06



Rub the left palm with the back of the right fingers, and rub the back of the left fingers with the right palm, while penetrating between fingers.

07



Rub the right palm back with the left thumb circularly, then rub the left palm back with the right thumb.

08



Rub the right palm circularly to the back and to the front, whereas the right fingers interlock with the left palm, and vice versa.

09



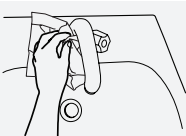
Wash your hands with water.

10



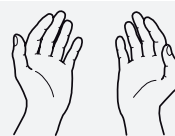
Dry hands well with disposable towel.

11



Use the towel for turning off the tap.

12



Now, your hands become safe for providing care.

## Personal Care of Bedridden Patients

In order to prevent infection and maintain the patient safety, the following measures should be taken into account for the purpose of infection control:

### What is meant by the Personal Care of a Patient?

A set of tasks to be undertaken by the patient or patient assistant to exercise the necessary daily activities of life including eating, drinking, bathing and caring for hair, nails and teeth.

### Important notes to be taken into account

01

Before cleaning the patient, consider the room ventilation.

02

When cleaning any area of the patient body, it is recommended to begin with the least dirty areas, moving to dirtier areas, and so on.

03

Apply the principles of infection control.

04

While cleaning and moving the parts of patient body, it is required to note any new change to patient body, such as: skin color, temperature and flexibility.

05

Ask the patient before bathing whether patient needs or not to urinate or defecate.

06

Not to leave the bed while on high mattress nor removing the safety barriers when getting away from the patient.

07

Cover patient's private parts if possible, as a kind of respect.

## Care for Mouth & Teeth

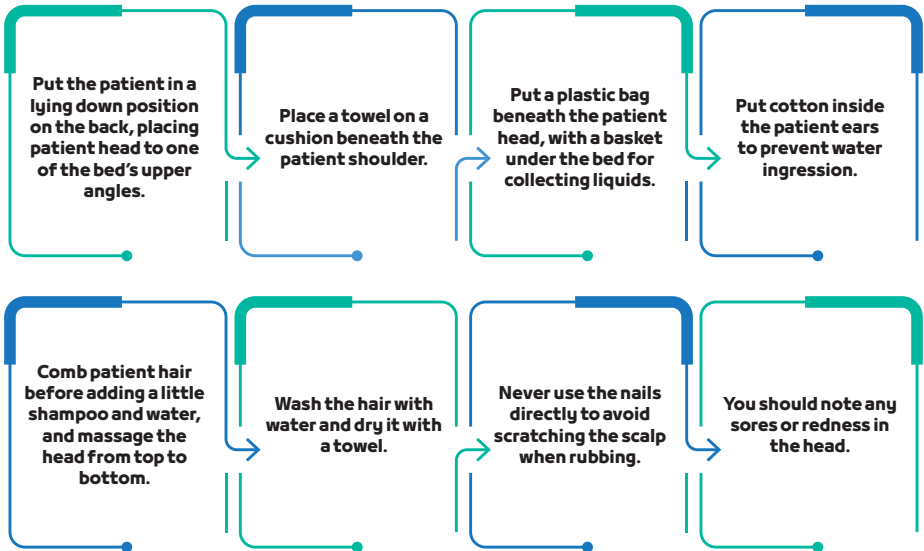
The daily care for mouth and teeth protects the mouth from sores, pain, tooth decay and gingivitis.

To prevent the tooth decay, it is required to brush your teeth twice per day.

Conscious Patient	Unconscious Patient
Place the bed high towards the head with the angle of 45 degrees, to prevent suffocation.	Place the patient on a side, without lifting patient's head.
Place a towel below the chin.	
Remove the denture and clean it outside the mouth.	
Use a mouthwash, if required.	
Open the patient mouth.	Open the mouth through: Wrap a wooden board with a gauze piece and place it among teeth, to keep the mouth open.
If there are teeth, put the toothpaste on the brush, and rub the patient teeth.	
Give the patient a glass of water to drink and rinse.	Use the syringe to pump water into the patient mouth and clean it.
Evacuate liquids in an empty vessel.	
To clean the tongue, wrap a gauze piece around a wooden board or around a finger for cleaning the upper part of tongue and gums.	
Remove the vessel.	
Dry patient mouth.	
Place moisturizer or vaseline over lips.	

## Cleanliness of Patient Hair

A set of tasks to be undertaken by the patient or patient assistant, to exercise the necessary daily activities of life including eating, drinking, bathing and caring for hair, nails and teeth.



## Clothing:

1. Let the patient choose its suitable clothes.
2. Patient clothes are preferred to be easy to be put on and taken off, like including big buttons or zippers, and having front and back openings.
3. If the patient complains of one of its own sides, begin with the side suffering from pain or weakness then the sound side, and when taking off clothes, begin with the sound side to avoid harming the patient.

## Use of Water Closet

01

**Assure that lighting at the water closet functions well.**

02

**Assure that there are handlers fixed to walls the patient can lean.**

03

**Assure that the toilet seat is high to help the patient while standing and sitting.**

04

**If the patient is difficult to move to the bathroom, the patient may urinate in a particular container. When the patient sits on the toilet seat, try looking at the other side.**

05

**Leave the bathroom if the patient is certainly able to remain alone without any risk.**

06

**Give the patient enough time to urinate/defecate without rushing around.**



## Cleaning Patient Body

Place the patient in a lying down position on its back.

Remove any dirty clothes.

Put upper bed sheet for covering the patient body.

### Head

Begin with cleaning patient face with water using only a wet towel, initially focusing on orbit with the towel angle from the inside out, then the other eye with the other angle of towel, noting any change or strangeness in patient face, then complete cleaning the forehead, nose, cheeks, ears and neck.

### Extremities

- Uncover the area to be cleaned and cover the other parts of body using upper sheet to wash hands and forearms, put bathing liquid on the towel, rub the hand from fingers to the underarm, then clean using wet towel and dry.
- To clean feet, put them in a vessel having warm water, then rub, clean and dry feet, taking into account the area between toes.

### Chest and Abdomen

Uncover Chest and Abdomen, and rub circularly taking into account the area below breasts for females and fat people, and check any redness or fungi.

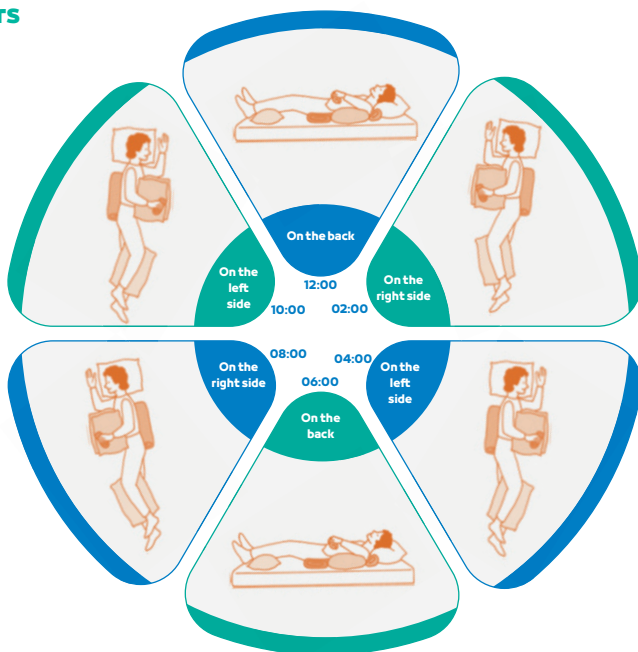
### The Back and the Private Parts

The patient is to be turned over on a side, gently rub circularly beginning with the neck and ending with the buttock region, cleanse the private parts with a special towel, put on or change gloves, wash the respective area using water, and then dry it.

## Ultimately,

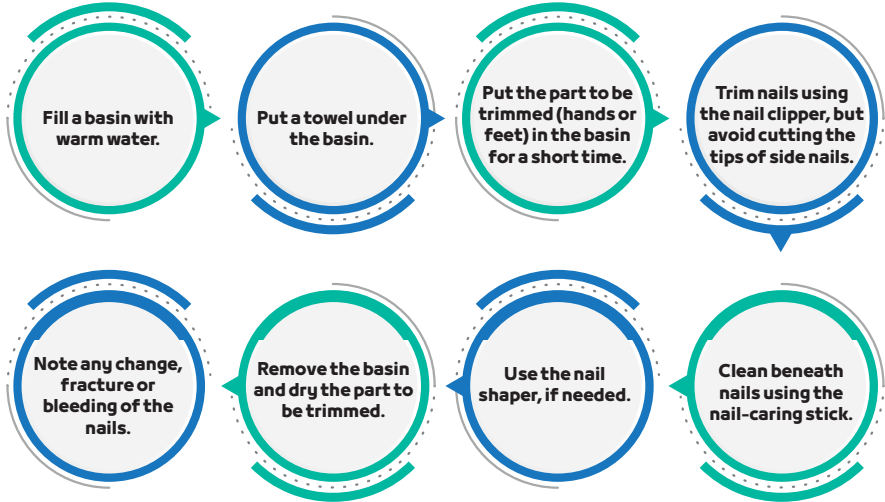
- Clean the body using an appropriate moisturizer, put on comfortable cotton clothing, and replace the upper sheet with another clean one.
- Cover the patient and lift the safety barriers.
- Wash hands and remove the used tools.

## Alter the Bedridden Position Every Two Hours





## Nail Trimming



## The Right Positions for Bedridden Patients

Being aware of the bed positions is important for bedridden and patients suffering from limited movement, to protect from skin sores, muscle contraction and extremities swelling; thus it is required to change the bed position every two hours to avoid skin sores.

### The First Bed Position

#### Lying Down on the Back

When the patient is lied down on the back, the following guidelines should be taken into account:

1. Put a comfortable pillow beneath the patient head, with the upright or slightly inclined position of the head.
2. Put a cushion below the arm and hand of both sides, whereas the palm is to be directed towards the cushion.
3. Put a small wrapped towel below the thigh of both sides above the knee, whereas the knees are to be slightly bent down, which reduces pressure on the area beneath the back.

## The Second Bed Position

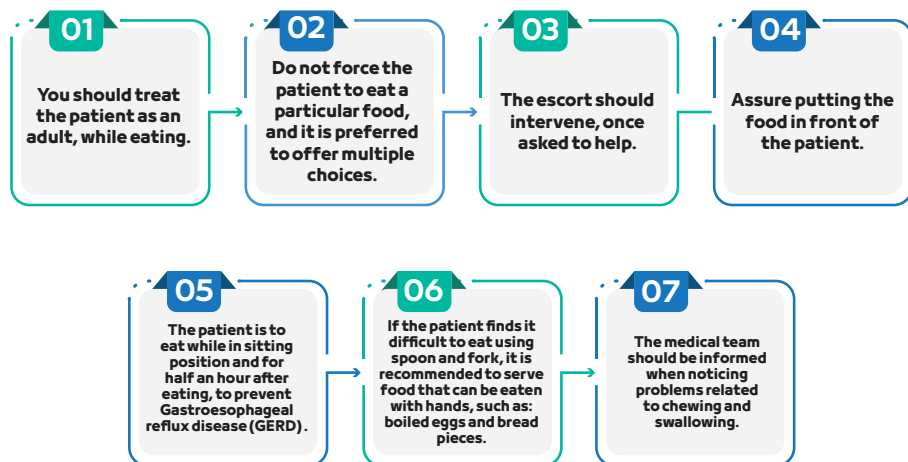
### Lying Down on the Right or Left Side:

When the patient is lied down on the right or left side, the following guidelines should be taken into account:

1. Put a large cushion or 2 small cushions under the patient head.
2. Put a cushion behind the patient back, to avoid going backwards.
3. Bent down the hip and knee of lower leg (that on the bed) slightly, and put a cushion between knees.

## Eating

There are several methods helping the patient to rely on itself while eating. In case of patient disability, the escort may help patient in a manner in which the patient does not feel inferior, as follows:



## Prevention of Falling Risk

Everyone at any age is prone to stumble and/or fall, but the chances increase once one gets older. Following the age of 65, one of every three persons falls. Meanwhile, most of such falls do not seem dangerous, many falls might cause disability or even death.



Human is able to reduce the chances of stumbling and falling through taking simple procedures.

### Advices to Prevent/Minimize the Fall Risk

1. Use a stick or a walker if the person is in need to help while walking, and the physician advice is required in this regard.
2. Provide safety measures at home including stairs handrails, handles to catch at the water closet, good lighting at night and anti-slip mat at the bathtub.
3. Minimize chaos across the house, and keep the walking paths and courses clear from any boxes, telephone and electricity wires and furniture pieces.
4. Fix the carpets well to prevent slipping.
5. Put clothes and dishes at accessible areas.
6. Keep the floor non slippery through cleaning and washing regularly.
7. Conduct eye check and put on appropriate medical glasses, whereas good vision minimizes fall risk.

## List for helping the patient escort to know whether the patient is prone to fall

Sr.	Statement	Yes	No
01	Is the person to whom you provide care is 65 years old or more?	<input type="checkbox"/>	<input type="checkbox"/>
02	Does the patient have 3 or more of the current health problems as diagnosed by the physician?	<input type="checkbox"/>	<input type="checkbox"/>
03	Did the patient fall or stumble throughout the last three (3) months?	<input type="checkbox"/>	<input type="checkbox"/>
04	Has the patient recently suffered from frequent urinary incontinence during day or night, besides a problem associated with reaching the bathroom on time?	<input type="checkbox"/>	<input type="checkbox"/>
05	Does the person for whom you care have vision problems? If there is a prescribed medical glass, but the patient does not always put it on at home, select "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
06	Does the patient face difficulty while exercising the daily activities; like wearing clothes, cleaning teeth and hair, bathing, going to toilet and eating or preparing meals? That includes using a stick, similar item or a wheelchair.	<input type="checkbox"/>	<input type="checkbox"/>
07	Are there dimly lit areas at home, pets, chaos or other items at home that might impede the patient? That involves dim lights, headlight wires, medical equipment tubes, uneven floors or uneven stairs, and any items stacked on the floor or the stairs.	<input type="checkbox"/>	<input type="checkbox"/>
08	Does the patient take 4 or more prescribed medications?	<input type="checkbox"/>	<input type="checkbox"/>
09	Does the patient for whom you care suffer from any pain during movement?	<input type="checkbox"/>	<input type="checkbox"/>
10	Does the patient have memory-related problems? That includes persons with symptoms of Dementia or Alzheimer's, or those seem suffering from impaired judgment or memory.	<input type="checkbox"/>	<input type="checkbox"/>

**Total Points: Yes ----- No -----**

**\* If you answer "yes" to 4 questions or more, your family member has a high risk of falling.**

# Level 2

## Vital Signs

## Diabetes

### Pre-Diabetes

Pre-diabetes is the condition preceding type 2 diabetes infection, whereas the blood sugar level is higher than normal range but is not high enough to diagnose diabetes infection. Further, the early discovery and treatment help restoring the normal blood sugar level and preventing the infection of type 2 diabetes.

### Diabetes

Diabetes is a chronic condition of hyperglycemia on the basis of the normal range, as a result of deficiency of insulin hormone produced by pancreas, insulin resistance or both. Insulin: It is hormone produced by pancreas, whose role is to control and maintain blood sugar level.

Type 1 diabetes results from the damage of cells responsible for producing the insulin hormone. The patients of type 1 diabetes are usually young.

#### Type 1

In this condition, the body is able to produce insulin hormone either in insufficient quantities or normal but ineffective quantities.

#### Type 2

Higher blood sugar (glucose) level as a result of hormones produced by placenta during pregnancy, and often disappears after giving birth. by the end of pregnancy.

#### Gestational Diabetes

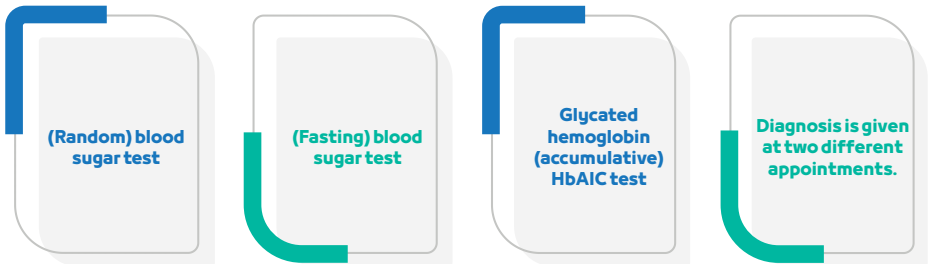
Results from using some medications and hormones or pancreas surgery and other causes.

#### Secondary Diabetes

## Symptoms:



## Diagnosis



## Symptoms:





## Complications

### Chronic Complications:

#### Cardiovascular Diseases

Diabetes infection increases the risk of Cardiovascular Diseases including coronary artery disease, angina pectoris, heart attack, stroke and arteriosclerosis.

#### Nerve Damage (Neuropathy)

High blood sugar level harms microvascular feeding nerves, causing numbness and burning pain extending from fingers to the hands and feet.

#### Kidney Problems (Nephropathy)

Higher blood glucose leads to kidney failure or kidney diseases.

#### Retinopathy

Higher blood sugar level leads to damage of microvascular that feeds retina; impeding the passage of light to the retina.

#### Feet problems

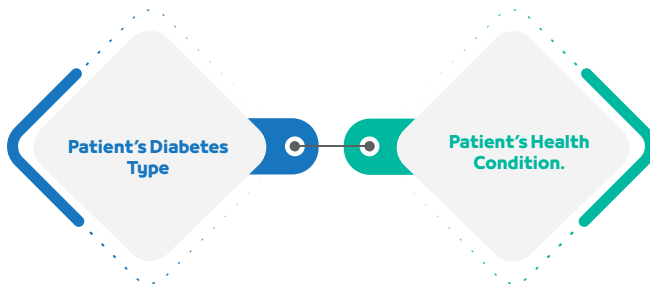
The damage of nerves at extremities particularly feet leads to non-feeling wounds, which might cause foot sores.

