



SPECIAL NEEDS

SENIORS

WHO ARE DENTAL PATIENTS WITH SPECIAL NEEDS?

- Dental patients with special needs often – but not always – have higher rates of poor oral hygiene.
- As a result, they also have a higher incidence of gum diseases and cavities than people in the general population. Those considered dental patients with special needs represent individuals with a broad range of conditions that do not necessarily relate to oral health.

TYPES:

- **Individuals with mobility issues.**
 - Patients with mobility issues may need assistance in and out of the dental chair, as well as to and from the dental office.
- **Mentally disabled individuals.**
 - Those who are mentally challenged or intellectually disabled may need to be accompanied to dental appointments by a caregiver, since they may not be able to comprehend dental hygiene requirements or homecare instructions.
- **Immunocompromised people and those with complex medical problems.**
 - People with cardiovascular disease, diabetes, bleeding disorders or other systemic conditions need to have their conditions – as well as their medications – taken into account before receiving dental treatments. Dentists will likely need to collaborate with their physicians.
- **Aging and elderly people.**
 - These individuals may need more frequent dental visits to monitor tooth wear, pain and the effects of medications that they cannot detect themselves due to decreased pain sensations. These individuals are often sensitive to glare and have a hard time hearing dental information or instructions if background music is loud. Therefore, blinds or shades may need to be drawn and the music lowered during their appointments to enhance their comfort.

TYPES CONTINUED

- **People with a mental illness.**
 - An individual with a mental illness may have difficulty following proper dental hygiene regimens, obtaining dental care and countering the effects of medications that affect oral health (such as antidepressants that cause dry mouth). These individuals may need shorter appointments that are scheduled when they are in a balanced state, as well as be accompanied by a caregiver or case manager.
- **Children with behavioral or emotional conditions.**
 - Children with autism, for example, are averse to changes of any kind. These patients with special needs would likely need to be seen by the same hygienist – wearing the same outfit, working in the same dental office – whenever they visit the dentist to receive care. Or, children who need medication for ADHD may need to be given their medications at such a time that they are able to sit through a dental appointment.

PLEASE KEEP IN MIND

- An efficient and systematic approach to the examination and treatment so that appointments are short, when necessary
- Knowledge of the medical, physical, mental or behavioral condition in order to better manage the appointment and oral health needs
- More assistants during examinations and treatment procedures to better control and monitor the patient and the appointment
- Sedation dentistry to promote patient comfort if longer appointments are required
- Flexible appointment scheduling
- Caregiver or case manager involvement in treatment planning, providing instructions and information, and while performing dental procedures

DENTURES

- **Partial Dentures** may be supported by retainer clasps around the natural teeth or by a combination of natural teeth and oral tissues. Partial dentures are used for clients who have some teeth in the mouth.
- **Complete or Full Dentures** replace the entire arch. If the client has **NO** teeth in an arch.
- Remember to tell the client to remove the dentures at night!

DENTURE CLEANING SOLUTIONS

- **Alkaline Hypochlorite:** bactericidal. Fungicidal, bleaches stain and may inhibit calculus.
 - DO NOT use on metal
- **Alkaline Peroxide:** some antibacterial effect, removes stain.
- Or – **make it yourself solution:**
 - 1 tablespoon of sodium hypochlorite (bleach)
 - 1 teaspoon of calgon (or mild soap)
 - 4 ounces of water
 - Rinse

DENTURE STOMATITIS

- Dentures are one of the common oral prosthetics used by seniors to replace missing teeth. Although it assists significantly with chewing and normal speech, dentures can also cause a host of problems in long term users.
- One of these problems is a condition known as **denture stomatitis**. The medical term stomatitis means inflammation of the mouth. There are many different causes of stomatitis but denture stomatitis is irritation and inflammation of the tissue of the mouth cavity due to denture use.
- Understandably it is more common in the elderly and may affect as many as half of all users of complete dentures.

CAUSES

- There are several possible reasons why denture stomatitis is so common among complete denture users. It is important to remember that it also affects wearers of partial dentures but the incidence is significantly lower.
- It is known that prolonged use of dentures and particularly nighttime use causes irritation of the soft inner lining of the mouth known as the oral mucosa. **This is not uncommon with any prosthetic device that is used for very long hours and especially if it is not removed at night where possible.**
- Repeated trauma to the oral mucosa by the dentures causes alterations in the structure of the tissue over time. Constant contact also may lead to allergic reactions due to the resins or materials used in the denture. Allergic responses trigger inflammation within the oral mucosa.
- **Fungal infections** have been recently discovered as one of the main causes of denture stomatitis. It is specifically a type of fungus known as a yeast that has been implicated. **The Candida species, and more commonly Candida albicans, the same yeast that causes thrush is the major cause of denture stomatitis.**

