COMPASSION

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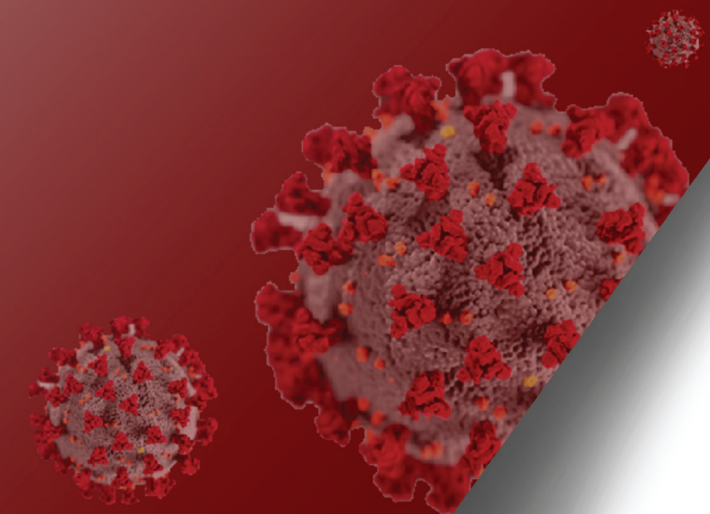

TEXAS NEPALESE MEDICAL ASSOCIATION

Texas Nepalese Medical Association
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PRESIDENT'S MESSAGE

Sanjeeb Shrestha, MD, FACG
President

It is a great privilege and honor to continue as your president for the next two years term from January 2021. I am very thankful for the trust you all have placed in me for this office.

The year 2020 or the year of Covid-19 will go down in history as one of the most difficult years for all of us due to its profound negative effects on us and the world. This has caused unforeseen changes in our lives and has disrupted our jobs, medical practices, family and social lives. The pandemic has afflicted thirteen million Americans and we have now surpassed the grim milestone of 265,000 lives lost. We pray for all the departed souls and their families as we grieve together as a nation. At the same time we are cautiously optimistic about the future particularly with the news of three different vaccines coming out this month. It seems there is light at the end of the tunnel, albeit a long tunnel.

With the growing Nepalese population in Dallas/Fort Worth approaching 50,000 it was felt that a permanent health clinic was needed as opposed to previous Free Health Camps. One of our goals for 2020 was establishing a health clinic for the Nepalese population in Dallas/Fort Worth. This goal was significantly hampered by Covid-19 pandemic. We were, however, able to lay the groundwork for the Clinic. We have set up Himalaya Health Clinic (HHC), which will be a non-profit, free health clinic for uninsured patients.

We have been very fortunate to obtain a permanent space at the Nepalese Cultural and Spiritual Center in Euless. There will be enough space for a medical and dental clinic, nurse's station and a small lab. This will be a clinic where Nepalese diaspora can access healthcare, get referral to different specialists and obtain health related education. With ongoing community support, we hope to inaugurate Himalaya Health Clinic in spring of 2021.

Due to restrictions related to coronavirus, NST/TNMA Free Health Camps have been on hold. Instead, we have been providing virtual educational programs related to coronavirus and other chronic medical illnesses. Under the leadership of our CME director Dr. Puja Sainju, TNMA has organized fifteen sessions of medical education programs for the community. TNMA's website: www.tnmaonline.org is active and you can access previous educational sessions and prior issues of Compassion Magazine. You can also access information about our sponsors and partners. We would like to see the TNMA site develop into an information hub for incoming new physicians; to be able to connect with local businesses, as well as for our community members to get detailed information on physicians,

medical services and medical facilities available in the local community. We will have a section "Circle of Sponsors" which will list businesses that sponsor and support Texas Nepalese Medical Association in our mission.

We are also one of the first Nepalese organizations to develop mobile app. The free TNMA app can now be downloaded in both platforms; Apple and Android. Please visit us on TNMA app or our online site to be apprised of our ongoing and future projects. A special thanks to Prince Shrestha, Director of Information & Technology for single handedly developing it.