#### Skin Diseases

Diabetes patients are more prone to skin problems including bacterial and fungal infections.

## Treatment

Diabetes cannot be completely cured, however it is possible to control the blood sugar level within the normal range. Diabetes treatment differs from one patient to another; whereas the physician decides the most appropriate treatment plan for each patient, on the basis of:



Treatment success is often based on the patient. When a diabetes patient learns how to control the blood sugar level, and actually applies that, patient shall have a healthier life, through:

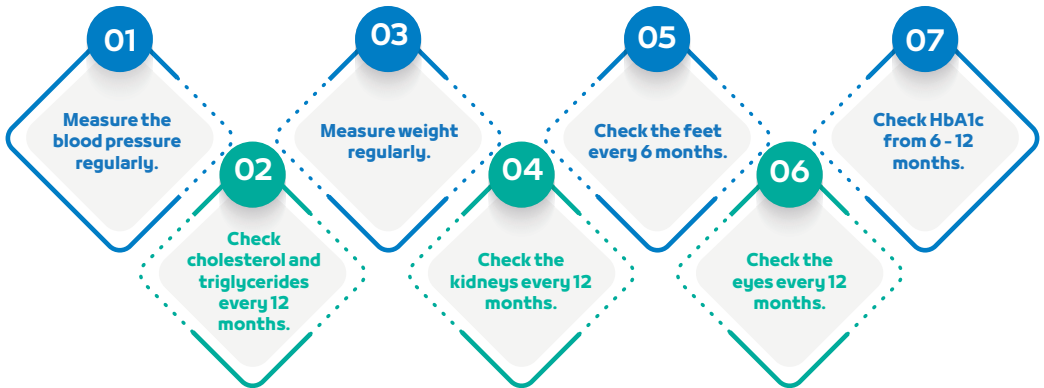


## Protection

**You can protect yourself from Pre-diabetes, Type 2 diabetes and gestational diabetes through:**

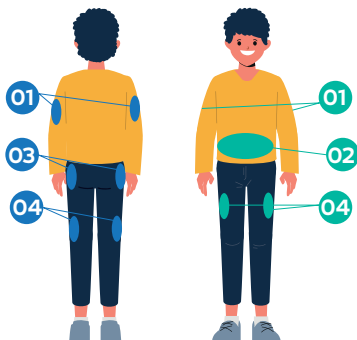
1. Eating healthy food by choosing foods with the least fats and calories, and the highest fibers, concentrating on fruits, vegetables and full grains.
2. Exercising regularly.
3. Avoiding overweight.

## Necessary Examinations for Diabetes Patient

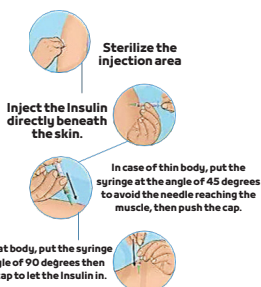


## Skills of Preparing Insulin Syringe

A set of tasks to be undertaken by the patient or its assistant; to exercise the necessary daily activities of life including eating, drinking, bathing and caring for hair, nails and teeth.



## How to Use Insulin Injection



- Upper back part of the arm
- Abdomen but away from the navel.
- Upper part of the buttocks
- External upper part of the thigh.

## Areas where Insulin Needles are Injected



## Injection by Insulin Pen

### Each Pen includes:

Cover with external rubber cap for inserting the needle, Insulin tank, dose-setting knob, dose indicator and injection button.

### Each Pen includes:

#### Remove the cover of Insulin Pen



- Catch pen needle, then remove the paper cover.
- Catch the needle in parallel with the Insulin Pen, and keep it upright
- until inserting and fixing it.
- Remove the needle's plastic cover, then the second cover.



### Remove the cover of Insulin Pen



Choose the injection area and clean it with a medical swab.



- Catch the Insulin pen like a writing pen.
- Fix the skin and insert the needle at the angle of 90 degrees.
- Keep the needle in the skin for ten seconds, then get it out.
- Close the needle carefully using the first external cover, then dismantle the needle from the pen.
- dispose the needle in a metal box.



## Advice to Patient Escort on How to Deal with Diabetes Patient

Currently, you can rarely find a family whose all members are free from diabetes. Most people know someone close who is infected with this disease. Acknowledging that a diabetes patient is a normal person and requires a normal treatment, the spirit of human solidarity with every person infected with a disease requires more respect and appreciation to that person without expressing the sense of pity if the infection results from hereditary or the sense of guilty if the infection is caused by the patient itself.

**How can we maintain our relationships strong with relatives and friends infected with the diabetes? The Behavioral Diabetes Institute gives 10 recommendations for dealing with the diabetes patients in general, and the diabetic relatives particularly, as follows:**

1. Do not give unrequested advice on what the patient has to eat or do in association with the management of diabetes. Your intention could be good but giving advices on the personal options of anyone is often regarded with resentment and suspicion, especially in the event the patient does not even ask for advice. In addition, many prevailing beliefs and thoughts about diabetes are misleading, inaccurate or surpassing on the ground that some people think that all what is needed from the diabetic is to stop eating sugar.
2. You need to know that the diabetes management is difficult and requires enormous effort. It is like a full-time job for which diabetic does not apply, and even does not wish, and can't ignore. Diabetes management is a difficult task that requires patience and thinking a lot about the food type and quantity, eating time, exercising, taking medications, avoiding tension, controlling blood sugar level besides many other measures.

3. Never tell a scary story or bad ending of a relative or a friend infected with diabetes. Diabetes is a scary disease in itself, thus telling the patient negative or bad-ending stories drives the patient to much anxiety and disturbance, hence meeting with you aggravates the patient condition and harms patient's psychological then physical health. Moreover, it is known that the good management of diabetes enables many diabetics to have extended and happy life. Why do not we recall successful stories for inspiring the patients of diabetes?
4. Offer diabetic patient accompanying you in changing the life style to better through joining a sporting club, or a program application. Human always gets motivated and encouraged when finding someone keeps him/her warm and share what is being done, and the opposite happens when a patient is left to manage his/her disease lonely without a companion, lover or friend.
5. Do not trigger negative reaction or express disturbance when the patient checks the blood sugar level in your presence or even when injects itself with Insulin. Measuring the blood sugar level and taking medications are a daily routine that the patient goes through for managing diabetes well, so you need to understand that. If a patient has to hide from relatives and friends for doing so, that makes the process of diabetes management so difficult, not to mention restricting the patient's everyday activities and movements, which is deemed totally unbeneficial to patient.
6. Encourage the patient to trust you for supporting or helping when required. If you want to be supportive and generous, there are many simple matters to do, which could have positive impact on the patient. Just ask the patient or try to feel its pulse first.
7. Do not offer hasty and reckless reassurances. Never say something like "thank God! Being infected with diabetes is better than being infected with cancer!" That will not make the diabetic feels better in any way. Additionally, such statements implicitly deliver false messages that the diabetes is not a dangerous or worried disease, which is not true at all.



8. Support the efforts exerted by the patient at the level of self-care. You can help the patient for example by supporting it creating a healthy environment at home, like always providing healthy foods at the kitchen. Do not hesitate appreciating the patient decision to stop eating a particular food, even if you want him/her to eat it. You can help the patient better by acting friendly not pushy nor cajolingly.
9. Never comment on the patient's blood sugar level without asking the patient first. The patient's blood sugar level remains private and confidential information, unless the patient itself determines sharing it. You should be aware that such levels could normally be very high or low from time to time. Making unrequested comments on such levels might deepen the patient sense of disappointment, frustration and anger, which should not be aggravated.
10. Offer the patient love and encouragement. When the patient works hard and successfully manages diabetes, the other feeling of appreciation and admiration for his/her efforts is an enabler motivating that patient to pursue and demonstrate determination.

## High Cholesterol

It is a compound that exists in every cell of body, which is used to recover the existing cells, build up new cells and produce necessary hormones. If the blood cholesterol level is high, fatty precipitations will form inside the microvascular walls, then such precipitations will eventually impede the arterial blood flow.

### What will occur in case of higher cholesterol?

**When your cholesterol gets higher, your body is affected as follows:**

1. You will not get sufficient quantity of blood rich in Oxygen as needed, which increases the potential infection of (heart attack)
2. The blood will not reach the brain as needed, which might lead to the infection with - cerebral stroke)).

### Symptoms of High Cholesterol

There are no symptoms of Cholesterol nor signs of (hypercholesterolemia) It is possible to discover the Cholesterol's increased values only by conducting blood check.

### Factors Under Control Affecting the Cholesterol Level

There are several factors in hand contributing to raising the ratio of harmful cholesterol (LDL) and reducing the ratio of good cholesterol (HDL), including most importantly:



## Uncontrollable Factors

### Genetic Factors

Genetic factors can prevent the body cell from successfully disposing of the surplus cholesterol (LDL) in the blood, or make the liver producing excess quantities of cholesterol.

**If you belong to one of those risk groups, you will probably suffer from high cholesterol level that could lead to the infection with a heart disease. Such risk groups include:**

#### Smoking

Smoking cigarettes harms the microvascular walls, whereas they become more stackable of the fatty precipitations inside. Additionally, smoking might lead to lowering good cholesterol level (HDL).

#### Overweight

If the body mass index (BMI) is higher than 30, the risk of harmful cholesterol level is probable to increase.

#### Malnutrition

Foods rich in cholesterol such as red meat and milk products rich in fats raise the total level of cholesterol in the blood. Eating saturated foods (which come from animals) and trans fats (available in manufactured foods such as cakes and chips) might lead also to higher blood cholesterol level.

## Lack of Physical Activity

Physical Activity helps body to raise the level of good cholesterol (HDL) and reduce the level of harmful cholesterol (LDL). Lack of Physical Activity raises the risks of higher cholesterol level.

## High Blood Pressure

High Blood Pressure at the arterial walls damages arteries, which could accelerate the accumulation of fatty precipitations inside them.

## Diabetes

High blood sugar level leads to raising the values of harmful cholesterol (LDL) and reducing the values of good cholesterol (HDL). Moreover, the increased levels of blood sugar might damage the internal endothelium of arteries.

## Patients in the Family

If a parent or sibling has suffered from a heart disease before reaching the age of 50, higher cholesterol level raises the potential of developing a heart disease above the average.

## Treatment

Changes to lifestyle like exercising and sticking to a healthy diet are deemed the first defense line for protection from higher levels of cholesterol. However, if you make changes to such important lifestyles and the cholesterol level remains high, your physician may recommend taking a medication. Selecting a particular medication or group of medications depends on varied factors including your own risk factors, age, current health condition as well as the potential side effects.

### Protection from the High Cholesterol Level

Changing the lifestyle is necessary to improve your Cholesterol Level in blood.

**For reducing the cholesterol values in your body, you should:**

1. **Exercise:** Practice physical activity permanently every day.
2. **Quit smoking:** Avoiding all products of tobacco might reduce the risks of high cholesterol.
3. **Lower Weight:** Get rid of excess kilograms.
4. **Eat healthy food:** The food you eat directly affects your own Cholesterol level. In fact, scientists say that foods rich in fibers and other known foods lower the cholesterol level with almost the same effectiveness of statins as to lowering the cholesterol level.
5. **Healthy food:** Choose a selection of healthy foods.
6. Avoid the foods rich in trans fats.
7. **Reduce the quantity of food rich in Cholesterol** - the Target is that the quantity will not exceed 300 milligrams of cholesterol daily or below 200 milligrams daily if you suffer from a heart disease.
8. **Select foods of whole wheat:** There are several substances in the whole wheat contributing to maintaining the health of your heart.
9. **Fruits & Vegetables:** Consume various types of Fruits & Vegetables.
10. **Eat Healthy Fish:** Multiple kinds of fishes such as: cod fish, tuna and flounders contain lower levels of fats and scarce quantities of saturated fats and cholesterol comparing to meat and chicken.

## Osteoporosis

Osteoporosis is a condition affecting the strength of bones. Bones consist of solid fibers (minerals) and flexible fibers (Collagen). When you are young, bones grow faster, but once you get older, it goes to the opposite. Starting from the age of 35, your bones lose density and strength, noting that the density of bones to be lost differs from one person to other.

### Treatment of Osteoporosis for the Elderly

Treatment of Osteoporosis is based on slowing down or ceasing the loss of minerals, increasing the bones density, preventing their fracture and controlling the disease-related pains. Nearly about 40% of females suffer from bones fracture due to Osteoporosis throughout their lives. Moreover, one person out of each five persons suffers from other vertebral fracture within one year. Those suffering from fractures of backbone, and one of each five suffer from other vertebral fractures within one year in which case, more fractures could occur, which is called "fractures series", and the target of treatment is to prevent the potential fractures.

### Diet

Youth should be encouraged to have normal bone mass through getting sufficient calcium (1000 mg per day) within their diet through drinking milk or orange juice supported by calcium, eating foods rich in calcium such as salmon, doing weight-bearing exercises like walking or sports (Aerobic Swimming) and maintaining normal weight of body. Refer to Specialists: Persons suffering from fractures of backbone, hips or wrist should visit orthopedist (orthopedic surgeon) for the necessary follow-up besides the treatment of fractures. Those persons should also be referred to a physiotherapist for knowing how to pursue life in the presence of bone fracture safely.

## Symptoms of Osteoporosis

A person suffering from osteoporosis often does not know until fracture occurs, nevertheless there are occasionally clear symptoms including:

1. Back pain.
2. Gradual Height Loss.
3. Fractures of backbone, wrist or hips, due to the least fall or injury.
4. Dental x-rays reveal jaw bone loss (so-called Osteonecrosis), which could be a sign of osteoporosis.

## Causes of Osteoporosis

Osteoporosis occurs in case of imbalance between the formation of new bones and the resorption of old bones, whereas the body may fail to form sufficient new bones, re-resorb many old bones or both. The most important minerals for forming bones are calcium and phosphate. The loss of bones usually occur throughout long periods, due to the following reasons among others:

1. Reduction of certain hormones particularly the Estrogen for females and Androgen for males.
2. Age.
3. Lack of Exercise.
4. Loss of weight particularly among the elderly, and the overuse of cortisone.
5. Some genetic disorders.
6. Reduction of Calcium in the diet.

## Advices for the Protection from Osteoporosis

**There are methods limiting the infection of Osteoporosis including:**

1. Quit smoking.
2. Limit drinking alcohol.
3. Psychological and practical support to those persons suffering from Osteoporosis.
4. Reduce foods aggravating Osteoporosis, like: Salt, Soft Drinks and Caffeine.
5. Practice sports, weight-bearing exercises for strengthening muscles, and aerobic exercises.



## Chronic Arthritis

Chronic Arthritis is a chronic infection affecting most joints, and could damage the body organs including skin, eyes, lungs, heart and blood vessels.

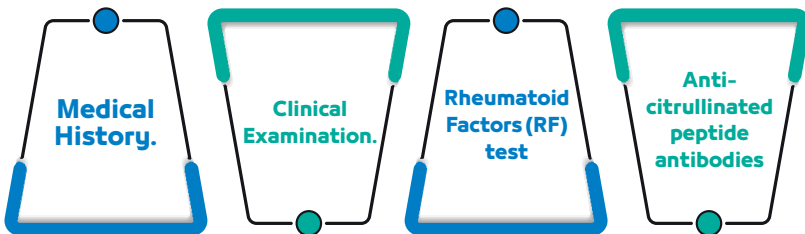
### Cause of Disease

The cause of Chronic Arthritis is totally unknown, though it is medically defined as abnormal response of the immune system, which plays a role in the infection and damage of joints. The reason for malfunction of response is unknown certainly, however there is scientific evidence that genes, hormones and environmental factors represent a principal factor. Researchers indicate other factors also, such as: Bacterial or viral infections, obesity and body reaction to stressful events, such as: Bodily or emotional shocks, exposure to smoking, air pollution for instance Pesticides, and the exposure to minerals and silica.

### Symptoms



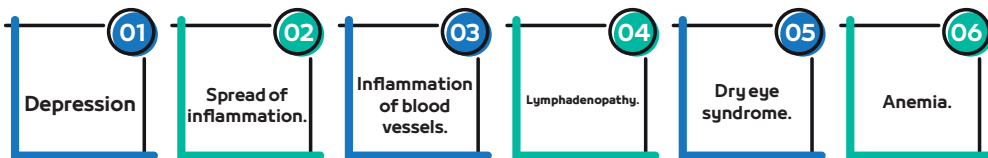
### Diagnosis



## Risk Factors

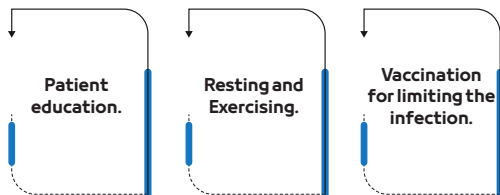


## Complications

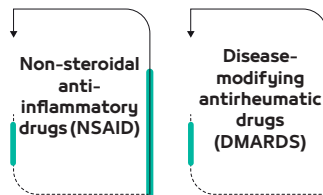


## Treatment

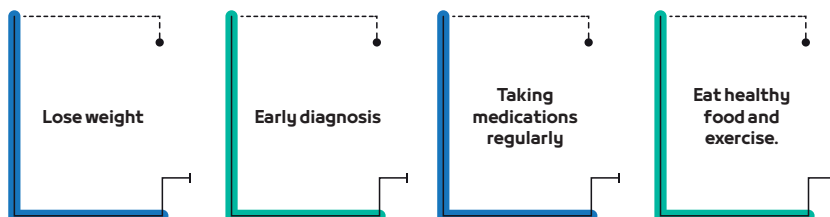
### Non-pharmacological treatment including:



### Pharmacological treatment including:



## Protection



## Incontinence

Incontinence (Loss of bladder control) is a common problem and is often embarrassing. Severity ranges from Incontinence occasionally in case of coughing or sneezing to the urgent need to urinate suddenly and strongly to the extent that you cannot reach toilet on time.