SYMPTOMS

- A large number of cases of denture stomatitis do not present with any symptoms (asymptomatic) and a person may not be aware of this problem until a doctor notices signs of it. **Signs and symptoms denture stomatitis includes :**
- Red and swollen tissue in the mouth, especially the soft palate (this is the main sign)
- Slight bleeding from the affected site.
- Yellow to white spots at the affected area indicating a fungal infection.
- Burning sensation at the affected site.
- Strange sensation in the mouth similar to severe mouth dryness.
- Abnormal bad taste sensations.
- Although redness and swelling of the affected area is a common symptom, in most cases there is no accompanying tenderness, burning or pain reported by the person. Most of the other symptoms as well are not experienced by every person with denture stomatitis.

TREATMENT

- The first approach to treatment is to ensure the proper fit of the denture, appropriate denture use as indicated by a dental professional and proper cleaning of the dentures.
- A person with HIV/AIDS, hypothyroidism, uncontrolled diabetes mellitus and malnutrition may have a weakened immune system that predisposes to the development of denture stomatitis.
- There is a risk of developing a condition known **as inflammatory papillary hyperplasia (IPEH)** in chronic or severe denture stomatitis. IPEH is an overgrowth of the tissue in the mouth cavity as a result of chronic irritation. This condition carries its own risks but mainly complicates the treatment of denture stomatitis. Therefore it is crucial to institute the proper treatment for denture stomatitis as soon as possible.
- Treatment of denture stomatitis involves soaking the dentures in strong antiseptic solutions that are not commonly used for denture care. These solutions will destroy any fungi on the surface of the denture and prevent any future growth. Antifungal ointments and gels that are suitable for use in the mouth may also be applied to the affected area and coated over the denture prior to use. Surgery is not necessary for denture stomatitis treatment unless there is inflammatory papillary hyperplasia (IPEH) where the excess tissue needs to be removed.

DEMOGRAPHICS

- In Canada, 13% of the population is over 65 years of age,¹ and healthy seniors who are 76 years old today have a life expectancy of more than 10 years.³
- Most Canadian seniors live independently in the community. Only about 8% live in institutions.^{1,5}
- A substantial number of seniors feel that they have adequate income to direct toward their dental needs.⁵ In a survey to determine financial security, 82% of respondents believed that they had enough money for their old age.² When surveyed about spending patterns, Canadians over 50 years of age were found to be responsible for spending more than 70% of all discretionary income.³
- Although the perceived need for dental care among seniors is greater than for the general population, their use of dental services is less. Utilization statistics vary considerably among studies because of differing eligibility criteria, but all are low. Of homebound seniors, 60 to 90% have reported a need for dental services, but only 26% reported visiting a dentist at least once every 2 years and 12 to 16% had not visited a dentist in over 5 years.^{1,2,6} Depending on the criteria used, only 9 to 25% of seniors in institutions see a dentist once a year and 30 to 78% have not visited a dentist in over 5 years.^{1,2,6}

DENTURE INDUCED LESIONS

- **Lesions are divided into three categories;**
 - Reactive/traumatic – secondary to injury, such as ulcers
 - Infectious - denture stomatitis: most common inflammation. (up to 65%)
 - Mixed reactive and infectious – could be from trauma or infectious. An example is papillary hyperplasia

BARRIERS TO CARE

- No perceived need for dental care is the reason given most frequently by seniors and their caregivers for low utilization of dental services among seniors.^{1,2,6} Poor overall health can restrict access to care. **Decreased cognitive ability, medications and limited ability to tolerate procedures may reduce the desire for care.**
- Anxiety and fear of new situations or procedures may affect willingness to seek dental care. Existing esthetic factors, including missing teeth, may contribute to a reluctance to go out in public. Seniors may be unable or unwilling to be transported off-site to a treatment centre. Seeking care may just be too much bother for the individual or caregiver.
- The cost of dental care, public health cutbacks and lack of dental insurance may influence access to care,. A substantial number of seniors have adequate discretionary income to direct toward dental care.² Of Canadians surveyed about financial security, 28% reported an annual income of less than \$15,000; 36% reported an income of \$15,000 to 60,000 a year and 32% would not divulge their income.² A separate survey revealed that 60% of Ontarians 15 years of age and older had some dental insurance.¹ Yet another survey of disabled elders, found that 60% of respondents who had an annual income of less than \$10,000 would be willing to pay for dental treatment if the cost was reasonable.²
- Finally, there is a lack of willingness by dentists to treat elderly patients. Their reluctance is generated by a perception that seniors have insufficient patience, endurance or finances to undergo treatment; **they require more chair time; and treatment is more difficult.**^{1,6}