I am also very proud and grateful for the work done by Pramesh Shrestha and the Publication committee in publishing our annual publication, "Compassion", an educational magazine for the community. This magazine has many timely educational articles on Covid-19 and various chronic medical conditions. Texas Nepalese Medical Association was established in September 2018 with the goal of providing free health care, providing education on health related topics and uniting the medical, nursing and allied health personnel under one common platform. Hand in hand we want to continue to work together to unite the medical diaspora and community at large for our common cause "working together for a healthy community".

Lastly, I would like to thank the TNMA Executive Board members, Directors and volunteers who have put in countless hours to make our common goal a reality. Your continued support and dedication will make Texas Nepalese Medical Association truly impactful for all of us and our community; and together we will continue to strive forward in the year ahead.

Let the holiday spirit keep us joyful and optimistic. Stay safe, stay hopeful, trust in science, together but with social distancing we can overcome the pandemic and looking forward to a brighter and safer 2021.

Respectfully,

Sanjeeb Shrestha, MD, FACG

President, Texas Nepalese Medical Association

Fort Worth, Texas

FIRST WORDS .....

Death! ……. An ultimate realization of 2020!

We are in such a cruel cross-section where so many human lives peril each moment and emotionally we all are exhausted; and we feel helpless. Each one of us is nervous; and we are in a next phase, a pandemic fatigue.

I have been a big fan of Theory of Evolution; Charles Darwin and his theory of 'The Natural Selection'.

No shortcuts; and no choice! But we are compel to prove human race as the best and to align us as 'The Survival of the Fittest' ones. Conscience can save us; it's the time to use the modern science and the traditional wisdom; and to survive and let the human race survive.

This Too Shall Pass – Change Is Inevitable

Buddha and his teaching: 'The Law of Impermanence' - It's a simple realization that all of existence is in a constant state of transition. This moment, the way things are as they currently appear, shall change and, it already has. Change is Inevitable.

Compassion! ..... a meaningful word; and a beautiful teaching of the nature that relates to a great truth of our lives and our existence.

Salute to our medical first responders! No matter what? Doctors, nurses and medical personnel send us a good vibes. Their smile resonate hope; we feel the warmth of their compassion. Hope is on the way ..... we are close to the cure of the pandemic. This too shall pass. Change is inevitable.

Big Shout Out to the Team! I am thankful to Professor Nirmal Man Tuladhar for his dedication, Dr. Sandeep Pandey for his punctuality, Manjil Shrestha for meaningful cover designing, and each of my publication team members. Without the team contributions, publication of Compassion is not possible.

Sincerely,

Pramesh Shrestha

Editor, COMPASSION

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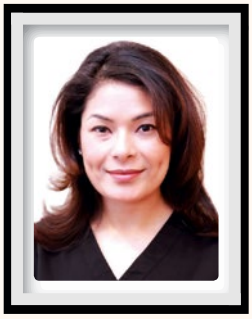
President



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TREASURER'S REPORT

Dipesh Bista, MD
Treasurer

It has been a pleasure serving as the Treasurer for Texas Nepalese Medical Association and be a part of its noble quest to bring Nepali Health community together and serve our community.

TNMA, being a 501c charitable organization, has been conducting activities from the support of our community.

Since last year, we have separated our fiscal activity into two entities:

1) Texas Nepalese Medical Association (TNMA)
2) Himalaya Health Clinic (HHC)

TNMA entity is funded strictly by Life time membership dues from our physician members. Its funding will be used for medical community development, seminars, medical education or other activities pertaining to Texas Nepalese Medical Association.

Himalaya Health clinic entity is funded by our Life time supporters from the community as well as sponsorship during our Gala events. This fund will be used to conduct activities related to the Health Clinic.

2019/2020 was busy and fruitful as we received tremendous support from the community and our Gala dinner sponsors.

HHC Account – Nov 01, 2018- Jun 30, 2020 report

Life Time supporter collection	$32555.00
Gala sponsor and Ticket sales collection	$42869.86
Gala Expense	($31927.29)
Clinic Expense	($2101.07)
Total Balance	**$41396.50**

TNMA account- Nov 01, 2018 – Jun 30, 2020 report

Life time member collection + N 95 sales	$ 21764.00
TNMA event expense	($ 3517.34)
Total Balance	**$ 18246.66**

I would like to thank all our community partners for their support. Our quest to serve some of the health needs for underserved community members can only be fulfilled with your continued support.