Although it occurs frequently as people get older, Incontinence is not inevitable result of aging. If Incontinence affects your daily activities, do not hesitate visiting your physician. As to most people, simple changes to the lifestyle or medical treatment could lessen the feeling of discomfort or stop Incontinence.

### Incontinence might occur due to:

#### Aging Changes

**Aging of bladder muscle, leading to lowering the capacity of bladder in terms of urine storage. Also, involuntary bladder contractions become more frequent as you get older.**

#### Neurological Disorders

**Multiple sclerosis, Parkinson's disease, stroke, brain tumor or backbone injury could interfere with nerve signals involved in bladder control, causing Incontinence.**

#### Prostatic Hyperplasia

**Incontinence often occurs particularly among elder men, due to prostate gland enlargement, which is Benign prostatic hyperplasia (BPH).**

## Prostate Cancer

Urge incontinence among men could be associated with Prostate Cancer that is not treated. However, incontinence often occurs as a side-effect of the medications of Prostate Cancer.

## Occlusions

The existence of tumor at any area along the Urinary Tract could prevent the normal flow of urine, leading to overflow incontinence. Urinary stones, which are solid blocks resembling stones that could be formed in the bladder, occasionally cause urine leakage.

## Risk Factors

**Incontinence's Risk Factors include:**

### Gender

Women are more susceptible to stress incontinence. The variation, in this aspect is attributed to pregnancy, delivery, menopause and the normal female anatomy. However, men infected with Prostate-related problems are more susceptible to the infection of urge incontinence and overflow incontinence.

### Age.

Once you get older, the bladder muscles and urethra lose part of their strength. Aging-related changes reduce the quantity that bladder can retain, which raises the chances of involuntary urination.

### Overweight.

Overweight raises pressure on bladder and surrounding muscles, which weakens them and permit urinating when coughing or sneezing.

### Smoking

Tobacco use raises the risk of infection with incontinence.

### Family History

If one of your close family members suffers from incontinence particularly the urge incontinence, you will be more susceptible to infection.

### Other Diseases

The infection with a neurological disease or diabetes might increase the risk of incontinence.

## Complications

**Complications of Chronic Incontinence include:**

**Skin Problems -** Rashes, skin infections and ulcers can occur from constantly wetting your skin.

**Urinary tract infections:** Incontinence increases the risk of recurrent urinary tract infections.

**Impacts on Personal Life:** Incontinence could affect the social, practical and personal relationships.

## Protection

**Incontinence cannot always be protected from. However, to help reducing the risks, you should:**

1. Keep a healthy weight.
2. Do pelvic floor exercises.
3. Avoid substances that irritate blade, such as: caffeine, alcohol and acidic foods.
4. Eat more foods rich in fibers that could prevent constipation, which is one of causes of Incontinence.
5. Do not smoke, and ask for help to quit smoking.

## Care for a Patient Suffering from Incontinence

Some statistics indicate that 70% out of Incontinence patients suffer from depression, thus it is necessary to take their psychological condition into account, find out appropriate solutions for abreaction and listen to their problems.

### Therefore, patient escort should

1. Coordinate with the attending physician and educator, and report the physician about any changes to the patient's health condition.
2. Be patient and encourage the patient morally.
3. Never embarrass the patient and consider patient's psychological condition.
4. Make the patient put on clothes that are easy to be worn and taken off.
5. Follow up the patient diet including avoiding caffeine (coffee and tea) - chocolate of every kind and spicy food (full of seasoning and hot pepper).
6. Ask for help when needed.

### Take Care of Skin

Frequent urination means that the body is losing liquids, which could make the patient skin more susceptible to dryness. In addition, that might cause the irritation of sensitive area's skin, and the patient becomes more susceptible to rashes.

#### Advices and Steps to be Followed by the Patient Escort

1. Use absorbent cotton pads and on-time handkerchief.
2. Use particular products to cleanse the sensitive area without drying.
3. Avoid using soap and any products incorporating perfumes, irritating substances or baby wipes that contain alcohol.
4. Use special lotion and moisturizing creams to prevent friction.
5. Continuously change the patient's cotton pads to avoid skin irritation.

## Stroke

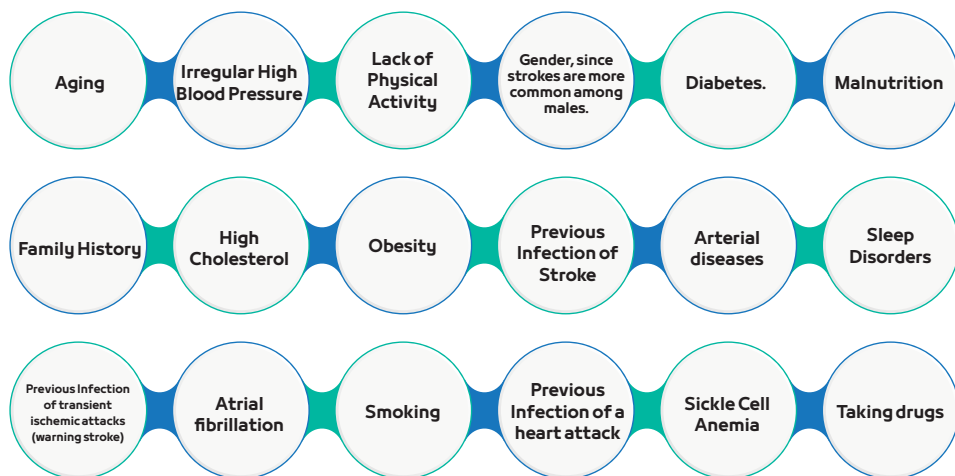
### Symptoms of Osteoporosis

1. Occurs when the blood flow to brain is stopped or reduced, leading to the damage of brain cells.
2. Pre-Stroke temporary warnings should be known and considered.
3. One of the most important symptoms of stroke is the sudden hemiplegia.
4. Quick asking for treatment within the first few hours of symptoms emergence is very important.
5. Controlling chronic diseases and following a healthy lifestyle are ones of the most important means of prevention.

### Introduction

This disease affects arteries and brain, and is attributed to sudden malfunction as to the blood supply to brain, which is often resulted from occlusion or sudden burst of a brain artery. Stroke is considered one of the most dangerous nerve diseases, affecting anyone, but they are more common among the elderly.

### Risk Factors





## Symptoms

1. Numbness or weakness of face, arm or leg, especially in one side of body.
2. Difficult speaking or understanding.
3. Difficult vision in one eye or both.
4. Walking Difficulty, dizziness and the loss of balance.
5. Severe and sudden headache that might be associated with nausea.

## When should you visit a physician?

You should visit your doctor instantly once noticing any of the following symptoms even if such symptoms are disappeared:

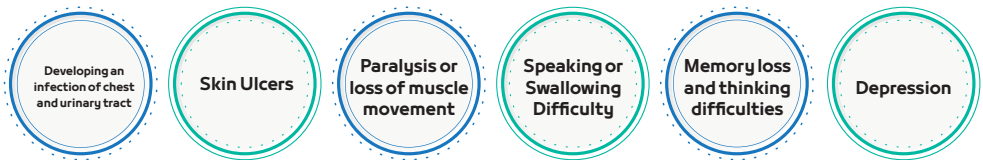
**Face:** In case of drooping one of the patient's face sides while smiling.

**Arms:** If the patient cannot lift its arm above.

**Speech:** If the patient speech seems strange or slurred.

Or the occurrence of any of the above-mentioned symptoms.

## Complications



## Diagnosis

The physician needs to evaluate the type of stroke and the affected areas of brain, and needs also to exclude the other potential causes of symptoms (such as: Brain tumor or reaction to a medication); thus the physician may conduct many tests to determine the risk of stroke infection including:

**Lab Analyses:** Blood tests for determining the levels of cholesterol and blood sugar.

**Other Tests:** CT scan, MRI, swallow test, cardiovascular tests

## Treatment

The treatment relies on the stroke type, including:

### Medications

Taking one medication or more, whereas some of them may be taken instantly and for a short term (such as: Blood thinners) meanwhile other medications may be taken on the long run. Once diagnosed, the patient is instantly given clot solvents intravenously; in order to improve the blood flow to a part of brain, but such kind of medications must be used within the first three or four hours of infection, or even within the first six hours according to other recommendations.

### Surgery

Some people may need surgery for removing the blood clot and allowing the blood to flow again to the brain, through inserting Catheter into the artery, often in the thigh, then passing a small device through the Catheter to the harmful artery of brain. Such a procedure needs to be applied within the first six hours of the emergence of symptoms of severe stroke.

## Rehabilitation

Some patients may need long-term treatment, whereas they need physiotherapy, occupational therapy, speech, psychiatric treatment, nutrition and blade control.

## Prevention

1. Knowing the signs and symptoms of stroke is the first step to guaranty getting medical assistance on an immediate basis.
2. Controlling health problems (such as: Diabetes, High Blood Pressure... etc.)
3. Sticking to a healthy diet.
4. Keeping a healthy weight.
5. Regular exercising.
6. Quit smoking.

## How to deal with a stroke patient

The early discovery of stroke i.e. within no more than 4.5 hours only as of the emergence of symptoms for receiving treatment increases the possibility of cure by 30 - 50% without any handicap or only with slight handicap. Moreover, recovery degree relies on the severity, position and size of brain's damaged tissues caused by the stroke. Additionally, healing relies on the sufficient rehabilitation, the patient's mental capabilities as well as the support received from the surrounding (family and community).

**The best element for a patient following the recovery from stroke is to rely on himself/herself as much as possible. The relevant advices include:**

### Training the face muscles in front of the mirror

Take a deep breath, puff the cheeks out and move air from one cheek to the other. There are also other simple exercises like getting your tongue out, showing teeth, laughing, smiling and moving the forehead and eyebrows.

### Sitting upright when eating

### When changing clothes

First, take off the clothes from the infected side. When putting them on, do the opposite i.e. the proper side first then the infected one. Shoes should be easy to be taken off and put on. It is necessary to choose shoes with good insoles to avoid slipping.

### The carpet in the room may cause stumbling to the patient when walking

### Take Care of the Body

For instance: putting a chair and sitting on it when bathing. Using particular coats for drying.

## Advices to Patient's Family

1. Coordinate with the attending physician, health educator and physiotherapist besides the home visits if possible.
2. Be patient and encourage the patient morally.
3. Create a safe environment to the patient at home.
4. It is necessary to talk and listen to the patient, because silence for a long time makes patient brain stop thinking.
5. Help the patient to train, and do not prevent the patient to touch or bear something out of fear of falling, on the ground that with training, the patient is recovered.

## High Blood Pressure

It is the amount of pressure caused by the blood flow on the walls of arteries carrying it from the heart to the other parts of body. The blood pressure is measured using a particular device and is expressed by two digits; the first digit refers to pressure during the contraction of heart muscle, and the other digit refers to the pressure during the myocardial diastole.

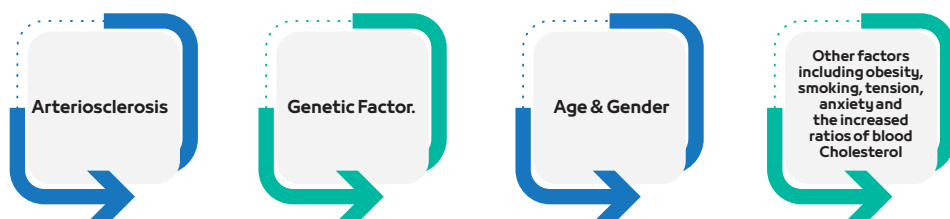
**The Normal Ratio of Blood Pressure Ranges from 65 - 100/ 79 - 119 mmHg**

### The Levels of Blood Pressure for the Elderly

1. When measuring the blood pressure, the patient should be sitting or lying down not standing.
2. The blood pressure changes temporarily based on the agitation, sleeping, eating, measuring time, physical activity, quantity of salt or taking medications.

Category	Systolic Pressure (mmHg)	Diastolic Pressure (mmHg)	Result
Normal Level of Blood Pressure	Less than 120	Less than 120	The best for your health
Pre-High Blood Pressure	120 - 139	80 - 89	The Blood Pressure might affect the health negatively, making changes to diet, activity and weight loss, in case of diabetic it is required to refer to the doctor.
High Blood Pressure	140 or higher	90 or higher	Blood Pressure is considered high, and it is required to visit the doctor to know how to control it.

### High Blood Pressure's Threatening Factors



## High Blood Pressure's Threatening Factors



## Dietary Approaches to Stop Hypertension (DASH)

### ■ Healthy Nutrition for Reducing the Blood Pressure

DASH concentrates on food quantity, eating varied foods and getting the appropriate quantities of nutrients. Discover how DASH may lead to improving your health condition and reducing your blood pressure.

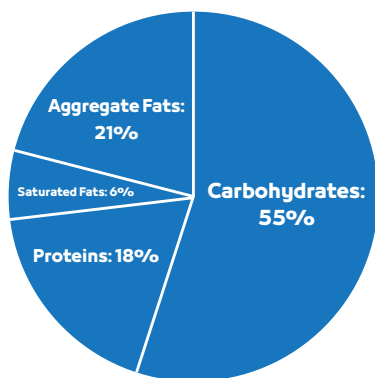
“DASH” means healthy diet for stopping hypertension. The diet for ceasing hypertension is a lifelong style for eating healthy food designed to help treating high blood pressure (hypertension) or preventing it. The healthy diet designed for ceasing hypertension encourages you to reduce Sodium in your diet and eat a variety of foods rich in nutrients that help reducing your blood pressure such as: Potassium, calcium and magnesium.

By following a healthy diet to cease hypertension, you are able to reduce your own blood pressure by few degrees within 2 weeks only. By the time, your systolic blood pressure may reduce by nearly about 14 degrees, which may represent a prominent difference in terms of health risks.

Because the healthy diet designed for ceasing hypertension is a healthy way to have your meals, it provides health advantages, in addition to lowering blood pressure. The healthy diet designed for ceasing hypertension agrees with the dietary recommendations to prevent the infection of osteoporosis, cancer, heart disease, stroke and diabetes.

### ■ Sodium Levels

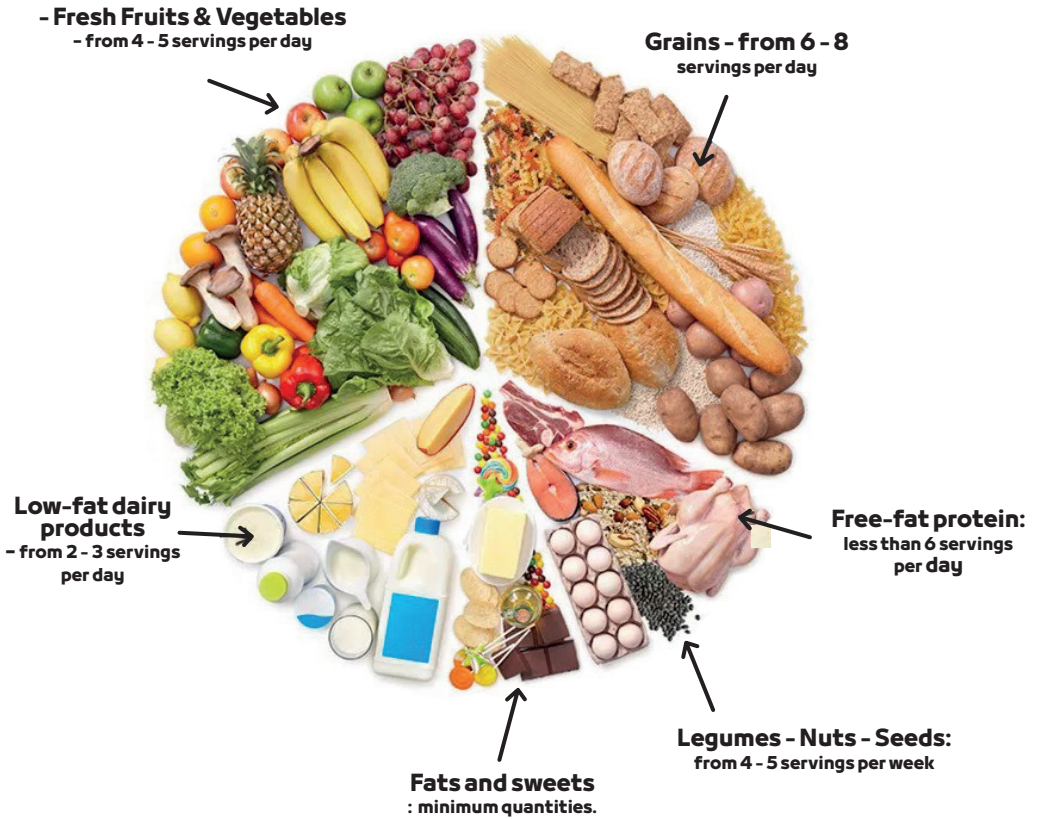
It is a diet system designed for lowering the blood pressure and preventing its rising. DASH stands for dietary approach to stop hypertension, and it includes a quantity of Sodium ranging from 1150 - 2400 mg per day. The above quantity of Sodium is the maximum limit recommended by the National Heart, Lung, and Blood Institute (NHLBI) in the U. S. This diet incorporates also a limited quantity of saturated fats and Cholesterol as in the red meat and sweets, besides using nuts, legumes, fishes and chicken as source for protein, besides large quantity of potassium, magnesium, calcium and fiber as in the fruits, vegetables, grains and low-fat dairy products, and limiting drinks and sweets with added sugar and desserts.