REGULAR APPOINTMENTS

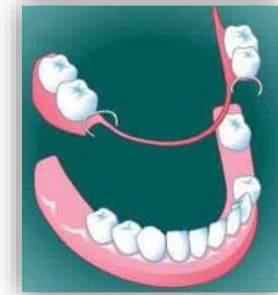
- Often seniors may feel they don't need to see the dentist on a regular basis because “**I have less teeth**”.
- This couldn't be LESS true! We still need to exam the seniors mouth on a regular basis to check bone levels, alveolar ridge, and perform the oral cancer screening
- Over time the senior will have a harder time cleaning their teeth due to less dexterity so the plaque levels will likely be higher
- Every 6 or 9 months is still recommended!

DENTURE CARE

- If you lose a tooth, you can replace it with a "false" (or artificial) tooth. If you don't replace it, your other teeth may get out of line. You need to care for complete dentures and partial dentures as carefully as you would look after natural teeth.

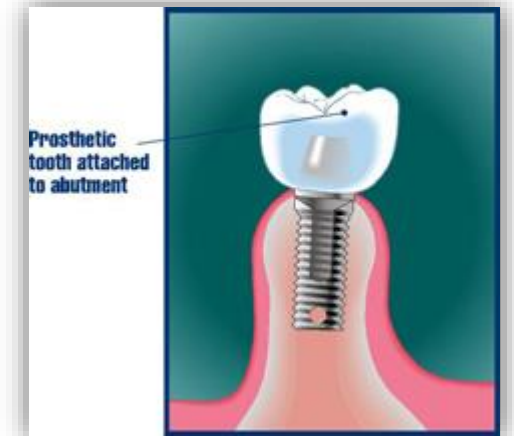
TYPES OF DENTURES

- A partial denture (or removable partial denture).
 - One or more false teeth are held in place by clasps that fit onto nearby healthy teeth. You can take the false teeth out yourself, for cleaning and at night.
- A fixed bridge (or fixed partial denture).
 - One or more false teeth are held between healthy teeth on both sides. You cannot take this kind of bridge out by yourself.



CONTINUED

- **Dental implants.**
 - Dental implants are used to support false teeth or a fixed bridge. You must have healthy gums and bone (under your teeth) to support the implant. Your dentist (or oral surgeon) will put a small metal post into your jawbone.
 - Over time, the post will bond with the bone around it. The post (or implant) will act like an anchor to hold one or more false teeth in place.
- **Complete dentures.**
 - If you lose your teeth, these dentures can replace all your natural teeth.



CARING FOR DENTURES

- **You need to care for complete and partial dentures as carefully as you would look after natural teeth.**
- Clean them every day. Plaque and tartar can build up on false teeth, just like they do on natural teeth.
- **Take them out every night.** Brush your teeth and gums carefully, using a soft toothbrush. Be sure to clean and massage your gums. If your toothbrush hurts you, run it under warm water to make it softer OR try using a finger wrapped in a clean, damp cloth.
- **Soak them overnight.** They can be soaked in a special cleaner for false teeth (denture cleanser), in warm water or in a mix of warm water and vinegar (half and half). If your denture has metal clasps, use warm water only for soaking. Soaking will loosen plaque and tartar. They will then come off more easily when you brush.

CARING FOR IMPLANTS

- Because the implant sticks to bone, it can be treated more like a natural tooth. But it is NOT as strong as a natural tooth. You must brush and floss the implant very carefully. Be gentle, but make sure you brush all sides of the implant. At least once a day, floss very carefully. You will need to be gentle with the floss where the implant meets the gum.
- If you have a bridge or implants, dental exams will help you make sure that your natural teeth get good care. If you have problems with your false teeth, your dentist may suggest you see a special dentist who knows more about false teeth. **This kind of dentist is called a prosthodontist.**

REMEMBER TO TELL YOUR PATIENTS

- People who have complete or partial dentures can also get gum disease around any natural teeth that are left. If you have gum disease:
- **Your false teeth will not fit well over gums that are sore, swollen or bleeding.**
- Your partial dentures (or removable dentures) will not be held firmly in place if your natural teeth and gums are not strong.
- Be sure to see your dentist regularly for professional cleaning and dental exams, so that he or she can detect any early signs of gum disease, and provide appropriate treatment.