Prakash Shrestha
MD

SURVIVING WITH CORONAVIRUS DISEASE 2019 (COVID -19)

> "Generally, outdoor activities that allow participants to keep six feet from non-household members are low risk. These activities include walking/ running, hiking, biking, and sports such as tennis."

Introduction

In December 2019, an outbreak of pneumonia cases occurred in Wuhan, Hubei Province, China. Within a short period of time it rapidly spread across China and other countries throughout the world. On February 12, 2020, the World Health Organization officially named the disease COVID-19 which stands for Coronavirus Disease 2019 (COVID-19). The virus that caused COVID-19 was designated Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2). On March 11, 2020 COVID-19 was declared a pandemic by the World Health Organization. By the end of August 2020, more than 25 million people of 215 countries around have already been infected by SARS-COV-2 and more then 850 thousand people have died from this disease.

Novel Coronavirus - SARS-COV-2

Coronaviruses are family of viruses with enveloped positive-stranded RNA viruses. The coronavirus that causes COVID-19 (called Novel Coronavirus, Novel means New) is a beta coronavirus in the same subgenus as the severe acute respiratory syndrome (SARS) virus and Middle East Respiratory Syndrome (MERS) virus. Available evidence suggests COVID-19 leaped from wild animal to human. The post likely hypothesis is that COVID-19 originated in bats and then jumped to humans via a pangolin intermediary, according to multiple studies (although some virologists disagree).

Transmission of Disease

It is very important to understand how this infection spreads so that we can implement measures to prevent its transmission. SARS-COV-2 Virus can spread from person to person in following ways

> Uncertain risk of animal contact from SARS-CoV-2 infection is thought to have originally been transmitted to humans from an animal host, but the ongoing risk of transmission through animal contact is uncertain. There is no evidence suggesting animals (including domesticated animals) are a major source of infection in humans.

Respiratory Droplets

Direct person-to-person transmission is the primary means of transmission. It is thought to occur through close-range contact mainly via respiratory droplets. When a person with infection coughs, sneezes, or talks; viruses are released in the respiratory secretion and can infect another person if it makes direct contact with the mucous membranes.

Therefore, wearing mask is so important to prevent spread of this infection

Contact with infected surfaces

Infection might also occur if a person's hands are contaminated by droplets or by touching contaminated surfaces and then when they touch their eyes, nose, or mouth. Droplets typically do not travel more than six feet (about two meters).

Therefore, Hand Hygiene is so important to prevent spread of this infection

Airborne Route

SARS-CoV-2 can also be transmitted through the airborne route which means respiratory particles smaller than droplets may get aerosolized or carried in a gas cloud after the infected person speaks, coughs, or sneeze. These particles containing viruses can remain in the air over time and travel certain distance. The extent to which this occurs under natural conditions and how much this mode of transmission has contributed to the pandemic are controversial. Although some reports of clusters of cases have suggested the potential for short-range airborne transmission of SARS-CoV-2 within enclosed indoor spaces, long-range airborne transmission of SARS-CoV-2 has not been documented.

Therefore, Mask and Social distancing are so important to prevent spread of this infection.

Risk of transmission depends on exposure type

The risk of transmission from an individual with SARS-CoV-2 infection varies by the type and duration of exposure (indoors vs outdoors), use of preventive measures (mask) and likely individual factors, e.g. the amount of virus in respiratory secretions of infected individual. Close contacts are those individuals who are in contact with infected individual for more than 15 minutes within 6 feet distance. It is considered a significant risk for transmission of disease. The risk of transmission appears highest with prolonged contact in indoor settings. As explained above, risk of transmission decreases significantly when infected individual wears a mask and even more when the exposed individual is also wearing a mask.

Thus, most secondary infections occur in the following settings:

- Among household contacts;
- In health care settings when personal protective equipment is not used (including hospitals and long-term care facilities); and
- In other congregate settings where individuals are residing or working in close quarters, e.g. cruise ships, homeless shelters, and detention facilities.

Uncertain risk of animal contact from SARS-CoV-2 infection is thought to have originally been transmitted to humans from an animal host, but the ongoing risk of transmission through animal contact is uncertain. There is no evidence suggesting animals (including domesticated animals) are a major source of infection in humans.