**Daily needs of nutrients in DASH**



## DASH for Controlling Blood Pressure



## Food servings according to DASH, for Individuals that need to 2000 Calories

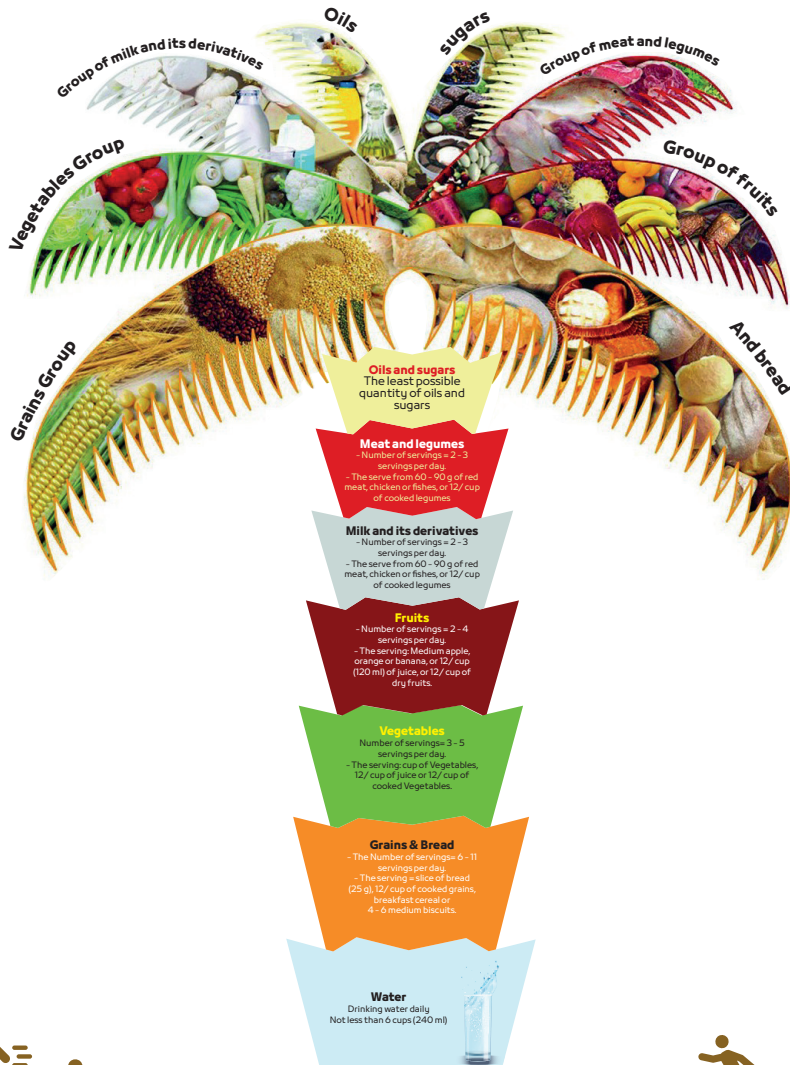
Food Group	Servings	Serving Quantity
Normal Level of Blood Pressure	6 - 8	1 slice of toast 12/ cup of cornflakes 12/ cup of cooked rice, pasta
Vegetables	4 - 5	1 cup of uncooked leafy vegetables 12/ cup of chopped cooked or uncooked vegetables 12/ cup of vegetable juice
Fruits	4 - 5	1 medium piece of fruit 14/ cup of dry fruits 12/ cup of chopped fresh, frozen or canned fruits 12/ cup of fruit juice
(Low-fat or free-fat) dairy products	2 - 3	1 cup of milk 30 g of cheese
Meat, chicken and fishes	0 - 2	30 g of Meat, chicken or fishes 1 egg
Nuts and legumes	4 - 5	12/ cup of almonds = 6 almonds 2 Tablespoons of peanut 2 Tablespoons of seeds 12/ cup of cooked peas
Meat, chicken and fishes	2 - 3	1 Teaspoon of vegetable oil 1 Tablespoon of Mayonnaise
Sweets and sugar added to foods	Less than 5 servings	1 Tablespoon of sugar 1 Tablespoon of jelly or jam

### Whole grains are the best choice due to containing fibers

Example for DASH designed for individuals, who are in need to 2000 calories

# DASH for Controlling Blood Pressure

## For the Kingdom of Saudi Arabia



Exercising: From 30 - 60 minutes per day, according to the health condition.



## Healthy Food Palm For the Kingdom of Saudi Arabia

### The Daily Recommended Food servings Out of the Palm's Food Groups

Sr.	Group	Number of servings	One Food serving
01	Grains & Bread Group	6 - 11	25 g of bread (equivalent to 14/ of Arabic medium loaf). A slice of toast. 12/ Cup of grains, rice, pasta, purée, oats, bulgur or corn. 6 biscuit pieces 14/ cup of cornflakes A medium-sized sweet potato or potato
02	Vegetables Group	2 - 5	A cup of fresh or leaf vegetables. 12/ cup of cooked or canned vegetables, or vegetable juice.
03	Fruits Group	2 - 4	A medium-sized fruit such as: apple, banana, orange, kiwi or guava. 3 medium dates 12/ cup of fruit juice 12/ cup of chopped or dry fruits
04	Group of milk and its derivatives	2 - 4	A cup of milk or yogurt. 3 tablespoons of powder milk. One slice of cheese or one piece of triangle or square cheese - tablespoon of liquid cheese. 2 tablespoons of Feta cheese, cheddar or labneh.
05	Group of meat and legumes	2 - 3	60 - 90 g of meat, chicken or fish 12/ cup of cooked legumes, such as: beans or chickpeas. 12/ cup of cooked dry peas. One (medium-sized) egg 2 Teaspoons of Peanut Butter
06	Oils and sugars	---	The minimum possible quantity of oils and sugars
07	Water	6	Drinking not less than 6 cups

# Level 3

## Nutrition

## The Concept of Balanced Healthy Nutrition

Proper nutrition primarily supports our health. In case of nutrition deficiency, the body's resistance to diseases becomes weak, and the disease symptoms remain longer. Additionally, the balanced and healthy nutrition is required for preventing diseases, in particular the contemporary diseases, such as: (Heart Disease, Diabetes, High Blood Pressure & obesity).

### To avoid infection, the following guidelines are advised:

1. Eating varied foods belonging to the main food groups of food pyramid.
2. Reduce foods rich in fats and sugars, whereas foods need to incorporate low-salt and fat, or choose meat free from fats.
3. Refrain from drinking soft drinks, given to their sugars and salts.
4. Eat foods that are rich in fibers like vegetables and whole grains.
5. Eat fruits and vegetables, and drink much water of about 6 glasses per day.
6. Minimize salt to avoid high blood pressure.
7. Increase movement and exercise for 30 - 60 minutes (3 - 4 days per week).
8. Drink much water of about 6 glasses per day.
9. Assure food safety.
10. Quit smoking.
11. Sufficiently sleep for at least 8 hours.

## Alimentotherapy of Constipation

Constipation is deemed a general problem among the handicapped and the elderly for many reasons including lack of movement, lack of having dietary fibers and liquids. Moreover, taking some medications could lead to constipation. A patient of constipation usually complains from abdomen pain, flatulence and discomfort.

## Alimentotherapy

The diet containing sufficient quantity of fibers helps excreting soft stools. The following tips should be followed:

1. Eat high-fiber foods such as: fruits & vegetables.
2. Drink soups rich in fibers, such as: oats (quaker), lentil soup, carrot soup
3. Avoid foods containing small amount or no fibers, like: (White bread, foods rich in fats, fried foods & sweets).
4. Drink much liquids (8 glasses daily).
5. Exercise daily as much as possible or frequently move handicapped in bed.

## Tube Feeding (Enteral Nutrition) at Home

The delivery of nutrition to stomach and small intestines through a feeding tube to be connected temporarily from the nose.

In case of permanent feeding, a surgical opening is to be made directly from the stomach or intestines to the abdomen surface, whereas the feeding tube is to be connected for medical requirements.

### Precautions to be Considered when Using the Feeding Tube

1. Wash hands prior to initiating the preparation of meals and put on gloves and apron.
2. Raise the patient head by 30 - 45 degrees before and after initiating the tube feeding, when the feeding tube is connected via the nose.
3. Assure placing the tube in the correct area.
4. Push 10 milliliters of air and put the stethoscope on the stomach pit for listening to the air bubbles to assure that the tube is in the correct place.
5. Assure that the nose is proper and free from redness, wounds and dryness resulting from the adhesive used to fasten the tube, and assure that the tube is fixed and not crooked.
6. Give nutrition using synergies and based on gravity.
7. Assure that the tools used for tube feeding are clean.
8. Give water of 20 - 30 mm before and after the tube feeding, and clean the tube from the contents of food or medications.
9. Consider changing the side of feeding tube's installation each time, when installed from the nasal opening.
10. Avoid tube blockage by encouraging using water following every meal.



## In case of using the feeding tube connected from the abdomen surface to the stomach and intestines.

1. Wash hands before and after tube feeding.
2. Put on gloves and apron.
3. Clean the area around the tube using sterilized cotton circularly.
4. Assure that the tube is installed in the correct area, by installing a syringe of 60 mm and pulling the gastric juice.
5. Give medications through the syringe or gravity.
6. Give doses of water to clean the tube from the remnants of food and medications between 20 - 30 mm.
7. Ensure that the tube area is free from swelling or sores.



## Ask about your child nutrition

Child malnutrition is defined as imbalance of foods eating and digesting. The malnutrition affects child growth, development and health. Nevertheless, the malnutrition severity can be lessened through identifying its signs, the precise reason for the condition, and how to treat it.

### Signs of Child Malnutrition

Children suffering from malnutrition may be shorter comparing to their counterparts of the same age. Moreover, they may suffer from thinness, weakness and immune disorders, whereas malnutrition may affect any organ, and may cause anxiety, mood swings and other psychological symptoms.

**Ask about your Child Nutrition, when noticing any of the following:**

- Delayed growth or gain weight at the expected rate.
- Lethargy, low-level of energy and fatigue easily comparing to peer children.
- Loss of appetite and frequent refusal to eat.
- Excessive and clear loss of fat and muscle mass.
- Changes to the quality and color of nails, hair and skin.
- Swelling, gums bleeding and tooth decay.
- Frequent diseases, delayed healing and slow wound healing.
- Changes to behavior and mood swings, like: irritation and anxiety.
- Poor mental development and inability to concentrate, which affects learning.

## Important Nutrients for Child Growth

### Energy (Calories)

Calories represent the measure of energy that food supplies us with. Infants need to energy is higher than any other phase of life. Energy needs lessen gradually with the growth. Energy needs differ among children due to the differences of growth speediness, puberty, the ratio of body muscle mass to adipose tissue and the physical activity. The estimates of needs can be re-assessed when comparing to having nutrition, gaining weight and growing within a period ranging from 1 - 3 months.

**The Factors Representing the Scope of Infants' Energy Needs Include:**



### Starches (Polymeric Carbohydrate)

The body uses starches mainly as an accessible source of energy. Starches consist of simple sugars, complex starches and most sources of fiber.

## Protein

The protein in foods supplies the body with amino acids used for building up and maintaining the protein-based bodily components such as muscles, bones, enzymes and red blood cells. The body can also use protein as a source for energy.

## Healthy Fats

Fats are important nutrients that the body uses for building up the cell membranes and nerve tissues (including the brain) and hormones. The body also uses fats as a concentrated source of energy. Getting a sufficient quantity of healthy fats is necessary for growth and development.

## Iron

Iron is a principal element in forming the blood. Infants are at risk of iron deficiency; due to the fast growth in the first year. From the age of 4 - 12 months, the infant's blood volume and need to iron are doubled. Anemia resulting from the iron deficiency at the childhood stage is associated with short and long-term consequences, including the poor cognitive and motor development.

## Calcium

Calcium is a very important element for the body, particularly for building up bones and teeth. The Calcium contributes also to healing wounds, controlling the blood pressure and reducing the risk of infection with osteoporosis.

## Vitamin D

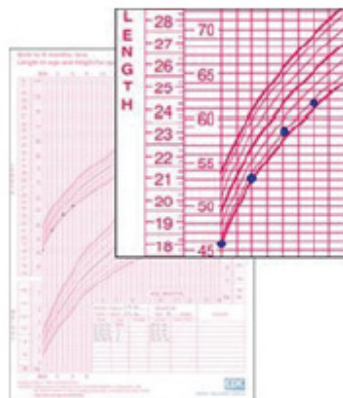
Vitamin D is considered essential nutrient in the infant food. Vitamin D plays an important role in the bones growth, and calcium and phosphor balance. Additionally, Vitamin D prevents osteoporosis and organizes immune-related genes.

## Child's Natural Growth Rate

The Natural Physical Growth is defined as the increase in the mass of body tissues at genetically-specified rates, patterns and ages with the proper growth of infant to become adult. The child needs sufficient feeding and physical activity for the optimum growth and maturity.

The rapid growth within the first year of age distinguishes infants from all other ages. Since the birth until the age of six months, the infant grows more rapidly than any other stage of the life cycle. Moreover, the childhood is a critical stage for forming the brain. The early childhood is an important stage for gaining and developing the cognitive, motor, social and emotional skills, then such developmental skills will continue progressing at all stages of childhood and adulthood. At this period, feeding skills and healthy food patterns are developed. Then, the child's growth rate is gradually reduced with the age progression until adulthood.

- Growth Charts globally approved by pediatricians, nutritionists and guardians are used to monitor the growth of infants, children and adolescents. Further, the Growth Charts consist of a series of percentile curves indicating the distribution of specific body measurements among children.



## Breastfeeding

Mother's milk is the idealistic food for children, as it is clean and safe, and contains anti-bodies helping to protect from several common diseases among children. Mother's milk supplies all energy and nutrients that the infant needs within the first months of its life, and continues supplying half or more of the child's nutritional needs within the 2nd half of the first year until the 13/ of the second year of age. The breastfeeding has healthy benefits for both infants and mothers, whereas mother's milk represents idealistic feeding for infant and supports its growth and development.

### Important Advantages of Breastfeeding:

- Mother's milk is the best source for most infants' feeding.
- While the infant grows, mother milk's components change gradually to meet the infant's nutritional needs.
- Mother's milk contains anti-bodies.
- Such anti-bodies help infants to develop a powerful immune system that protects them from diseases. Less expensive and easier to be prepared than the infant formula.
- Mother is not enforced to purchase and prepare infant formula, or sterilize the bottle and heat the milk, which saves time and money for the mother.

### Strengthening bond between the mother and infant

Women breastfeeding for longer terms experience motherhood feelings rather than others, which is reflected to their infants' life even subsequently. In addition, this strong bond can help mothers to read their infants' signals, and help them acting more flexibly. Breastfeeding can reduce the risk of mother infection with ovarian and breast cancer, type 2 diabetes and high blood pressure. Breastfeeding has healthy advantages in favor of the mother as well, whereas certain types of cancer, type 2 diabetes and high blood pressure are less common among the lactating women.

WHO recommends that infants begin breastfeeding within the first hour of delivery. Moreover, infants are recommended to breastfeed exclusively within the first six months of life, without providing other foods or liquids including water. As of the age of 6 months, the infants should eat safe and sufficient complements, and continue breastfeeding for a term up to 2 years and above.

## Signs of Infant Hunger

The mother should pay attention to the following signs indicating that the infant is hungry and needs to be fed immediately:

01

**Moving fists over the mouth.**

02

**Turning the head searching for the breast.**

03

**Becoming more alert and active.**

04

**Sucking hands or putting hands on the lips.**

05

**Opening and closing the mouth.**

## Signs of Infant Satiety

It is important for the infant to breastfeed until being sated. The following are signs of infant finish of eating:

1. The infant leaves the breast and gets away from it.
2. Turning the head away from the nipples.
3. The infant relaxation and resting the hands.

## Tube Feeding (Enteral Nutrition) at Home for Children

Enteral Nutrition can be used for the infants who cannot get the sufficient amount of food through the mouth, or who do not have desire for eating food through the mouth to meet their nutritional needs.



## Advises as regards the Little Hands and Nasogastric Tubes

Children and infants often try to pull the nasal tube (often at night), thus try to put gloves or socks on the child hands to prevent it from pulling the tube.

You can also stick the nasal tube below the shirt back during the day hours to get it away from the child's hand.

### Note: Child's Righteous Position during Feeding

- The Child should not be fed while lying down on the ground.
- Place the child at a sitting position on the chair or lying down with raising its head to at least 30 degrees, or above three pillows.
- Attempt keeping the child in this raised position after feeding (for instance: for 30 - 60 minutes).
- Important: If the child begins coughing choking or breathing hardly during a meal, stop feeding. Contact the physician immediately.

## Home Parenteral Nutrition for Children

Parenteral nutrition or by injection is the process of delivering nutrients directly to the blood, which might include carbohydrates, protein, fats, vitamins and minerals via intravenous (IV) tube (catheter). Parenteral nutrition is used when the digestive system is unable to absorb the sufficient feeding.

### Precautions to be considered when using the parenteral nutrition at home

The follow-up of medical care and the attendance of appointments are deemed a principal part of treatment. Therefore, it is necessary to assure identifying and attending appointments. It is preferred also to know the results of blood analysis and keep the list of medications that the child takes.

### Take Care of (IV) Intravenous Tube

#### Follow your Physician Instructions on Caring for IV Tube The Physician or Nurse will:

- Educate you about the liquids to be given through the vein.
- Give the sufficient guidance through caring for the skin around the vein. Assure following the instructions and keeping the area clean.
- Educate you how to control infection or vein blockage.

### Take Care of IV Tube

- Follow the Physician instructions about the method of parenteral nutrition. Do not change the dose or the number of times of feeding without speaking to your physician first.
- Wash and sterilize your hands prior to dealing with the feeding solution and supplies or the IV Tube.
- Store feeding solution in the fridge if not in use. Leave the solution warm to the room temperature before using it. You can put the feeding bag on a clean table for an hour before using it. Never warm the solution.
- Always verify of each feeding bag before using it. If there is a problem related to the feeding bag, consult the physician or the pharmacist.
- Verify of the expiry date. Do not use the feeding bag if expired. Check the bag in search for any leakage. Do not use it in case of discovering any leakage.
- Follow your physician instructions on how to safely dispose of intravenous needles, intravenous tubes and feeding bags.