CAREGIVERS

■ Complete or Partial Dentures

- Let the person tell or show you how to take the complete dentures or "partial" out. (With complete dentures, put the upper set back first, and then the lower set.)
- Both kinds of dentures must be cleaned daily.
- Look for cracks in the denture. If you find any, take it to a dentist for repair.
- Fill the sink with water.
- Scrub the denture with a denture brush and soap.
- Rinse with water when you finish cleaning.
- **Soak denture overnight. It can be soaked in a special cleaner for dentures (denture cleanser), in warm water or in a mix of warm water and vinegar (half and half). If the denture has metal clasps, use warm water only for soaking.**

CONTINUED – THE CAREGIVER

■ The Mouth

- Ask if it is okay to look inside the person's mouth.
- Check the mouth closely. Look for swelling, red or white patches, parts of the gums that have changed colour and sores that do not heal in a few days. If you see any of these things, call the person's dentist.
- Clean and massage the inside of the person's mouth with a damp cloth or a soft toothbrush.

■ Natural teeth

- Stand behind the person to brush and floss their teeth.
- Let the person sit in front of the sink. That way, you can make the same motions you use when you brush and floss your own teeth.
- Make sure you use a soft toothbrush. Or you may find an electric toothbrush better when you brush someone else's teeth. Ask the person to tell you if you are brushing too hard.
- Have the person rinse with warm water when you are done.

LIFE EXPECTANCY

- Seniors are living longer than ever!
- **Maximum life span**
 - The number of years humans can live.
- **Life expectancy**
 - The number of years an average human can expect to live.
- **Seniors are grouped into 3 categories:**
 - Young old, 55
 - Middle Old: 75
 - Oldest Old: 85 and older

THEORIES OF AGING

- **Micro level:** How individuals interact with each other
- **Macro-level theories:** Looking at social structures and elements
- **The three perspectives are:**
 - The interpretive perspective.
 - The functionalist perspective.
 - The conflict perspective.

PERSPECTIVES

- **Conflict**
 - Focuses on conflict and change in social life.
- **Functionalist**
 - How the individual adapts in the social order of society
- **Interpretive**
 - How people choose to live socially in the environment

SOCIAL-PSYCHOLOGICAL THEORIES

- **Three social-psychological theories of aging:**
 - **Disengagement theory** – seniors naturally disengage as they age, this is normal!
 - **Activity Theory** – activity will decrease as we get older but the theory suggests its important to keep doing the same activities for as long as you can. You will be happier because of it!
 - **Continuity Theory** – this is how people cope with aging. Some do better than others and can accept the fact they are aging.

HEALTH PROMOTION MODEL

- Focus on prevention and self care by preventing disease through lifestyle change, increased knowledge about healthy behavior and environmental improvement.
- Through eating healthy and exercise you will be healthier
- Seniors need to remember to eat well and light exercise is recommended
- **Seniors especially need to monitor two things:**
 - **ADL:** daily living
 - Bathing and eatig
 - **IADL:** instrumental activities of daily living
 - Regular activities – preparing meals, using the phone or the computer



PATIENTS WITH SPECIAL NEEDS

CARDIOVASCULAR DISEASE

- Periodontal disease can affect your overall health. Over time, it may increase the risk for heart disease and stroke. Several studies have shown that people with periodontal disease may be more likely to have coronary artery disease than people with healthy mouths.
- Right now, scientists have two possible explanations for this association. One is that the bacteria that cause periodontal disease can release toxins into or travel through the bloodstream and help to form fatty plaques in the arteries. **These plaque deposits can lead to serious problems, such as blood clots, which can block blood flow.**
- The other explanation is that these bacteria cause the liver to make high levels of certain proteins, which inflame the blood vessels. Inflammation eventually could lead to a heart attack or stroke.

HEART DISEASE

- Patients with certain heart conditions have a higher risk of endocarditis. This is an infection of the heart. It can be life threatening. It happens when bacteria in the bloodstream attach to damaged heart valves or other damaged heart tissue.
- People with certain heart conditions may need antibiotics before they have certain types of dental procedures. Make sure to inform your dentist of any heart issues.
- In **2007, the American Heart Association updated its guidelines** on the use of antibiotics before dental treatments. The new policy advises antibiotics for fewer conditions than the old policy did.
- Pre-treatment with antibiotics is still recommended for people who have had endocarditis in the past. It is also recommended for people with artificial heart valves, and people who had heart transplants and later developed heart valve problems.

HEART ATTACK

- A heart attack can sometimes feel like **pain that starts in the chest and spreads to the lower jaw**. Other times it may be pain that starts in the jaw or in the left arm or shoulder.
- Wait **at least six months after a heart attack** to have most dental treatments. Your dentist should have oxygen and nitroglycerin available during your appointment. Your dentist and physician should discuss your condition before dental treatment.
- Some medicines you take can change the way your dentist treats you. For example, **if you are taking blood thinning drugs (anticoagulants), your blood is less likely to clot**. You may need to stop taking your blood thinning medicines before some dental procedures. Do not stop taking any medicines until you have spoken to your physician. This is something your dentist will discuss with you and your physician. Let your dentist know the medicines you take, and their doses. You may need to take blood tests before some dental procedures, such as gum surgery (periodontal surgery) or extractions.