Activities and Level of Risks

Various different activities that involve gathering inside and outside our home will involve some risk of contracting COVID-19. Assessing risk factors and the level of risk of exposure can assist in making

decisions about what activities are appropriate for you and your family. You can also consult your healthcare clinician for specific advice about what activities may be safe for you, considering your personal and community risk factors.
Here are a few examples of low, medium and high risk activities

Low-risk activities

Generally, outdoor activities that allow participants to keep six feet from non-household members are low risk. These activities include walking/running, hiking, biking, and sports such as tennis.

Similarly, attending a small backyard gathering where all participants maintain social distancing, wear face masks, and bring their own food, beverages, and supplies would be considered low risk. It is important to be aware that although some outdoor activities themselves may be low risk, crowded conditions increase risk levels. For example, crowded parking area or trail that makes it difficult to maintain social distancing, the risk of catching COVID-19 becomes higher.

Swimming is another low-risk activity. There is currently no evidence suggesting that COVID-19 is transmitted through water. Still, swimming and spending time at a crowded pool, lake or beach could make it challenging to follow social distancing and public health recommendations, and therefore, raise the level of risk.

Medium risk activities

Dining at a restaurant — whether indoors or outdoors — is generally considered to be a medium risk activity. However, level of risk may vary depending on whether others wear face masks when not eating, hygiene policies at the restaurant, and how close servers and other diners are.

Camps and activities for kids have a variable level of risk depending on different factors such as:

- The age of the children
- Whether children are with the same group each day, or whether they are permitted to mix between groups
- How frequently the children share objects and equipment
- The social distancing and hygiene policies of the camp
- Whether the camp is indoors or outdoors
- Whether the children are from the same geographic area

High risk activities

Remember 3 C's

- Crowd
- Closed Space
- Close Contact for a prolong period

Each of these factor increases the risk of transmission significantly. Bar is considered high risk as it has all these 3 high risk factors. Risk of transmission would be low in a restaurant if dining area is in open space with small crowd and social distance is maintained.

Symptoms

COVID-19 affects different people in different ways. Infected people have had a wide range of symptoms reported – from Asymptomatic individual to mild symptoms to severe illness. It is estimated that up to 60 % of people infected with this virus remains asymptomatic (infection without symptoms). However, these individuals can spread the infection to others. Up to 80% of people have mild symptoms and remaining 15- 20 % people can have severe disease. People who are elderly and have underlying health conditions like Diabetes Mellitus, Hypertension, Congestive heart failure, cancer etc. have higher risk for serious Illness and death from this disease.

Symptoms may appear 2-14 days after exposure to the virus. It is called incubation period. Symptoms can be categorized as:

- **Specific Symptoms of COVID 19**
- **Non-Specific Symptoms of COVID19**

Specific Symptoms

- Fever or chills
- Cough
- Shortness of breath or difficult breathing
- Fatigue

- Muscle or body aches
- New loss of taste or smell
- Sore throat

Non-Specific Symptoms

- Headache
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

What to do when a person gets exposed to the person infected with COVID-19

- In areas where SARS-CoV-2 is prevalent, all residents should be encouraged to stay alert for symptoms and practice social distancing by maintaining six feet (two meters) distance from others and wearing masks when they leave home.
- People who have come in close contact with COVID-19 patients need to be in quarantine for 14 days after the last contact with the infected person. Specially people who have vulnerable people in family (elderly people above 75 years old; family members with heart disease, cancer, uncontrolled diabetes etc.) should avoid contact with these family members as the risk of these people dying is quite high if they get infected with COVID-19. (Close contact = Interaction within 6 feet for more than 15 minutes)
- For people taking care of COVID-19 family members or who cannot avoid close contact, they need to be quarantined up to 24 days. (10 days of infectious period of patient + 14 days of quarantine starting from last day of those 10 days).
- Having a negative test during this period of quarantine does not mean that the quarantined persons are not infected. Even if the test is negative, at least 14-day of quarantine is necessary. They can develop symptoms from 2-14 days after infection or they can have no symptoms at all but can spread the infection to a large number of people.
- For asymptomatic individuals who are critical infrastructure workers, the CDC has provided guidance on returning to work during the 14-day post-exposure period with symptom and temperature monitoring, mask use, social distancing, and workspace disinfection. Please contact your employer for the specific policy and guidance.