## Home Follow-Up

- It is required to monitor the weight weekly to determine the amount of feeding that the child needs.
- Check the position of catheter and IV tube in search for any signs of infection such as: redness, swelling, warmth and secretions.
- Measure the child temperature as per the directions.
- Monitor the amount of feeding and other intravenous fluids that the child gets.
- Monitor the amount of urination.
- Measure the blood sugar level, as per the directions.
- Follow up with the healthcare provider about the child need to check the blood regularly. Blood tests may show how the body responds to the parenteral nutrition or whether the child is infected.

## When should you ask for help?

**You should go to emergency once noticing any of the following infection signs on your child:**

Increased pain, swelling, warmth, redness around the vein, red lines on the skin around the tube, secretions from the venous area, fever.

# Level 4

## Protection from Bedsores

## Bedsore

Bedsore is a skin infection arising from the insufficient of blood flow and also from the continuous friction between the skin and bony areas or from the body friction with the bed or wheelchair for a long time.

### Causes

- Bedsore occurs as a result of the continuous pressure on tissues, which in turn presses on the tiny veins and capillaries that feed the skin with oxygen and nutrition.
- Malnutrition.
- Hard beds or shoes rubbing against the skin could cause skin injuries.
- High temperature.
- Put powder over the body at large amounts.
- Skin exposure to wetness for a long time, as a result of sweat or urine, which makes the skin surface vulnerable to inflammation.

### Most Vulnerable Persons

- Patients lying down for longer periods on the bed like fainting (consciousness loss), paralysis.
- Wheelchair users.
- Post-surgery patients and those patients having to remain at hospital for long-term treatment.
- Inpatients due to disease or infection, particularly the overweight persons.
- Persons suffering from morbid thinness.
- Some diseases affecting the nerves, like head injuries, stroke or diabetes.

## Protection from Bedsores

- Continually changing the body position, permitting the blood to reach every part of the body. The patient needs to be turned every 2 or 3 hours.
- If the patient is bedridden, it is required to use mattress filled with air or water to prevent the formation of bedsores.
- The patient should use of pillows between knees and heels to prevent their friction.
- The patient should avoid lying down directly on the pelvic bone, when lying on the side, and put a pillow to reduce that.
- If the patient cannot move completely, pillows should be put under
- its feet at the calf of leg until the ankle joint to prevent heels from touching the bed most the time.
- If the patient is sitting on the wheelchair, the body needs to be lifted once every 10 or 20 minutes for 10 seconds.
- Attention to the skin: Dry the skin well after washing without massaging.
- If the patient cannot control urination or uses catheter, it is necessary to provide treatment and to keep the skin clean and dry.
- Eat balanced food that is rich in proteins, iron and calories.
- Consult the physiotherapist as regards the appropriate exercises for improving blood circulation.

## Treatment Methods

There are principal factors for curing the bedsores:

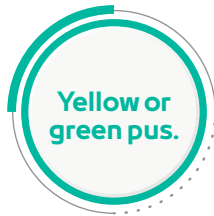
Lessen the pressure causing the bedsores.

Work on improving the nutrition of person suffering from the bedsores.

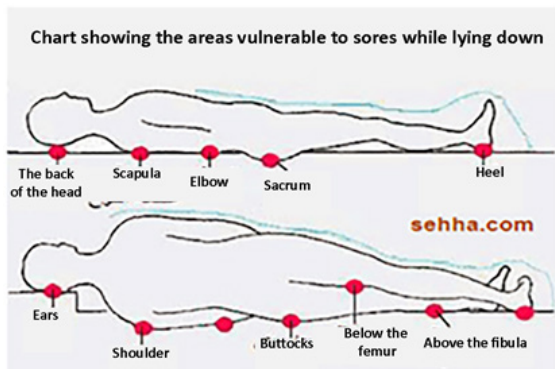
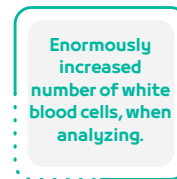
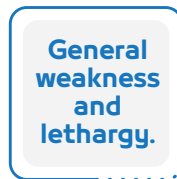
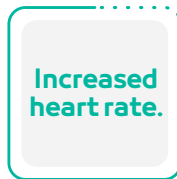
Appropriately prepare the medical pads and continually clean the sore under the supervision of the medical team.

## Treatment Methods

There are principal factors for curing the bedsores:

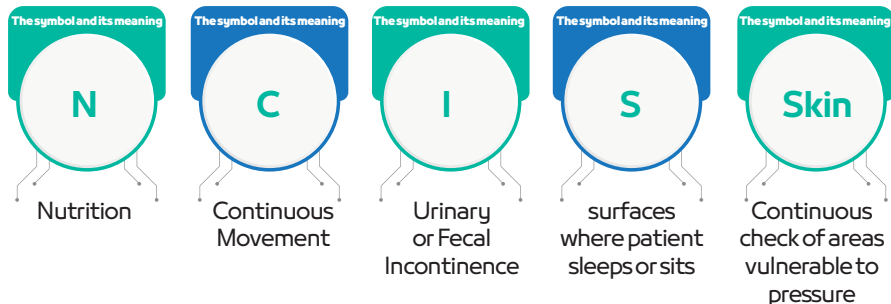


The sores inflammation may be accompanied by the following general symptoms, such as:



## The Skin Protection Methods to Stop Bedsores (NCISC)

The Skin Protection Methods (NCISC) refer to the methods to be followed for preventing bedsores, whereas each of the following letters focuses on what the care provider should do and give priority.



Nutrition	Monitor weight loss	Interest in meals rich in protein and minerals	Assure taking sufficient quantities of food	Therapeutic nutrition and compliments
Continuous Movement	Turn the patient every two hours at the bed	Move the patient every 15 minutes at the wheelchair	Use the alarm to remember the turning time	Physiotherapy for protection from joint deformities
Urinary or Fecal Incontinence	Interest in cleanliness and quickly change dirty diapers	Use an external catheter	Use skin-care creams	Resort to catheter in cases of sores
Pressure-resisting surfaces	Use air mattresses	Use pillows for chairs	Use pillows	Use a manual lever for turning (Do not pull the patient)
Skin and Continuous Check	Clean, not wet and not dry	Redness or color change	Know and protect the pressure spots	Early discover sores





## Diabetic Foot

- Simple feet problems could develop among the diabetes patients and cause serious complications.
- Problems begin with the loss of sense at feet until reaching, at worst, the stage of amputation.
- Diabetic neuropathy often begins at feet and legs, then hands and arms.
- The condition can be treated with or without surgical intervention.
- To prevent feet problems, it is advised to control the blood sugar level and follow the guidelines of feet care.

The diabetes patients suffer from several feet problems. Even simple problems may develop and cause serious complications. The diabetic foot often occurs when the feet nerves are damaged (Diabetic Neuropathy).

## Impact of Diabetes on Feet

The Skin Protection Methods (NCISC) refer to the methods to be followed for preventing bedsores, whereas each of the following letters focuses on what the care provider should do and give priority.

### The Loss of Sense

**Feeling pain, cold and warm. When the patient feet is infected, patient cannot be aware of injury. For instance, when gravel gets into the shoes, the patient does not feel and the gravel remains inside the shoes causing harm to the feet.**

### Feet sores

**Sores often affect the front of the lower side of foot or the sole of hallux. Sores appear on both sides of feet often due to the inappropriate shoe measure.**

**Reason:** Wounds are not healed or are infected.

## Poor Circulation

That leads to the feet inability to combat and heal the infection.

**Reason:** Diabetes causes narrowing blood vessels and increasing their thickness.

## Gangrene

A condition that occurs when tissues die.

**Reason:** The blood does not reach cells completely or there is acute infection.

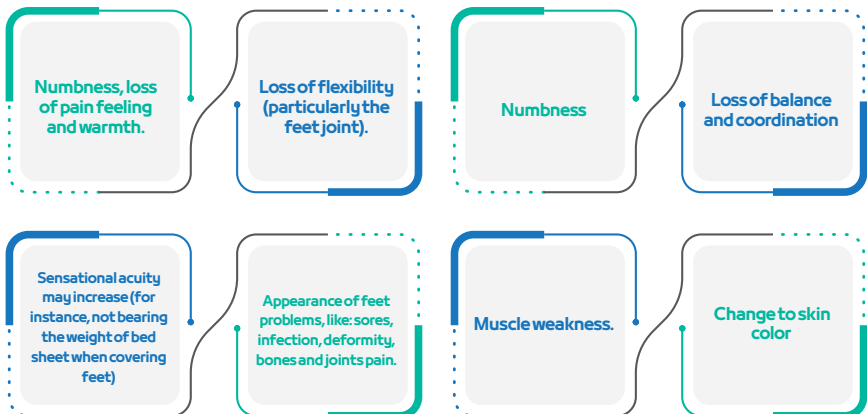
## Amputation

Occurs at the advanced stages of sores inflammation.

**Reason:** The Loss of sense and poor circulation.

## Symptoms and Signs of Diabetic Neuropathy of the Extremities

It often affects feet and legs first, then hands and arms, whereas severity is increased at evening, including the following signs:



## When should you see the doctor?



## Treatment

### Non-Surgical Treatment:



### Surgical Procedures:

1. Severe infection may be treated through removing or amputating inflamed tissues.
2. Treat the foot deformity with an operation for correcting and beatifying it.
3. Partially amputate the area infected with Gangrene or the full amputation.

### Protection and Care for Feet

1. Control the blood sugar level.

### Self-Check of Foot, through:

1. Searching for the effects of wounds, bruises, pressure areas, redness and nails problems. The mirror can be used for checking.
2. Palpate each foot to check its swelling.
3. Check the areas among toes.
4. Verify of foot sensation.
5. Focus on the following six areas in the sole of each foot: thumb tip, pinkie sole, middle toe sole, heels and the limits of the front part of foot.
6. Avoid trying to treat anything without the physician consultation.



**Self-Check of Foot, through:**

1. Washing feet daily with warm water and soap, and verify of the water temperature before using it.
2. Avoiding soaking the feet in the water.
3. It is advised to dry feet using a towel and concentrate on drying areas among fingers.
4. Moisturizing feet using creams and avoiding placing cream among the fingers.
5. Trimming nails uprightly and avoiding cutting the corners of nail to avoid wounds.
6. Informing the physician immediately about any problem caused to the nails.
7. Avoiding using sterilizers, ointments, warm compresses and sharp tools for the feet.
8. Maintaining feet warm through putting on socks and avoiding their exposure to heat sources (such as: heaters).
9. Wearing spacious socks when sleeping.
10. Not exposing feet directly to snow and rain.
11. Avoid putting one foot above the other for a long time; since that prevents the blood flow to feet.
12. Quitting smoking.

**Self-Check of Foot, through:**

1. Avoid walking barefoot.
2. Avoid wearing open shoes.
3. Carefully select shoes and experience the measure by the end of the day, when the feet size increases.
4. Assure that the shoes are comfortable and verify size before purchasing.
5. Avoid shoes with pointed tip and high heels, and choose shoes with spacious tip.
6. Avoid wearing the same shoes repeatedly every day.
7. Palpate the shoes from inside by hand prior to wearing.
8. Tighten the shoelaces moderately.
9. Put on clean and dry socks, change them daily and avoid putting on perforated socks.



## Air Mattress and its Importance

### What are Air Mattresses?

**Mattress designed for preventing and curing pressure sores.**

The mattress consists of a set of inflatable pneumatic tubes, filled with air using electricity-operated motor. The mattress imitates the patient movement easily when sleeping on it, however the patient should not be left in the same position for a long time period.

By the time, pressure can be lessened below the body, particularly at certain areas being exposed to sores, such as: hips, shoulders, elbows, heel and buttocks.

The air mattress helps ensuring air circulation appropriately, which helps oxygen reaching the areas of sores, thus recovery is accelerated and sores could not reappear.

### How can we benefit from the air mattress?

**Air mattresses are advised to prevent and treat bedsores. Air mattresses are suitable for any patient who cannot move and remains at bed for a long time, like:**

1. Persons with spinal cord injuries or neurological conditions.
2. Patients suffering from conditions affecting the blood flow.
3. Any patient that cannot change his/her own position while lying down at the bed.
4. The elderly that cannot move.
5. Sleeping well is important for idealistic health and helps blood vessels to be recovered and corrected.

Therefore, it is required to create a good, comfortable and appropriate environment for patients' comfort and sleeping, whereas sleeping well ensures the idealistic immune performance, healthy metabolism and strong memory.

If the patient faces any problem depriving him/her of sleeping, that patient becomes prone to psychological problems and successive bouts of depression. Additionally, not sleeping well could delay healing.

Air mattresses help providing better conditions for healthy sleeping to those patients that sores prevent them from sleeping normally, due to pain and inflammations.

## Benefits of Air Mattresses

### The most important benefits of such mattresses

1. Air mattresses help maintaining the humidity to accelerate the recovery of wounds.
2. Air mattresses use pump "blower" to get rid of surplus humidity, which helps the recovery of sharp and chronic wounds. While the patient sleeps on the mattress, there is no humidity between the mattress and the cover, which accelerates healing.

### 3. Improving Blood Flow

Air mattress helps keeping the patient body much higher than traditional bed, which helps improving the blood flow to the infected area through regulating the pressure levels precisely; because the blood flow is important for the recovery of wounds.

That helps also lowering the infection and complication rates significantly, through reducing the possibilities for returning to hospital, since such air mattresses provide the patient with well sleeping and comfort at home.

### 4. Treating the Advanced Wounds:

Using air mattresses lessen the suffering of hurtful and chronic injuries and wounds, which helps the patient recovery quickly.

**Hence, when a person faces problems making a patient bedridden for long periods and becomes unable to change his/her position easily, it is better to use air mattresses for better sleeping, which ensures the rapid recovery of wounds and sores.**



# Level 5

Patient Care, depending on  
patient Condition

## Urinary Catheter Care

### Urinary Catheter

A rubber tube placed inside the patient bladder to evacuate the urine from inside the body.

### Care for Catheter & Urostomy Pouches

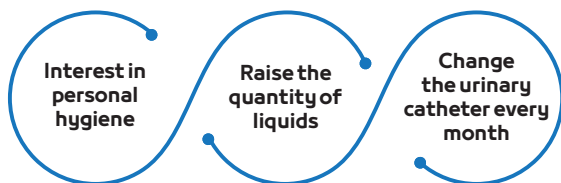
Catheters are made as closed device for urine drainage i.e. the passage from the catheter tip inside the bladder to the urostomy pouch is a closed passage, which reduces the chances for infection.

Some urine collection pouches are large up to 2 liters, and other pouches are small and placed between both legs, and must be replaced every 3 - 5 days.

These pouches should be lower than the bladder, permitting the gravity to discharge the urine and not letting the urine get back to the bladder, since such return augments the risk of infection.

## Preventing Urinary Infections

To prevent infection, follow the following steps:



### How to take the urine sample from catheter?



Collect at least 30 ml of urine and cool the sample until sending to the lab. The sample must be delivered within 2 hours as of collection.

## Colostomy Care



Colostomy is a surgical operation in which a piece of the colon is diverted to an opening in the anterior abdominal wall, whereas this opening will be the main way out for food scraps to outside the body. The opening seems red with a measure of about 2 cm. The patient does not feel pain when touching the opening. It is normal to bleed, when the opening is cleaned or wiped.

### The Types of Colostomy Bag

- **COLOSTOMU BAG: Dedicated bag depending on the opening type, with circular measure.** It is used when there is solid not liquid dirt.
- **Ileostomy bag:** It is used when there is liquid not solid dirt. The bag is opened from below with the possibility of evacuating the same from dirt, with tongs for locking.

### How to Install Colostomy Bag?

To prevent infection, follow the following steps:

<p>Scissors</p>	<p>Soft toilet paper</p>	<p>Small waste bag</p>	
<p>Powder</p>	<p>Normal water</p>	<p>Effective paste for protecting the opening's circular cutaneous area from skin irritation and leakage.</p>	

After collecting the instruments, the base circle is relatively cut prior to pasting the bag into the abdomen wall, after assuring that the circle is wider than the artificial opening by 2 mm. The opening and its cutaneous circle should be cleaned using water only, and then dried well. Neither soap nor sterilizer may be used.

**If the opening's circular cutaneous area is in good condition without any sensitivity, the base can remain adhesive to the abdomen wall for 5 - 7 days. The bag needs to be changed when needed.**

## The Diet Prescribed for Patients with Colostomy Bag



**Eating at a particular time and under quiet conditions**

**Slowly eating and chewing food well**

**Drinking 1.5 - 2 liters of water during day hours**

### Gas-causing foods

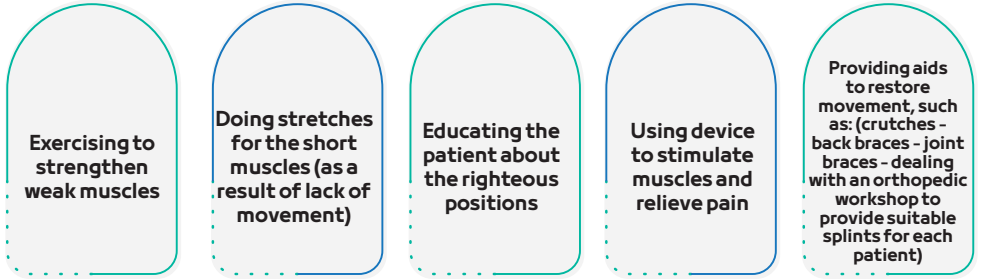
Cabbage, mushrooms, onions, eggs and dried grains. The impact of these foods varies from one person to another. To minimize gases, it is advised to avoid drinking soft beverages and chewing gums.