HIGH BLOOD PRESSURE

- Some drugs that treat high blood pressure (anti-hypertensive medicines) cause dry mouth (xerostomia) or an altered sense of taste (**dysgeusia**). Others may make you more likely to faint when you are raised from the relatively flat position in the dentist's chair to a sitting or standing position quickly. **This reaction is called orthostatic hypotension.**
- Gum overgrowth is a possible side effect of some drugs that treat high blood pressure. These include calcium channel blockers. It can begin as soon as one month after you start drug therapy. Some people's gums become so large that they have difficulty chewing. In some cases, surgery is needed to remove part of the overgrown gum tissue.
- **Most people with high blood pressure can safely take anti-anxiety drugs — such as nitrous oxide or diazepam (Valium) — for dental procedures.**
- If you have high blood pressure, your dentist should check your blood pressure at each visit. Your dentist can decide whether it's OK for you to have non-emergency dental treatment. It will depend on:
 - How high your blood pressure is
 - How well your blood pressure is controlled
 - Whether you have other medical conditions

ANGINA

- Angina is pain that starts in the chest. Sometimes it spreads to your lower jaw.
- Some people with angina take drugs called calcium channel blockers. These drugs can cause gum overgrowth. This can happen as soon as one month after you start these drugs. Some people's gums become so large that they have problems chewing. People who have this problem will most likely need surgery on their gums (periodontal surgery).
- People with stable angina can be treated like any other patients, with a few differences. **Your dentist should have oxygen and nitroglycerin available during your visit.** Your dentist should talk to your physician before your appointment. People with unstable angina should not receive non-emergency dental care. If you need emergency dental care, your heart should be continuously monitored.
- Stress can trigger angina attacks. If being in the dental chair increases your anxiety, speak with your dentist about ways to reduce this stress. If you feel any chest discomfort, tell your dentist or the dental staff right away.

HYPERTENSION

- People with high cholesterol have too much fat in their blood. There are no oral effects of high cholesterol.
- Some drugs used to treat high cholesterol can make you feel faint after you get up from the dental chair. High cholesterol puts you at risk of hardening of the arteries, which can lead to a heart attack or stroke. Your dentist should know about your condition and the drugs you are taking.

STROKE

- Stroke can cause many long-term effects. These include:
 - Paralysis
 - Difficulty speaking and swallowing
 - Increased or decreased sensitivity to pain
 - Blurred vision
 - Poor memory
 - Personality changes (anxiety, depression)
- In some people, a stroke paralyzes one side of the body. If this happens to you, a family member or caregiver may need to help you with activities of daily living, including your dental care. Special toothbrushes and floss holders also are available. If you wear dentures, they may need to be adjusted.
- If your face or tongue is paralyzed, you may not be able to rinse your mouth. You may also not realize when you have food left in your mouth. You may bite your lip or tongue and not realize it. To keep your teeth and gums healthy, your dentist may suggest that you use a fluoride gel or saliva substitute.
- You may need to stop taking your blood-thinning medicines before some dental procedures. Do not stop taking any medicines until you have spoken to your physician. This is something your dentist will discuss with you and your physician.

CONGESTIVE HEART FAILURE

- Many of the medicines used to treat congestive heart failure (CHF) cause dry mouth. The medical term for dry mouth is "**xerostomia.**"
- If you are being treated for CHF and have no complications, side effects or physical limitations, there are usually no special changes needed for dental treatment.
- If you have more severe heart failure, you should not lie down in the dental chair too far. The fluid build-up in your lungs may affect your breathing. You also should not sit up or lie down very quickly. These changes can make you dizzy and light-headed.
- Your dentist can confirm how serious your CHF is by talking with your physician or cardiologist. Some people with severe CHF may need to have their dental treatment in a hospital setting.

PACEMAKER

- **There are no specific oral effects caused by having a pacemaker.**
- If you have a pacemaker, you should confirm that there are no interactions between electromagnetic devices in your dentist's office and your pacemaker. Certain machines that a dentist or dental hygienist may use could potentially interact and cause a problem with a pacemaker.
 - Examples include machines used for ultrasound or electro surgery. The chance of any interaction is very small.
- You should avoid elective dental care within the first few weeks after receiving your pacemaker. If you must receive dental care within that time, your dentist and physician should decide if you **need to take antibiotics before treatment.**