What to do if a person develops symptoms suggestive of COVID 19

- Almost 80% of people have mild symptoms and recover without any specific treatment or hospitalization. Young and healthy individual who does not have underlying health condition usually has mild disease. But anyone who develops symptoms of COVID 19 is advised to contact their doctor and inform them about their condition.
- Call Doctor's office or ER before visiting them so that appropriate arrangement can be made for your examination without risk of exposing to the caregivers at doctor's office.
- Any person who has MILD infection of COVID-19 (who does not need hospitalization) is infectious and can spread the disease from 2 days prior to symptoms onset to usually 10 days after symptoms started. Please isolate yourself strictly during this period to prevent the spread. Individuals with severe infection (who require Oxygen or need hospitalization) need to isolate themselves for 20 days.
- Whereas a person infected with COVID-19 does not have to reveal their disease to anyone, it is

> "Until vaccine is available, we need to continue taking precautions and carry out measures to prevent infection from COVID-19 including maintaining social distancing and wearing mask in public, avoiding crowds, hand hygiene etc."

their social responsibility to inform people they have come in close contact within that infectious period. (Close contact = Interaction within 6 feet for more than 15 minutes) so that those individuals can isolate themselves and monitor themselves for any symptoms.

- Look for emergency warning signs for COVID-19. If someone is showing any of these signs, seek emergency medical care immediately:
- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

Prevention and Vaccine

An individual is protected (immune to) from COVID-19 once they have developed immunity to this virus. There are two ways to confer immunity:

1. Infection
2. Vaccine

Once a person is infected with COVID-19 they develop antibodies against this virus and is protected from infection in the future. However, it is unclear how long a person is immune after an initial infection. Initial research suggests that these individuals are protected from re-infection for at least 90 days. More studies are going on regarding reinfection, and recently there has been report about individual getting reinfection after several months of first infection.

Nevertheless, infection is not the preferred way of getting immunity to this disease as people can develop complications and die from infection. Vaccine allows development of immunity without the disease. Multiple research is being carried out around the world to develop vaccine against the disease and few of these research are towards the end (Phase III) of developing vaccine. It is estimated that vaccine against COVID-19 can be available by end of 2020. Duration of immunity conferred by these vaccines is unknown, and it is possible that multiple doses of vaccine are needed for prevention of this disease. Until vaccine is available, we need to continue taking precautions and carry out measures to prevent infection from COVID-19 including maintaining social distancing and wearing mask in public, avoiding crowds, hand hygiene etc.

Since COVID -19 is very new to all and the guidelines are changing, it is recommended to follow visit WHO and CDC websites for updates and recent changes.

ABOUT THE WRITER

Dr. Prakash Shrestha is a medical doctor specialized in treating complicated infections. He is a board certified in two different specialties; Internal Medicine and Infectious disease.

Born and raised in Nepal, he completed his medical school in Manipal Teaching Hospital, Pokhara. While in Nepal, Dr. Shrestha worked as a medical officer in various parts of the country including Manang, Kapilbastu, Pokhara and Kathmandu; and mostly serving underprivileged people in remote areas.

After moving to the United States in 2007 he completed his Internal Medicine residency from Guthrie/Robert Packer Hospital, Sayre, PA in 2012; and completed his fellowship in Infectious Disease from University of Texas Health Science Center, San Antonio in 2017.

Dr. Shrestha is currently working in a position of Regional Medical Director of Antimicrobial Stewardship and Infection prevention with Covenant Health System in Lubbock, Texas. Dr. Shrestha has numerous publications in international medical journal and has experience of presenting in various national and international scientific meeting. Dr. Shrestha enjoys spending his free time with family and friends, travelling and social activities.

He is currently serving as a President of Nepalese Society of Lubbock and Board Member of NRN Texas Chapter.

SCREENING AND PREVENTIVE CARE

Neeti Pokharel
Internal Medicine, MD

Preventive Screening

Preventive screening typically refers to the identification of a condition that does not show symptoms right away. Therefore, early detection provides clinical benefits. Early detection and treatment of the condition should increase the survival or improve quality of life compared to later detection at symptomatic stage.