### In case of constipation

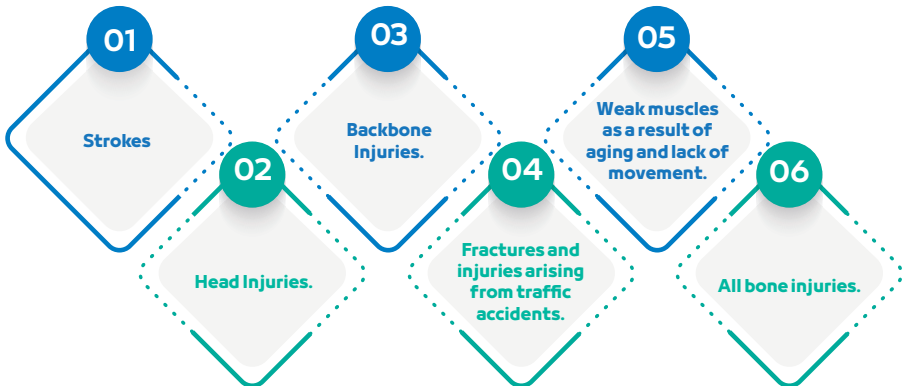
Drinking large quantity of water, and eating vegetables, fruits and foods rich in fibers and milk.

## Physiotherapy

The purpose of physiotherapy for the patients of home healthcare is to help the patient as much as possible to rely on itself and facilitate the everyday activities, through:



## Cases in Need to Physiotherapy Sessions



Physiotherapy relies on the patient and its family's response to the physiotherapist by applying the exercises daily, as per the instructions given, besides the family commitment to attend sessions with the physiotherapist during treatment period.

## Sarcopenia (Age-related Muscle Loss)

With aging, muscles become weaker and lose capability to move easily as accustomed. By reaching the age of 40 or 50, some gradual changes can be noticed, like: muscle contraction and occasional spasm. Although the muscle weakness is a symptom of aging, the regular exercises as well as continuous activity are significantly important for delaying this symptom and reducing its severity.

Researchers could discover the reason behind muscle weakness with aging, whereas the person's leg muscles become smaller with limited capability to bear weights, which might lead to disability and fall.

The study was conducted by scientists from Manchester Metropolitan University in England, and found that at the age of 75 years, the person keeps only 30 - 50% out of nerves that were previously controlling the leg muscles, which means that areas of muscles will lack for nervous feeding, leading to their decay and death.

In addition, scientists found out that new nervous branches may emanate from nerves in muscles to save muscles that became detached from the nervous feeding. Regular exercises are thought to contribute to this process.

**Minimizing physical activity and the lack of exercises lead to weakening and losing muscles once get older, besides premature aging or the so-called "sarcopenia"**

## To prevent this disease

### First

Regularly exercise. It is necessary to target 10,000 steps per day gradually, which is deemed the normal activity.

### Second

Walk daily for 30 minutes

### Third

A person should also stick to a diet of sufficient calories and proteins. It is required to eat not less than 1.2 g of proteins/ kilo gram of the body weight on a daily basis.

### Minimizing physical activity and the lack of exercises lead to weakening and losing muscles once get older, besides premature aging or the so-called "sarcopenia"

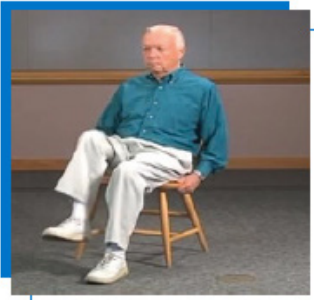
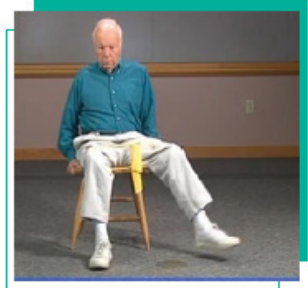
Proteins contribute to strengthening muscles and stimulating their growth, thus physicians recommend eating meat, milk, cheese, egg and fishes of different kinds at higher percentages once get older.

Muscles begin to be lost at the age of thirty, then such loss gets accelerated at the age of fifty, and gets accelerated considerably in the midst of seventy. However, it is possible to slow down the loss of muscles in most cases, and maintain the muscles strength irrespective of the age or the fitness level, to an extent that a study conducted in 1994 proved that some persons are able to acquire muscles at the age of ninety. Strength training is an important factor to fight the muscles loss, whereas the exercises for building up muscles and supporting the relation between nerves and muscles cells help maintaining them. Strength exercises contribute also to improving the body response to proteins. Building up muscles requires choosing weights that are hard to be lifted, or a resistance level that is hard to be completed after about 15 attempts. It is required to feel tired after completing every group. Most importantly, it is required to rest before starting the other group for 3 - 7 minutes.

## Exercises for the protection from muscles loss among the elderly



Strengthen thigh muscles using elastic band - to be repeated 10 times



Strengthen thigh muscles: Lifting both legs and heels using ankle weights - to be repeated 10 times



Strengthen the upper part muscles using elastic band - to be repeated 10 times

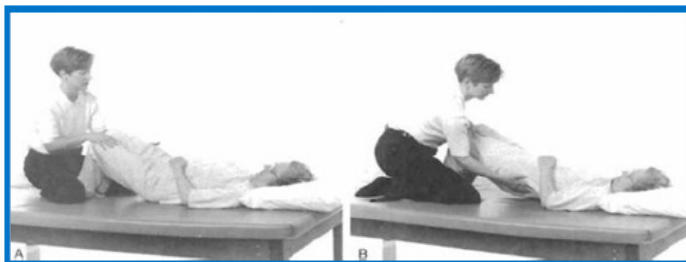
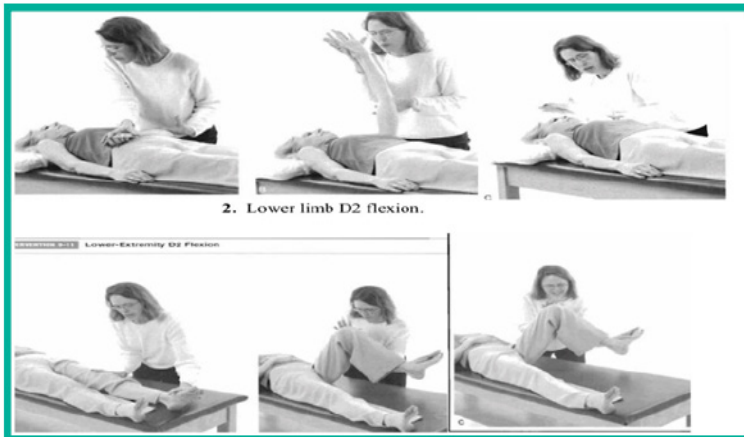




## Physiotherapy for Stroke Patients

A rehabilitation program is developed for the patient of stroke depending on the patient's health condition as well as the extent of damage of body as a whole.

Physiotherapy helps to restore moving and walking. It also helps relying on oneself for entering the bathroom and eating. Moreover, the physiotherapy improves the sleepiness for the stroke patient. The following are exercises for the stroke patients and bedridden:



## Occupational Therapy



The occupational therapy has several fields but it mainly concentrates on the performance of upper extremities of body, particularly the movement of fingers and hands.

**It is considered enabler for the physiotherapy in most cases, like:**

1. Strokes, whereas it works on restoring the movement of hands for performing the everyday activities.
2. Fractures and deformities of upper extremities, whereas the Occupational Therapy is helpful, besides the splints to be prepared by the orthopedic workshop.
3. Prescribe the appropriate exercises for each case, and educate the patient and its family about the righteous positions for each patient.

## Exercises for the Protection from Muscles Loss among the Elderly

01

**Assess the patient and pinpoint the strengths and weaknesses**

02

**The patient is the important and effective element of the treatment plan**

03

**Set short and long-term targets**

04

**Illustrate how the Occupational Therapy works and get him updated about the treatment plan**

05

**Set the priorities of such targets and their significance to the patient**

06

**Consider the patient as a prime responsible for the success of treatment plan.**

## The Importance of Activities in Occupational Therapy

The use of therapeutic activities is principal in the Occupational Therapy. The Occupational Therapist pursues a holistic approach towards persons with special needs; thus designs activities targeting at incorporating the physical, mental and social capabilities to employ them for performing activities.

## Occupational Therapy in Home Healthcare for Children

The role of care provider is to follow up the child case at home and show interest in its daily activities, home environment and appropriate exercises depending on the child case.

## The most common interventions for the Occupational Therapy at the Home Healthcare for Children include:

1. Focusing on the child's growth skills and designing exercises that facilitate such skills.
2. Keeping the right positions for bedridden patients.
3. Making splints and following up the case with the patient.
4. Creating the home training program for the patient and care providers, in line with each case.
5. Carrying out measurements, dispensing medical instruments and following up the case with the patient.

### Splints

#### Indications:

To avoid joints stiffness.

To avoid muscle weaknesses.

To maintain the length of muscles.

#### How to Use:

Put on splint and take it off for 2 hours.

Ensure that the splint is in the correct side (right - left).

Ensure tightening the splint bonds correctly.

#### The splint should be removed immediately, in case of noticing the following:

1. Skin sores; due to the splint application for a long time.
2. The change of skin color to the blue; due to the splint impact on the blood circulation.
3. Swelling and pain at the relevant extremity.

### General Warnings

Avoid washing it with hot water.

Avoid exposure to the sun or a hot surface

Ensure keeping it dry.

When wounds do not heal or aggravate

## Respiratory Care

It is a medical specialization that is specialized in caring for the respiratory patients, inclusive of diagnosing the case, following up on it and making decision on the treatment plan in coordination with the specialist. The person responsible for respiratory care is called respiratory therapist.

### What is the normal level of oxygen in the blood?

The normal level of oxygen in the blood ranges from 75 - 100 mm Hg. If the level of oxygen in the blood is less than 60 mm Hg, that means the oxygen level is low, hence the physician may prescribe supplemental oxygen.

### How to Measure the oxygen level in the blood?

**You can measure the oxygen level using these methods:**

#### ABG Test

The most effective method for monitoring the oxygen level in the blood is ABG Test, which is conducted by taking a blood sample from the wrist artery. This procedure is very accurate, but it might be little painful.

#### Pulse Oximeter

ABG Test is difficult to be applied at home, thus a person may wish conducting an alternate test using a small device called Pulse Oximeter, which is a small clip to be placed on the finger, ears or feet. It measures oxygen indirectly through absorbing the light by person pulse.

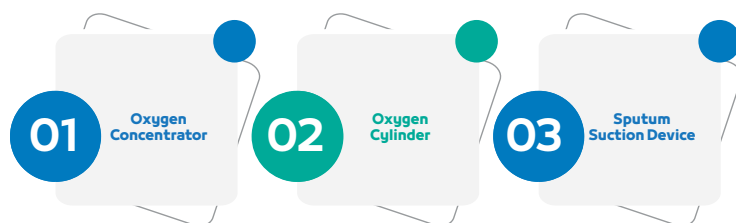
Although the Pulse Oximeter is easier, faster and not painful, it is not accurate as ABG test, since the Pulse Oximeter might be affected by factors such as: dirty fingers, flashing lights, nail polish and the poor blood circulation at extremities.

## Care being Provided by the Respiratory Therapist to the Patient

### 1. Patients using Oxygen

Some patients of chronic pulmonary embolism need to be treated by oxygen for a long period to get an acceptable level of oxygen in the blood.

#### The Most Important Respirators used at Home:



The role of Respiratory Therapist is to help choosing the appropriate tools for each case, educate the patient and his/her family how to use it, monitor its benefit, periodically assess the patient status as well as the used tools, and use the blood oxygen meter.



### 2. Breathing Exercises

Respiratory Therapist educates the patient and its family how to do the breathing exercises depending on patient status, for strengthening the muscles of respiration, getting rid of mucous secretions and suction them when needed.

## Sputum Suction Device

It is an electrical suction unit for withdrawing the fluids of body, mouth, nose and trachea among the adults or children, and it is appropriate for emergencies and care at home. Three different options for operation AC/DC, rechargeable battery, whereas 12-volt battery makes it multi-use suction unit.

### How Does the Automated Suction Device Work?

1. Wash your hands with water and soap, and put on medical gloves.
2. Prepare sterilized water or saline solution in a clean vessel.
3. Turn on the suction device.
4. Connect the tube to the suction device.
5. Let the patient take multiple deep and slow breathes to avoid breath shortness during the suction (if the patient relies on oxygen concentrator, it is required to raise the oxygen ratio prior to suction.)
6. Insert the suction tube inside the mouth or the tracheal tube slowly and calmly.
7. Pull the suction tube slowly in a circular form, and at that time put your thumb on the slot and pull. Remember that pulling takes 10 - 15 seconds.
8. Once the suction tube is pulled totally from the tracheal tube, pull the water whereas no secretions should be left inside the suction tube or on its surface.
9. Repeat the steps until you hear the patient's breathing sound without rattle, and until the patient feels comfortable.
10. Keep the suction tube after cleaning it in a clean area for using it again. The suction tube can be used more than once.
11. Wash your hands.

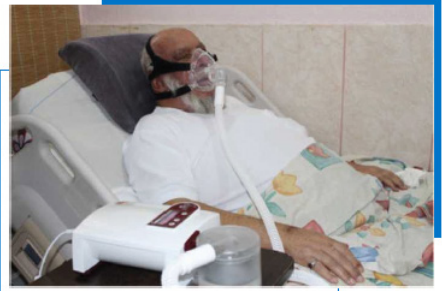
### 3. Care for the Laryngeal Fissure

The Respiratory Therapist educates the patient and its family how to care for the Laryngeal Fissure, deal with emergencies until getting the medical assistance, and supervise that while visiting the patient.



### 4. Using (CPAP - BIPAP)

Explain to the needed patients the indications for using this device, and explain how to act in case of device failure or in emergencies.





## Types of Physiotherapy for Chest

It is a medical specialization that cares for the respiratory patients, inclusive of diagnosing the case, following up on it and making decision on the treatment plan in coordination with the specialist. The person responsible for respiratory care is called Respiratory Therapist.

### 1. Clapping

It is a manual technique by clapping on particular areas of chest, underarms and the possible areas of excretion. The time of each clapping area is 2 minutes, from the bottom to the top as illustrated in the following figure:



### 2. Percussion

It is also a manual technique but the used tool is made of rubber or silicon. It works like clapping, however it is softer and more gentle on the patient body comparing to clapping. The Percussion time at each area is 2 minutes, from the bottom to the top.



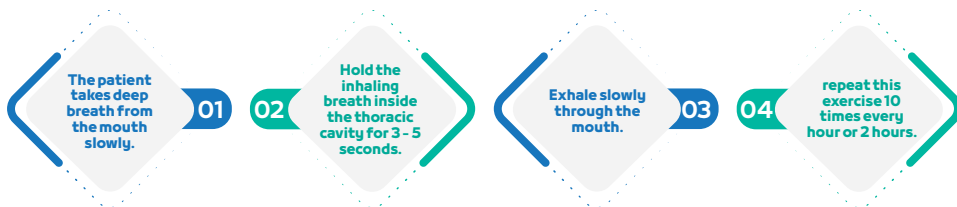
### 3. Vibration Machine

A vibration machine, whose strength can be controlled to help moving the chest secretions. It is preferred to use a flexible medical bed to facilitate changing its position from one side to another for 20 minutes, at least 3 times per day. This treatment style is usually used with patients unable to get rid of chest secretions through cough or the previous exercises. Those patients are often unconscious or semi-conscious.

### 4. Spirometry Incentive

It is a device for exercising chest muscles, improving and restoring the functioning of lung and chest muscles. Moreover, it helps making the lungs more spacious and preventing the atrophy of pectoral muscles and vesicular closures. This device enables us also to identify the extent of air inside the lungs while inhaling.

#### How to Use:



## How to use asthma inhalers?

01



Sitting upright with head held back, then remove the cover and shake the inhaler well before each use.

02



Exhale moderately to get the air out of the chest.

03



Open the mouth and catch the inhaler at a distance of 3 - 5 cm (or two fingers away) from the mouth.

04



Take a medium inhale at the same time you make one press on the inhaler

05



Stop breathing for 5 - 10 seconds as much as you can

06



Breathe slowly thereafter.

07



If the physician prescribes 2 sprays, wait a minute before taking the second spray, and repeat the previous steps.

08



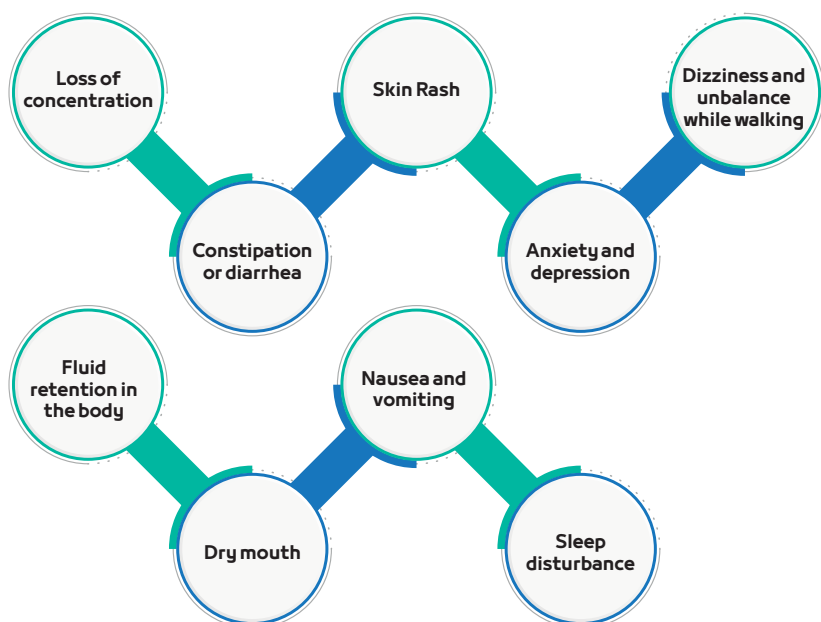
Rinsing after finishing to help reducing the undesired side effects.