OSTEOPOROSIS

- Osteoporosis is a loss of bone density among aging adults that can cause painful fractures, disability and deformity. While heredity and bone size affect the development of osteoporosis, it is often possible to prevent, delay or reduce bone loss through healthy living.
- Osteoporosis affects both sexes but is **more frequent among women**. It is estimated that about **one out of four women and one out of eight men over the age of 50 in Canada have osteoporosis**.
- Bones are constantly being renewed naturally. But with age, this process becomes less efficient, and bone mineral density is lost. When bone mineral density is lower than normal, but not low enough to be classified as osteoporosis, it is called osteopenia. Osteoporosis causes bones to become very thin and weak over time and increases the risk of fracture. It is often called "the silent thief" because bone loss occurs without symptoms.
- When bones are seriously weakened by osteoporosis, even simple movements such as bending over to pick up a bag of groceries or sneezing heavily can lead to fractures.

HEALTH EFFECTS

- Wrist, spine and hip fractures are most commonly associated with osteoporosis. Bone fractures occurring in these areas resulting from a fall from standing height or less are called fragility fractures, and are evidence of osteoporosis.
- Hip fractures due to osteoporosis are a serious problem for seniors. Mortality is significantly increased after hip fracture, and fewer than 50 % suffering from this injury experience functional recovery, and many are permanently disabled. About 25 % of patients reside in long-term care facilities for a year or more after a hip fracture.
- There usually are no warning signs for osteoporosis until a fracture occurs. However, there are ways to help prevent, delay and treat osteoporosis.

RISK FACTORS

- Women are especially at risk of osteoporosis. At menopause, estrogen levels, which help keep women's bones healthy, drop dramatically. Many women experience more bone loss during menopause.
- Hormone replacement therapy can help reduce the drop in estrogen levels during menopause, preventing and even correcting bone loss. However, there may be adverse health effects, including an increased risk of breast cancer. Talk to your doctor about what might be suitable for you.
- In addition to age, there are several factors that will increase your risk of developing osteoporosis. They include:
 - a family history of osteoporosis
 - osteopenia
 - low body weight
 - a diet low in calcium
 - low levels of physical activity
 - ovaries removed or early menopause (before the age of 45), without hormone replacement
 - being past menopause
 - vitamin D deficiency
 - smoking
 - excessive caffeine intake (more than four cups a day of coffee, tea or cola) or excessive alcohol intake (more than two drinks a day)
 - long-term oral use of some medications such as cortisone, prednisone or anticonvulsants

WAYS TO MINIMIZE YOUR RISK

- If you have some of the risk factors listed above, talk to your doctor about getting a bone density test and take preventive action to reduce the risk. Here are some of the things you can do to protect your bones.
- **Eat well.** All Canadians are encouraged to eat well and to be active every day by following the advice contained in Eating Well with Canada's Food Guide to reduce their risk of chronic diseases such as osteoporosis.
- **Include calcium in your diet.** People over the age of 50 need 1200 mg of calcium each day. As you age, your body doesn't absorb calcium as well, so calcium rich foods are important and you may require a calcium supplement. Calcium rich foods include milk and milk products; salmon and sardines with bones; beans; sunflower and sesame seeds; broccoli and other greens; figs; and rhubarb.
- **Get enough vitamin D.** Calcium is not easily absorbed by the body without vitamin D. In addition to following Canada's Food Guide, which recommends that all Canadians over the age of two consume 500 mL (two cups) of milk every day, everyone over the age of 50 should take a daily supplement of 400 IU of vitamin D. People who do not drink milk or fortified soy beverage will most likely require a supplemental source of vitamin D. For a large part of the year in Canada (October to March, and longer in far northern latitudes) the sun is not strong enough to produce vitamin D in the skin. The skin also has reduced capacity to produce vitamin D as it ages.
- **Be active every day.** Bones become stronger with increased activity. Include regular weight-bearing exercise such as dancing, walking, hiking or tennis in your daily routine. Exercise that improves balance and coordination such as yoga, tai chi swimming and flexibility exercises will help reduce falls and prevent fractures. Try several activities until you find the one that's right for you.
- **Avoid smoking.** Smokers have faster rates of bone loss and a higher risk of fractures than non-smokers. Women who smoke also tend to enter menopause at an earlier age than non-smokers. This means more rapid bone loss takes place at an earlier age.
- **Prevent falls.** If you have been diagnosed with osteoporosis or have some of the risk factors, preventing falls is particularly important. An exercise program geared to your abilities will help. Wear comfortable shoes that give good support. Watch for uneven ground, sidewalks and floors. Don't rush to catch a bus, answer the phone or a doorbell. Make your house safe to reduce the risk of accidents.

DEMENTIA

- **Dementia** is a long-term and progressive disease that affects all the parts of your brain. The symptoms of dementia can be caused by disease of the arteries in your brain, Alzheimer's disease, infections and premature degeneration of neurons in your brain.