The United States Preventive Service Task Force (USPSTF) has systematically reviewed the available evidence-based recommendation of screening for a wide range of conditions.

Summary of Screening Recommendations

TABLE 5. Summary of USPSTF Screening Recommendations

Condition	Recommendation
Depression	All adults, when appropriate support system available
Alcohol misuse	All adults
Obesity	All adults
Hypertension	All adults
Lipid disorders	All men ≥35 years of age; consider in men 20-35 years of age with increased cardiovascular risk. Women ≥45 years of age with increased cardiovascular risk; consider in women 20-45 years of age with increased cardiovascular risk. Diabetes mellitus All adults with sustained blood pressure >135/80 row Hg
Osteoporosis	Women ≥65 years of age; any other woman whose fracture risk is ≥ that of a 65-year old white woman without additional risk factors.
Abdominal aortic aneurysm	One-time screening in all root 65-75 years of age who have ever smoked
HIV infection	All persons at increased risk of HIV infection
Hepatitis B virus infection	All pregnant women at the first prenatal visit

> "All adults aged 50-75 years old should be screened for colon and rectal cancer every 10 years, but those with family history or inflammatory bowel disease should be screened earlier."

Chlamydial infection	All women ≤24 years of age who are sexually active; all women >24 years of age who are at increased risk of infection.
Gonorrhea	Sexually active women who are at increased risk of infection
Asymptomatic bacteriuria	Pregnant women at 12-16 weeks' gestation or at the first prenatal visit, whichever comes first.
Syphilis	High-risk persons and pregnant women
Breast cancer	Biennial screening mammography for average-risk women 50-74 years of age; initiation of screening between 40 and 49 years of age should be individualized.
Cervical cancer	Screen with Pap smear: initiate no sooner than 21 years of age; test every 3 years thereafter or, for women aged 30-65 years who want to lengthen the duration of screening, every 5 years if combined with HPV testing. Screening is not indicated in women following hysterectomy and without previous high-risk Pap smears. Screening may be discontinued at age 65 years in non—high-risk women with no recent abnormal Pap smears.
Colon cancer	All adults 50-75 years of age (see MKSAP 16 Gastroenterology and Hepatology)
HPV = human papillornavirus; USPSTF = U.S. Prevernve Services Task Force.	

Two questions to detect depression

The USPSTF recommends screening for depression in all adults for depression. There is little evidence to support one screening method is better than the other. Two questions will detect almost all case of significant depression such as:

"Over the past 2 weeks, have you felt down, depressed, or hopeless?"

"Over the past 2 weeks, have you felt little interest or pleasure in doing things?"

A positive response requires additional assessment to determine the diagnosis and treatment.

Due to the increasing rate of obesity in the society, USPSTF recommends screening all adults with obesity.

All adults should be screened for alcohol abuse, smoking and high blood pressure.

Patients with sustained blood pressure > 135/80 mmHg should be screened for diabetes.

Specific Screening Tests

Cholesterol should be checked in all men of 35-year old or older and women 45-year or older. Early screening should be done for the prevention of heart disease.

Women above 65-year old should be screened for osteoporosis and also younger women with elevated fracture risk. Although evidence is insufficient to recommend screening in men, but men at high risk may be screened.

According to USPSTF, screening Abdominal Aortic Aneurysm (AAA) should be done with abdominal ultrasound on a one-time basis in all men of 65 – 75 years old who have ever smoked (defined as 100 lifetime cigarettes).

Screening for Infectious Disease

All pregnant women should be screened for HIV, hepatitis B virus infection and syphilis.

The Center for Disease Control and Prevention (CDC) recommends one time testing for Hepatitis C for baby boomers (born between 1945-1965) regardless of risk factors. USPSTF recommends screening in adults of 18 – 79 years old.

Cancer Screening Tests

Breast Cancer Screening

Age is the most important risk factor for women developing breast cancer. Mammography is the only available breast cancer screening test that has shown to reduce mortality.

For average-risk women, USPSTF recommends screening mammography every 2-year for women aged 50 - 74 years old. Initiation of screening between the ages of 40 - 49 years should be individualized. Referral to genetic testing is

recommended to multiple affected family members for diagnosis and the presence of multiple primary tumors.