## Guidelines for using medication

It is a medical specialization that cares for the respiratory patients, inclusive of diagnosing the case, following up on it and making decision on the treatment plan in coordination with the specialist. The person responsible for respiratory care is called Respiratory Therapist.

1. Not to increase or decrease the dose except after referring to the physician.
2. Continue using the medication even if the symptoms disappear, as per the physician guidelines.
3. Give the patient a sufficient quantity of water when taking some medications.
4. Never break some tablets or capsules except after referring to the physician, because some medications are covered with layer to protect the course of throat and stomach.
5. Get rid of expired medications safely.
6. Keep the medications at a cool and dry area, away from the reach of children.

**There are some side effects resulting from the use of some medications. Once a side effect is noted, the patient should discuss the medical team about any of such symptoms including:**



## Drug Interaction

Medications help patients to have a better health, however when taking more than a medication, when mixing medications with a particular food or beverage, or when taking medications without prescription, that may make the patient subject to the Drug interaction, whereas a medication may interact with other medication, food, beverage or even a condition that the patient suffers from. Although most Drug interactions are not dangerous, some of them may have serious impact, whereas Drug Interaction might lead to increasing or decreasing the medication effectiveness or cause non-desirous side effects. Worth mentioning here that not all Drug interactions are bad, since some medications are absorbed better if taken along with food, or its ratio in the blood might raise if taken with other medications, taking into account the impact on certain metabolic enzymes.

### Possibility of Drug Interaction

The dangerous and life-threatening Drug interactions are not common but still off course a cause of concern, hence check is required each time a new medication is added to the patient. Stopping a medication may occasionally affect the level of other medications in the blood. There are factors indicating the possibility of Drug interaction and the extent of its seriousness, including the total number and types of medications a patient takes, patient age, liver and kidney functions, the diet, the general health condition and the nature of metabolic enzymes in each body.

### Types of Drug Interaction

01

The interaction between two medications or more is the most common type of Drug interactions. The more the medications patient takes, such a type of Drug interaction becomes much possible, which may reduce the medication effectiveness, increase the side effects or raise its level in the blood, thus the possibility of poisoning is increased. For instance, when taking an anti-allergic causing sleepiness simultaneously with a hypnotic drug, that leads to heightening the feeling of sleepiness and slowing the reactions.

02

The interaction of drug with food or beverage is often attributed to the fact that drugs taken via mouth are absorbed via the wall of stomach or small intestine, thus the existence of food in the digestive system might reduce the absorption of drug. To avoid such a type of drug interaction, the patient should take the medication one hour before eating or two hours after eating. Worth mentioning that the interaction between drug and nutritional supplements is deemed an example of drug interaction with food, like drug interaction with medicinal herbs and those products containing vitamins, minerals or Amino acids.

## Avoiding the Drug Interaction

**To avoid drug interaction, the following advices should be followed:**

1. Tell the physician or pharmacist about the prescribed medications or any drugs you take without prescription and any nutritional supplements or herbal products.
2. Tell the physician or pharmacist about any condition that you suffer from, such as: high blood pressure, diabetes, sores, glaucoma or prostate enlargement, whereas such patients are more susceptible to drug interaction.
3. Be aware about how to use the medication, how to take it, the foods or beverages that should be avoided when taking the drug, the integrity of taking such a drug with another one, the possibilities of drug interaction, the signs of this interaction - if occurred - and the procedure to be followed in case of drug interaction.
4. Adhere to taking the drug according to the physician guidelines.
5. Read the information and guidelines attached to the drug since they incorporate important information about potential drug interactions.
6. Tell the physician about any disturbing or continuous side effects.

## Table Helping the Patient Escort to Know and Organize Medications Doses

Drug Name	Dose	Timings of Drug Use	Color, Size and Shape	The Beginning of Drug Dispensing	Indications	Attending Physician	Notes

# Level 6

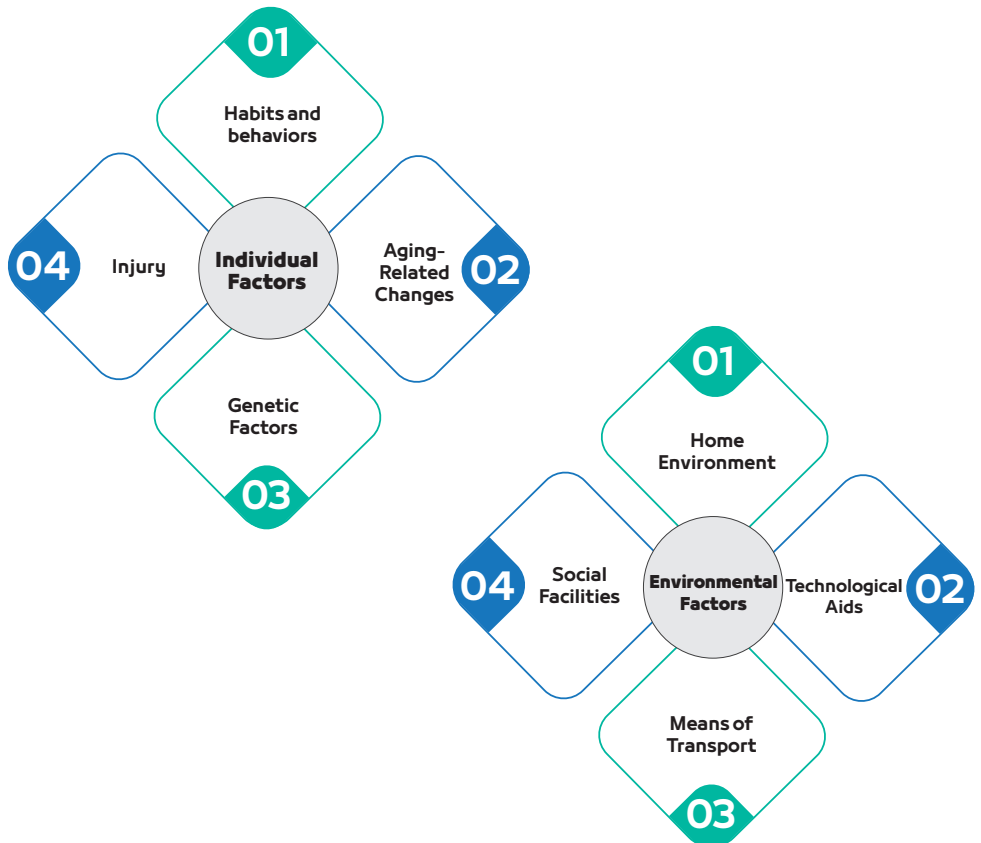
Dealing with Dementia and  
Alzheimer's



## Definition of Aging

Aging is a biological fact that occurs in a manner beyond the human control. Aging definition differs from a community to another. In the developed countries, age is an indicator of aging, whereas 60 - 65 years is the age of retirement and the beginning of aging. In other countries, age is not considered for identifying a person aging. There are other factors determining the retirement age, like: Capability to perform tasks assigned thereto. Thus, aging begins when a person becomes unable to effectively engage in the community. Gorman 2000

## Factors Affecting the Health of the Elderly



## Common Health Problems among the Elderly

### First Physical Health Problems

1. Chronic Diseases, such as: Diabetes, high blood pressure, urinary incontinence, osteoporosis, vision impairment, hearing impairment and cancer.
2. Heart Diseases.
3. Accidents of fall and fractures.
4. Diseases pertaining to the Musculoskeletal System, such as: Arthritis, loss of balance, walking disorder, lack or difficulty of movement.
5. Malnutrition, emaciation or obesity.
6. Respiratory System Diseases, such as: flu & lungs Inflammation  
Nervous System Diseases, such as: Stroke and tremor (Parkinson's).
7. Digestive System Problems, such as: weak tasting, stomach and intestines' decreased capability to digest and absorb food, and constipation.
8. Dryness.
9. Mouth and teeth problems, like: Teeth fall.

### Second Mental & Psychological Problems

1. Mental & Psychological Diseases, such as: Dementia, Alzheimer's, Depression & Delirium
2. Sleep Disorder.

### Third Social Problems

1. Social Isolation.
2. Decreased level of functioning.

## Healthy Aging

**Ability to carry out the main daily activities, like:** Eating, wearing, showering, walking and using water closets without others' assistance for longer period, even if using aids for walking and moving, such as: Stick and walker for the elderly.

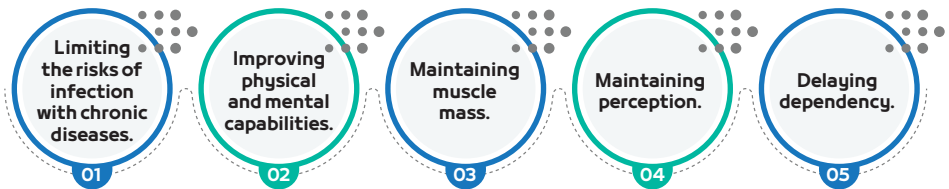
### Significance of Healthy Aging

1. Prolonging the average healthy active age.
2. Maintaining the functioning during the aging stage, and continuing the performance of everyday activities independently.
3. Reducing early death rate.
4. Raising the morale and feeling healthy among the elderly.
5. Raising the number of persons having positive life quality and engaging in social and cultural activities.
6. Reducing the costs of medical treatment and care services.

### The Way to Healthy Aging

**Preparing for healthy aging begins from an early age, whereas there are certain factors helping a person to maintain health when gets older, including:**

1. Maintaining healthy behaviors such as: balanced diet, regular physical activity, and quitting smoking, which help:



2. Preventing chronic diseases throughout the life inhibits the accumulation of negative consequences of the risk factors, which leads to reducing the risk of infection with diabetes and high blood pressure, and reducing the risks of complications, most importantly physical impairment, stroke and cardiovascular diseases.
3. Conducting periodical medical check-ups.
4. Controlling chronic diseases.
5. Get enough sleep, whereas many elderly people complain from sleep problems, such as: insomnia, sleepiness during day hours, and frequent awakenings during night.

**The following are guidelines for healthy sleeping:**



**Misconceptions about Health and Aging**

**01**

Reaching a certain age limits one capability to practice the accustomed activities, resulting in suffering from weakness, and becomes a burden on his/her family.  
 In fact, not all elderly people have the same health condition, as a person who retains strength should be allowed to practice the activities that he/she could undertake, and exploit his/her strength for his/her own benefit.

**02**

Memory loss is part of aging stages.  
 Memory loss is not inevitable outcome of aging, whereas the elderly people can train their brain and learn everything new at any age.

**For better life to the elderly and for preventing the pathological complications or the aggravation of health condition, the following precautions should be taken into account for maintaining the health of the elderly:**

### **Early Discovery of Diseases**

Elderly people usually suffer from some health problems, thus the discovery and treatment of such health problems at an early stage is important for preventing complications, whereas the elderly infection with chronic diseases might cause a kind of social isolation, thus any symptoms must be early discovered and treated.

Such symptoms include (Delirium, dizziness, sudden loss of consciousness, fall, movement problems, change to appetite and weight, and aconuresis).

If an old person develops several diseases, it is required to develop all-inclusive plan for all such problems, so that no aspect might overwhelm the other.

### **Therapeutic Intervention for Diseases of the Elderly**

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If the old person develops several diseases, it is required to develop all-inclusive plan for all such problems, so that no aspect might overwhelm the other.

## Mental Health and the Elderly

### Risk Factors Associated with Psychological Health among the Elderly

There are several social, psychological and biological factors determining the level of one's psychological health at any point, and besides the common typical pressures of life, many elderly persons become incapable of pursuing life independently; due to the limited movement, chronic pain, weakness, or psychological or physical problems, and accordingly they are in need to long-term care. Additionally, the elderly are more susceptible to suffering from incidents such as: feelings of grief, mourning or the lower social and economic status in association with the retirement or disability. All such factors could lead to isolation, loss of independence, feelings of loneliness and psychological distress among the elderly.

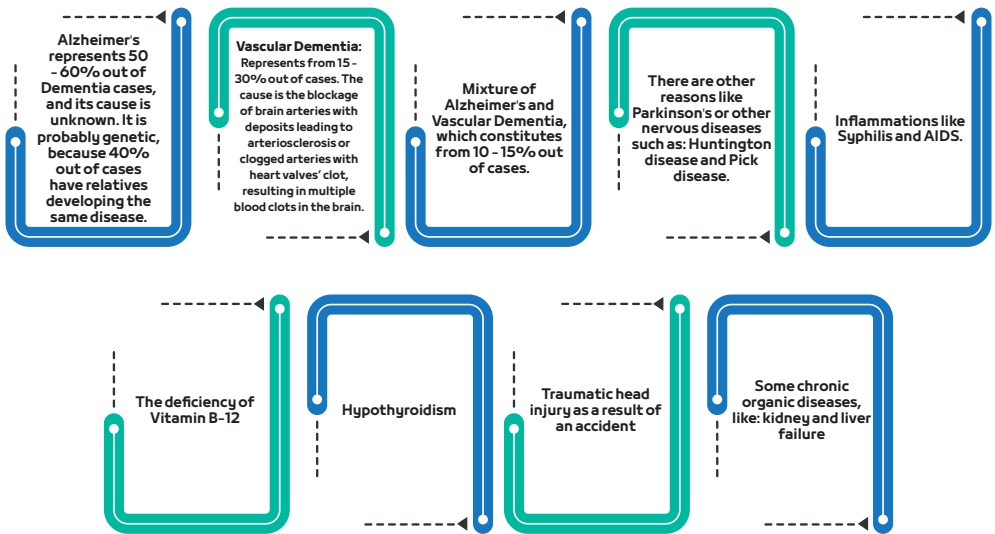
Psychological health affects the physical health and vice versa; for instance the elderly suffering from physical problems such as heart diseases have higher rates of depression comparing to those in good physical health. On the other hand, not treating the depression for an old person suffering from a heart disease can negatively affect the physical health condition.

### Therapeutic Intervention for Diseases of the Elderly

The early treatment of a disease makes it easy to control it and avoid complications. Such problems include, but not limited to:  
(Urinary incontinence - heart failure - Dementia - Alzheimer - cancer of different kinds - joint stiffness - Osteoporosis - diabetes complications - fall - fractures - bedsores - prostate cancer - stroke - depression - vision and hearing impairment - underactive thyroid - deficiency of iron in the blood - deficiency of Vitamin B-12).

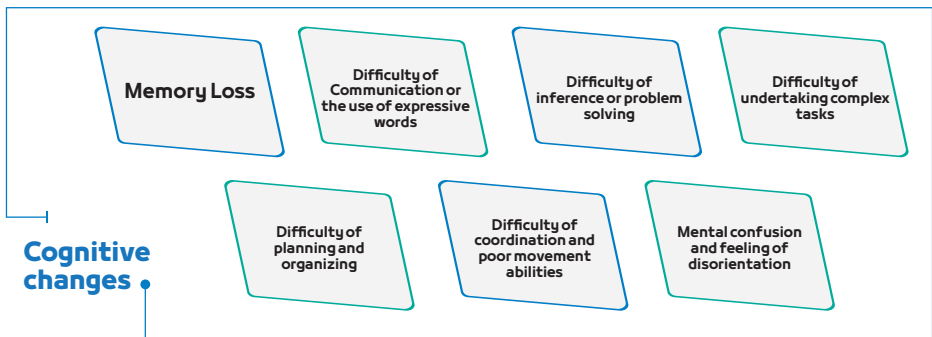
## Dementia

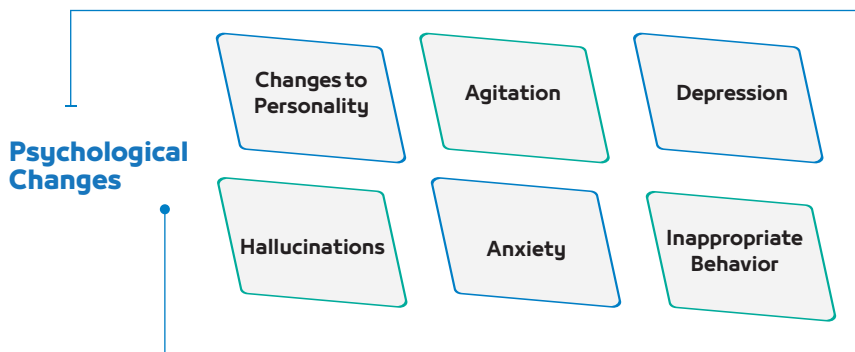
Dementia results from imbalance in the chemistry of brain or in the cells of brain to an extent leading to increased disorder of the brain's cognitive functions, such as: Perception, memory, thinking, concentration, attention and judgment. Dementia is also accompanied by personality and behavior-related disorders.



## Symptoms

Symptoms of Dementia differ depending on the reason, however there are common signs and symptoms as follows:





## Risk Factors

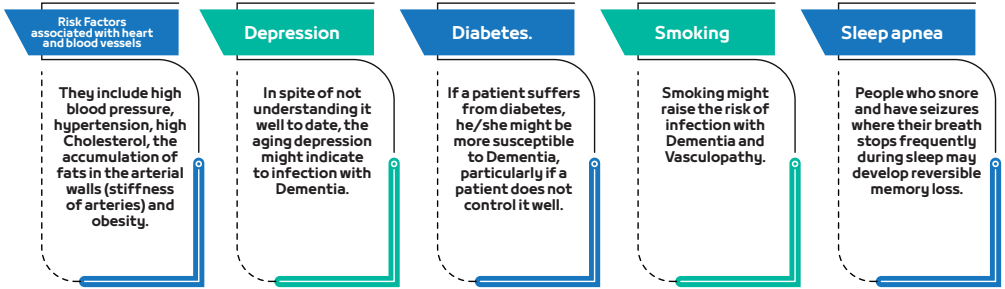
There are several factors eventually leading to Dementia. Some factors like age cannot be changed. But other factors can be handled to limit the infection risks.