SYMPTOMS

- **Memory Failures:** Lapses of memory are important first signs of dementia. Most people will forget appointment times or forgot someone's name. The most important type of memory loss is the loss of recently learned information. Initially, this may only occur infrequently, but as the condition progresses, it will grow in frequency.
- **Common Task Loss:** One of the easiest to spot first signs of dementia happens when individuals fail to recall how to perform basic tasks. This includes basic hygiene or preparing meals. A senior may be unfamiliar with making a phone call, for example. The steps to performing an action are lost to them.
- **Language Skills:** Most people forget names or mistakenly use terms. In early dementia cases, individuals use terms incorrectly. Both speech and writing skills can feel the effects. Forgetting simple words with increasing frequency is a clear warning sign of dementia.
- **Loss of Orientation:** In early dementia patients, individuals lose their orientation in familiar places. For example, they may forget where the bathroom is in their home. They may get lost in their neighborhood. At this point, the onset of dementia is usually evident and discussion with doctors should occur.

ALZHEIMER'S

- Alzheimer's is a progressive brain disease affecting over 4.5 million people in the United States. This includes one in 10 who are 65 or older and nearly half of those who are 85 or older. The average age of onset is 75 and length of disease progression is eight to 12 years.

RHEUMATOID ARTHRITIS

- Rheumatoid arthritis is the second most common type of arthritis, following osteoarthritis. It is one of the severely debilitating joint disease in seniors. Although it tends to start earlier in life, it is the elderly that tend to suffer the worst complications and most severe forms of associated disability. Rheumatoid arthritis is a chronic disease that affects different organs but mainly involves the small joints of the hands and feet.
- Inflammation of the capsule around the joint is the main reason behind the symptoms of rheumatoid arthritis. About 1% of the world's populations suffer from rheumatoid arthritis and this is across all age groups although it is more common in adults than children. Although not widely known, rheumatoid arthritis is not solely a disease of the joints.
- The disease can affect other organs like skin, lungs, eyes, kidneys and heart.

SYMPTOMS

- The symptoms depend upon the organ involved. The joints are the most commonly affected site in the majority of patients. However, the elderly are more likely to experience involvement of other organs and these symptoms are known as the extra-articular manifestations.
- **Painful, swollen and warm joints.** Usually the smaller joints of the body like those of the hand and feet are affected initially but with progression of the disease, large joints of the body like shoulder or knee may be affected. The affected joints characteristically remain stiff especially during morning after waking up or after prolonged inactivity. Often with progression of the disease there is erosion of the affected joints along with specific deformities of the fingers and toes.
- In many patients, there are nodules on the skin. This type of nodule may also be found on bony prominences. Other skin changes include purple discoloration, skin ulcer, fragile skin and thinning of the skin.
 - Fluid may accumulate in the pleural sac, the covering of lungs, leading to respiratory distress and chest pain.
 - Impaired kidney function leading to reduced urine output.
 - Dryness of the eyes with redness and irritation.
 - Anemia contributing to fatigue and paleness.
 - Tingling and numbness of limbs which may progress to muscle weakness and even paralysis. Sometimes the nerve supplying the muscles of the palm is compressed leading to loss of grip strength.
 - Generalized symptoms such as fatigue, loss of body weight and poor appetite.
 - Bone weakness with an increased risk of fractures.

RISK FACTORS

- Rheumatoid arthritis is an autoimmune disease that occurs due to improper stimulation of the immune system. In autoimmune diseases, the immune system mistakenly recognizes the body's own tissue (self proteins) as foreign and starts directing its action against it. In rheumatoid arthritis, it is the synovial membrane which is mainly affected. The synovial membrane that lines the joint cavity is the most commonly affected body part.
- In response to inflammation the synovial membrane becomes thick and gradually there is erosion of the bones and adjacent cartilages leading to joint damage and deformity. The exact factors that trigger the immune response are not known. However, certain factors are assumed to be responsible such as genes and infections. This then disrupts the body's immune responses.
- People who are more likely to develop risk factors include :
 - Women are more commonly affected than men.
 - Being in the 40 to 60 year age group.
 - Family history.
 - Cigarette smoking.

TREATMENT

- There is no definitive cure for rheumatoid arthritis. Drugs are effective in managing the condition but do not cure the condition completely. These drugs include anti-inflammatory medications like NSAIDs, steroids, immunosuppressants, disease modifying agents and TNF alpha inhibitors. Regular exercise helps improve joint flexibility and stiffness reduction.
- If drugs fail to halt progression of the disease, surgery is done to improve joint function. **The elderly who are more likely to develop complication often need reconstructive joint surgery.**

VISION LOSS

- **Cataracts** - are a gradual clouding of the natural lens of the eye, preventing light from reaching the retina.
- **Floater**s - tiny spots or specks that float across your field of vision. They are often normal and sometimes moving the eye around will make the spots shift out of your central vision.
- **Glaucoma**- develops when the pressure within the eye starts to destroy the nerve fibres within the retina. If not treated early, glaucoma can cause vision loss and blindness. Because most people have no early symptoms, regular eye examinations are required to detect it. Treatment may include eye drops, medication, or surgery.