### Risk Factors that cannot be changed:

Age	Family History	Down syndrome	Mild Cognitive Impairment (MCI)
<p>Risks are increased when one gets older, especially following the age of 65 years. Nevertheless, Dementia is not a natural part of aging, and could affect youth.</p>	<p>Family history of Dementia raises the risk of infection. Nevertheless, many persons with family history never develop Dementia. On the other hand, many persons with no family history develop Dementia. There are available tests to determine whether one has particular genetic mutations.</p>	<p>In middle age, many people with Down syndrome develop early Alzheimers.</p>	<p>That involves memory difficulties but without missing the daily tasks. That makes persons prone to higher risk of infection with Dementia.</p>

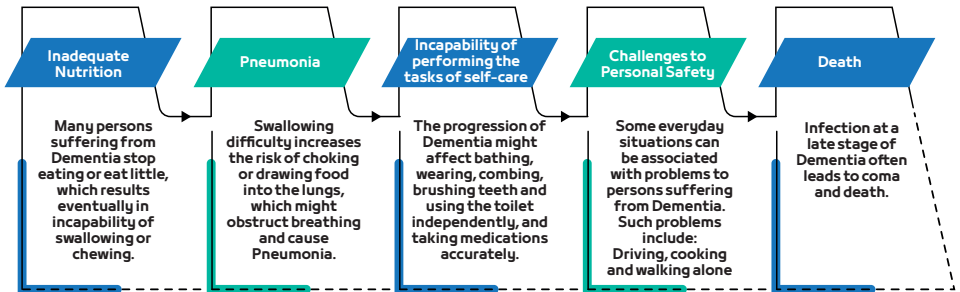


## Risk Factors that can be changed



## Complications

Dementia may affect many organs of the body, and their functionality.  
Dementia may lead to:



## Alzheimer's

It is a developing brain disease that destroys the cells of brain, which leads to problems related to memory, thinking and behavior. Alzheimer's severely affects the patient work, life and social interaction. The patient case is aggravated by the time and often leads to death. Alzheimer's is classified today as being the sixth main cause of death globally.

There is no final treatment for Alzheimer's at the time being, but the symptoms are treated, and the patients are supported to make their life better and help them coping with the disease.

### Stages of Alzheimer's Disease

The infection progresses gradually, and the patient goes through five pathological stages, as follows:

#### Stage 1: The Early Stage of Disease:

The symptoms are not shown at this stage, and the person may be unaware of being Alzheimer's patient except through the accurate and developed checks. This stage may last for years prior to the discovery of disease.

#### Stage 2: Mild cognitive impairment (MCI)

Persons at this stage experience mild changes to the memory and thinking capability, however person's life and relationships are not affected, but person's capability of making sound decisions might be affected and could be more difficult.

Such symptoms are similar to those of other diseases, thus a person may need more accurate checks for identifying the cause.

#### Stage 3: Simple Dementia

Alzheimer's is often diagnosed at the stage of simple Dementia, when it becomes clear to the family and physicians that the person faces major difficulty in association with memorizing and thinking.

### Noted symptoms during this period:

1. The loss of memory for recent events: The person may face difficulty with remembering the new information and events.
2. Difficulty with solving problems, performing complex tasks and making sound decisions and judgments.
3. Changes to personality: The person may become more quiet or introvert, particularly in the midst of socially difficult situations or unusual rage. The person may show little interest in completing tasks.
4. Difficulty with organizing and expressing thoughts like finding the appropriate words to describe things or express ideas clearly.

### Stage 4: Moderate Dementia

**Involves more disorders associated with memory and poor cognitive functionality. At this stage, the patient needs someone to help him/he for facilitating every day and principal activities. This Stage is featured as follows:**

1. Incapability of remembering significant details, such as: The current address or number... etc.
2. The patient gets confused towards dates and days.
3. The patient faces difficulties with solving math problems such as subtraction and alike.
4. The patient needs assistance in choosing appropriate clothes for each season or event.
5. The patient usually retrieves the basic information about himself/herself, name, children or spouse.

### Stage 5: Severe Dementia

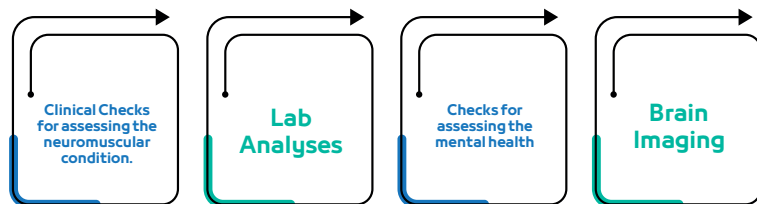
**Very severe cognitive deterioration, whereas the patient becomes incapable of:**

1. Communicating and talking with the community members.
2. Personal care including eating, taking off clothes and using the water closet.
3. Controlling movement.
4. Swallowing and controlling the bladder and intestines.

## Diagnosis

The physician usually collects information from the patient or patient's family on the medical history.

**Associated Checks Include:**



Researches work on developing new diagnostic tools to help diagnosing Alzheimer's at very early stages, prior to the emergence of symptoms.

## Treatment

There is no final treatment for Alzheimer's at the time being, however physicians describe medications to mitigate symptoms like insomnia, anxiety, agitation and depression.

## Coping with Alzheimer's

Adapting to the situation and needs of person infected with Alzheimer's is an important part of any treatment plan.

**Some steps can be followed to help person coping with Alzheimer's:**

1. Keeping keys, wallets, mobile phones and other precious items at the same place of house, to avoid being forgotten.
2. Arranging the schedules of drugs, and it is preferred to be once daily or to set alarm.
3. Using GPS programs on the mobile phone to facilitate finding the person in case of loss and forgetting directions.
4. Keeping the phone numbers of family or relatives at an accessible area, to help you in case of forgetting.
5. Using a calendar or white board at home to follow up daily schedules.
6. Maintaining accommodation in a good condition and minimizing chaos as much as possible.
7. The existence of family and friends around the patient is very important.
8. Establishing a regular routine to limit confusion and help communication.

## Skills for Dealing with some Problems Facing the Escorts of Dementia and Alzheimer's Patients

### Confusion or Wandering

**Wandering is a common symptom affecting the patients of Dementia, and is attributed to many factors such as: the memory loss, boring, nervousness or the need to go to a particular space like the water closet.**

**How to manage this case:**

1. Securing the house, so that the patient cannot get out to the street alone.
2. Writing down the patient's identification information such as the name and telephone number in a bracelet around his/her wrist.
3. Filling up the patient's free time with crafts or preferred hobbies.

### Uncontrolled Urination and Defecation

That usually occurs at the advanced stages of Dementia.

**How to manage this case:**

1. Scheduling the appointments of eating and drinking.
2. Following a daily routine for using the water closet.
3. Using signals and aiding boards to help the patient reaching the water closet at home.
4. Patient clothes must be easy to be taken off.
5. Using diapers at the advanced stages of the disease.

## Excess Nervousness

Nervousness of Dementia patient may result from incapability of communicating or due to certain pressure like feeling painful, depressed or incapable of understanding others' deeds.

### How to manage this case:

1. Working on discovering the reason behind the patient nervousness and attempting to avoid it in the future.
2. Reducing the noise level around the Dementia patient.
3. Removing dangerous items from the reach of the patient.
4. Doing physical exercises, which might help reducing the extent of nervousness.
5. Avoiding the confrontation of Dementia patient in cases of Excess Nervousness.
6. Attempting to draw the patient attention with another activity giving tranquility.
7. Reassuring the patient with a calm talk or by touching patient's hand.

## Repeating words and questions

Dementia patients usually repeat some words, sentences, questions and sometimes some activities many times throughout the day, causing worry and disturbance among care providers.

### How to manage this case:

1. Avoiding telling the patient that he is repeating words.
2. Writing down the answers to such repeated questions.

## Attention Deficit Hyperactivity Disorder (ADHD)

Mental disorder affecting millions of children. This disorder makes the child unable to follow the direct commands, unable to control acts or finds it difficult to pay attention to rules, which makes the child randomly preoccupied with stuff around. Thus, those children are thought to be messy and distracted, and lack for concentration, hence they are difficult to be dealt with.

Many parents especially mothers tend to believe that they cause this disorder to their child through their wrong decisions or breeding, nevertheless studies and researches show that the causes are not pedagogical but medical.

### Difficulties facing children with ADHD in their life include:

- Learning difficulties up to complete failure.
- Repeated injuries more than peers.
- Difficulties related to social relationships.
- Behavioral unrest and some psychological problems.

### It is possible to overcome these Difficulties through considering the following:

Knowing how to deal with the child appropriately, from the treating team, training and applying such appropriate methods. Home environment should be filled with love and free from family problems as much as possible.

Choosing the suitable school for the child and informing the management and teachers about the right way to deal with the child.

Following the directions of medical team carefully and not deviating from their instructions.

Attending according to the child's time schedule without negligence.

Training the child to acquire social skills.

Reporting the treating team about changes made to the child.

Registering the child at centers and organizations specialized in this disorder.

### How to deal with a patient child:

Patience and avoiding nervousness on the part of everyone at home, especially care giver.

Commendation and praise. Not focusing on mistakes.

Close monitoring.

Permanent support and continuous encouragement.

Assuring that the child fully understands and absorbs what is needed from it.

Applying the practical exercises interestingly.



## Autism

It is a neurodevelopmental disorder, causing difficulties related to speaking, learning, communicating and coexisting with others. That does not mean the child's intelligence standard is low, whereas the child with Autism can have excellent skills rather than other peers, however it is required to pay attention towards the pharmacological and behavioral therapy from the early childhood.

You need to know that each child with Autism is in need to different treatment rather than other children with the same disorder.

### Some of Behaviors of Children with Autism

Dissatisfaction with any change to routine even if very simple or when moving to a new place.

Avoiding looking at eyes and listening to others' talk.

Not participating in activities.

Responding unusually when others express anger, annoyance or affection, and the slow reaction when calling by name.

Finding discussions difficult.

Speaking about his/her preferred subject, without giving others any chance to respond.

Repeating words that he/she hears.

Facial expressions are not appropriate to the conversation context.

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- Repeating words that he hears.
- Facial expressions are not appropriate to the conversation context.

## How to Lessen the Severity of Behaviors of Autism Patient:

### Caring

The child with Autism is in need to greater interest rather than other children, hence it is required to pay attention towards the pharmacological and behavioral therapy enabling the child to cope with this disorder.

### Cooperation

The cooperation among all family members to provide the child with due care for helping him/her to develop and improve while facing everyday-life difficulties.

### Training

The child with this disorder can cope and learn needed skills through the continuous training for linguistic, behavioral and social skills.

### Learning

The selection of suitable school, coordination and continuous follow-up with the school are necessary to enable learning and to help the child acquiring social skills along with peers.

## Healthy Social Environment for Taking Care of Patient Child Generally

Following the treatment plan as well as the following procedures is very important to help the sick child to be improved. The success of these factors is contingent upon tasks to be undertaken by the family members for fulfilling all goals of treatment plan. Further, the home environment surrounding the sick child is considered its incubator during the period of recovery and follow-up, whereas the improved mood of child is a key to healing.

### The referred roles include most importantly:

#### Patience

Being patient, believing in God's justice and destiny and not showing dissatisfaction with the child's health condition support the child psychologically and make him/her feel a member of family not just a burden on family. In this manner, the child becomes well-prepared to get better.

#### Social Environment

Cooperation among the family members for supporting the sick child makes him/her feel reassured and safe emotionally and socially. Feeling safe is important for everyone particularly children. The loss of safety feeling affects the health of a normal person negatively, how about a sick child!

#### Cooperation with the Treating Team

The treating team always monitors the sick child's status continually, depending on its health condition. Attending at the scheduled appointments and keeping the treating team updated help the team to determine the patient's health condition and develop the appropriate treatment plan.

**Following the treating team's guidelines by the care provider and family helps improving the patient's health condition**

# Palliative Care

## Palliative Care

Palliative Care is all-inclusive care concerned with physical, psychological, spiritual and social aspects for patient with advanced condition of cancer, and includes also severe heart failure, respiratory failure and AIDS. The philosophy of Palliative Care for hopeless cases lies in focusing on the most significant symptoms from which the patient complains, like: pain, stress, nausea, vomiting, anxiety, depression, breathing difficulty, constipation, mouth dryness, poor appetite, itching... etc. We will focus on the problem of pain, being the most important symptoms of cases requiring Palliative Care.

### Pain

**Pain in most cases is attributed to the disease impact on the body tissues and various organs, and could occur occasionally as a result of some therapeutic procedures and chemical drugs.**

**The patient himself/herself is the one that can determine the degree of pain, based on a sliding scale from 0 - 10, whereas zero means no pain, and 10 means very severe pain.**

**Pain killers prescribed by physicians to relieve such pains are classified as follows:**

1. Simple analgesic such as paracetamol (Panadol - Fevadol).
2. Medium analgesic containing weak opioids like: Codeine, tramadol.
3. Strong analgesic containing strong opioids like: morphine, methadone.

opioids are deemed very useful drugs for relieving some kinds of pain if used well under the supervision of a specialist. It is necessary to tell the patient and his/her family that the patient may pursue taking opioids for years under the medical supervision, possibly with high doses, without any effect on the usual life of patient and with the minimal problems. On the other hand, a healthy person may take a simple dose of opioids out of curiosity and may lose his/her life due to that ominous dose. The patients to whom, opioids are prescribed should keep them. Although the side effects of opioids are limited if used under the medical supervision, we refer to some side effects like:

1. Drowsiness and lethargy, which occur within the first days of treatment beginning, then vanish. Nausea and vomiting at the beginning of treatment also and then vanish using anti-nausea prescribed by the physician.
2. Constipation, whereas some laxatives can be prescribed to avoid this problem.
3. Mouth dryness, thus the patient is advised to rinse with water and salt every 2 hours.
4. Other side effects occasionally occur including itching, trembling, involuntary contractions of muscles, urinary retention, weak concentration, hallucination and respiratory inhibition. If any of those symptoms are noticed, the physician must be informed to deal with each symptom as duly.

# Patient Purification and Prayers

## Patient Purification and Prayers

### Purification

The patient must purify with water and perform ablution. If the patient cannot purify with water due to disability or fear of condition aggravation or recovery delay, he/she can perform tayammum (ritual purification).

### How to Perform Tayammum

1. Patient or patient escort beats a clean land once to wipe face then palms together. If the patient cannot perform Tayammum on its own, other person may perform Tayammum for him/her by beating clean land with hand and wipe the patient face and palms, as the case if the patient cannot perform ablution by itself, then he/she lets another one perform ablution for him/her.
2. The patient may perform Tayammum from the wall or from any other clean item that has dust.
3. If the patient performs Tayammum for prayer and remains pure until the time of the next prayer, he/she may pray based on the first Tayammum and does not have to repeat Tayammum.

The patient must purify himself/itself from dirt, and if he/she cannot, it is possible to pray on his/her status and his/her prayer remains righteous without need to repetition.

The patient must pray on a pure item, and if he/she cannot, it is possible to pray on its current status and his/her prayer remains righteous without need to repetition.

### Prayer

1. The patient must pray on something clean.
2. The patient must pray on time as possible, and may not delay praying. If the patient finds it is difficult to perform all prayers on time, he/she may combine the Zhuhr and 'Asr prayers, and between the Maghrib and Ishā' prayers, whether in advance or on a delayed basis.
3. The patient must perform the obligatory prayer on a standing position even if bent over, relying on a wall, pillar or a stick, nevertheless if the patient is unable to pray standing, he can pray on a sitting position.
4. If the patient is unable to pray on a sitting position, he/she can pray on his/her side, heading towards the Qiblah.



# How to Evaluate Your Patient Condition at Home

## How to Evaluate Your Patient Condition at Home

**This evaluation aims at helping you to determine the general condition of the patient. That does not mean you are no longer in need to the assistance of medical team:**

1. Notice the patient generally in terms of how patient sits down or lie down, and look at patient's facial expressions, which helps you to know to which extent patient is comfortable, to which extent patient mood becomes better, and whether he/she suffers from any pain.
2. Test your patient consciousness by asking him/her about the place, time and surrounding persons. Notice any signs of paleness on the face, hands or eyelids, which might indicate malnutrition, or the deficiency of hemoglobin level in the blood.
3. Notice the patient cleanliness and whether there are unpleasant odors emitting from patient body.
4. Notice the patient's hair combing, nail trimming and cloth cleanliness.
5. Ask the patient about any complaint, or whether he needs assistance or needs something to be provided.
6. If you are trained to measure temperature, blood pressure, breathing and pulse, register them in a table, and it is necessary to be aware of the normal measures.
7. Check the skin and entire body to assure the lack of dryness, redness, cracks or sores, and if any of such signs are noticed, it is required to call the medical team for taking the necessary actions.
8. Check the pipes connected to your patient and assure they are compliant with the medical team's advice.
9. Verify of the validation of used oxygen and check the procedures of safety and security in the patient room like good lighting, ventilation as well as the lack of movement obstacles in the room.
- 10.

# Self-Evaluation of Performance of the Escort at Home

## Self-Evaluation of Performance of the Escort at Home

Sr.	Pivot	Yes	No
01	Did the patient face sleeping difficulty last night?		
02	Did the patient take the medication yesterday on time?		
03	Was the necessary cleanliness carried out, and were the patient clothes changed yesterday?		
04	Were the patient's bedsheets changed?		
05	Was the patient reminded of prayer appointments (for conscious cases)?		
06	Was the necessary food served to the patient, according to the physician instructions?		
07	Was the patient moved continually throughout the day? (Every 2 hours)		
08	Was the patient body humidified using moisture creams?		
09	Was the patient talked to and amused?		
10	Did the patient request something but it was not provided?		

## Conclusion

**This guide is directed to the patient escorts, who are main pillar in the system of home healthcare, out of belief in their significant role for improving the quality of patient life and raising health awareness in the family and community. We hope this guide is easy and simple reference in terms of awareness, rehabilitation and prevention to the escorts of patients at homes.**

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