CONTINUED

- **Age-related macular degeneration** - Macular degeneration occurs when the macula (the central part of the retina responsible for sharp focus) is damaged. This damage may be the result of many factors, including aging, and it causes permanent loss of central vision.
- **Diabetic retinopathy** - As the name suggests, this is an eye problem linked to diabetes. Changes to the blood vessels caused by diabetes can starve the retina of oxygen. This condition can go through many stages and can result in blindness. Symptoms include cloudy vision and seeing spots. If you have diabetes, be sure to have regular eye examinations and tell your eye specialist that you are diabetic.

HOW TO MINIMIZE YOUR RISK

- If you are over the age of 45, have your eyes examined on a regular basis.
- If you suffer from dry eyes (gritty, itchy, or burning), a home humidifier and eye drops may help. In a few serious cases, surgery may be needed to correct the problem.
- If your eyes water, it may be that you are more sensitive to light, wind, or temperature change. Simply shielding your eyes or wearing sunglasses may solve the problem. However, this condition may be the result of an eye infection, eye irritation, or a blocked tear duct, all of which can be treated. See your doctor to find out the exact cause and treatment.
- Turn on the lights. Seeing better can sometimes be as easy as changing a light bulb to one with a higher wattage. Putting 100 or 150 watt bulbs in your lamps can reduce eye strain. Just make sure the fixture is designed for that wattage. Bright light is important in stairways to help prevent falls.
- Don't smoke. Smoking tobacco is a major risk factor in the early onset of age-related macular degeneration.
- Reduce glare as much as possible by using good lampshades, glare shields on computer monitors, and sunglasses. Sunglasses should provide 99 to 100% UV-A and UV-B protection. UV rays can harm your eyes even on a cloudy day.
- Protect your eyes from accidents in your home.
- Put a grease shield over frying foods.
- Make sure spray cans and nozzles are pointed away from you when spraying.
- Wear safety glasses in the workshop and when using chemical products such as ammonia.
- Be careful of a recoil when using bungee cords.
- Eat your carrots. A daily dose of the vitamins and minerals found in melons, citrus fruit, carrots, spinach, and kale may help slow the progress of age-related eye diseases such as macular degeneration, glaucoma, and cataracts.
- Don't drive at night if you have problems with depth perception, glare, or other vision difficulties.

COMMON DENTAL ISSUES

- **Darkened teeth.** Caused, to some extent, by changes in dentin and by a lifetime of consuming stain-causing foods and beverages. Also caused by thinning of the outer enamel layer that lets the darker yellower dentin show through.
- **Dry mouth.** Dry mouth is caused by reduced saliva flow, which can be a result of cancer treatments that use radiation to the head and neck area, as well as certain diseases, such as Sjögren's syndrome, and medication side effects. Many medicines can cause dry mouth.
- **Diminished sense of taste.** While advancing age impairs the sense of taste, diseases, medications, and dentures can also contribute to this sensory loss.
- **Root decay.** This is caused by exposure of the tooth root to decay-causing acids. The tooth roots become exposed as gum tissue recedes from the tooth. Roots do not have any enamel to protect them and are more prone to decay than the crown part of the tooth.
- **Gum disease.** Caused by plaque and made worse by food left in teeth, use of tobacco products, poor-fitting bridges and dentures, poor diets, and certain diseases, such as anemia, cancer, and diabetes, this is often a problem for older adults.
- **Tooth loss.** Gum disease is a leading cause of tooth loss.
- **Uneven jawbone.** This is caused by tooth and then not replacing missing teeth. This allows the rest of the teeth to drift and shift into open spaces
- **Denture-induced stomatitis.** Ill-fitting dentures, poor dental hygiene, or a buildup of the fungus *Candida albicans* cause this condition, which is inflammation of the tissue underlying a denture.
- **Thrush.** Diseases or drugs that affect the immune system can trigger the overgrowth of the fungus *Candida albicans* in the mouth.

REMEMBER

- **Age in and of itself is not a dominant or sole factor** in determining oral health. However, certain medical conditions, such as arthritis in the hands and fingers, may make brushing or flossing teeth difficult to impossible to perform.
- Drugs can also affect oral health and may make a change in your dental treatment necessary.

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