Cervical Cancer Screening

Screening with pap smear decreases 95% in mortality from cervical cancer. Age to start screening is 21 years old followed by testing every 3 years with conventional pap smear until the age of 65 in non-high-risk individual. Testing may be done every 5 years instead of 3 years, if combined with HPV DNA testing.

Prostate Cancer Screening

Prostate cancer screening remains controversial due to unclear benefits of screening and limitations of testing. Two most common methods used are Digital Rectal Exam (DRE) and Prostate Specific Antigen (PSA) with the latter being more sensitive.

PSA is generally done on those who are 50-year old and over, who have life expectancies of at least 10 years.

Colon Cancer Screening

All adults aged 50-75 years old should be screened for colon and rectal cancer every 10 years, but those with family history or inflammatory bowel disease should be screened earlier. African-American should start at age of 45 years old. Colonoscopy is the standard method of all tests. Other methods are: fecal occult blood test, Cologuard test, flexible sigmoidoscopy, hypaque enema and CT colonography.

Vaccinations Recommended for All Adults

TABLE 7. Summary of Recommendations for Vaccines for Adults.

Vaccine	Type	Indications
Influenza	Live, attenuated or inactivated	All adults
Tetanus, diphtheria, pertussis (Td, Tdap)	Inactivated	All adults, Booster every 10 y. One time Tdap for all (see text)
Varicella	Live, attenuated	Persons born after 1980, HCWs, persons with ↑ risk of disseminated varicella without documented vaccination or immunity.
Herpes zoster	Live, attenuated	Adults ≥60 y
Pneumococcal disease	Inactivated	Adults ≥65 y; adults 19-64 y with risk factors (see Table 8)
Human papillomavirus	Inactivated	Females 11-26 y; males 11-21 y (permitted 21-26y)
Measles, mumps, rubella	Live, attenuated	Adults born after 1957 without documented vaccination or immunity. One dose usually sufficient; second dose indicated in HCWs, international travelers, college students, and post-exposure.
Meningococcal disease	Inactivated	Adolescents; persons living in dormitories; persons with HIV or asplenia
Hepatitis A	Inactivated	Travelers to endemic areas, men who have sex with men, users or illicit drugs, persons with chronic liver diesease.
Hepatitis B	Inactivated	Adults with increased risk of transmission, morbidity, or exposure (see Table 9)

HCW=health care worker
[a]Full recommendatiors are available at www.cdc.gov/vaccines/pubs/ACIP-list.htm.

Influenza is a virus that causes respiratory / lung infection. It spreads seasonally with peak activity in the fall and winter. Immunity to previous years Influenza is not protective for future infection. Influenza vaccine is currently recommended for all adults.

Tetanus vaccine is given with there shot series to children followed by booster vaccination every 10 years in adults.

Varicella vaccine: Persons born after 1980, health care workers, and those before 1980 who have a high risk for severe Varicella should receive a two-dose varicella vaccination series.

Herpes Zoster/ Shingle vaccine: All adults of 60-year old and above should be immunized unless contraindicated.

Meningococcal / Meningitis vaccine is primarily recommended for adolescents. Unvaccinated adults living in college dormitories or who are in the military should receive a single dose.

Human Papillomavirus (HPV) is the most common sexually transmitted disease (STD) in the United States. A certain stereotype can lead to genital Wart and cervical cancer. Vaccination is recommended for both girls and boys starting at the age of 11 or 12 years up to up to 26-year old.

Pneumonia vaccine (Pneumococcal-23) is recommended for all adults aged 65 years and older; younger persons who should receive the vaccine include those with specific risk factors , including smokers and those with asthma. Patients vaccinated before 65 years should receive a booster at 65 years, or 5 years after their first vaccine.

Another pneumonia vaccine (Pneumococcal-13) is recommended for persons aged 65 years and above for average risk.

The pneumococcal 23 and pneumococcal 13 should be given at least 12 months apart.

All health care workers should be immunized against Hepatitis B, Varicella, measles, mumps and rubella, tetanus and receive an annual influenza vaccination.

ABOUT THE WRITER

Dr. Neeti Pokharel was born and raised in Kathmandu, Nepal. She completed her medical education from Zhengzhou University, China. She did her Internal Medicine Residency in New York and has been in practice since 2012.

She initially worked in northern Maine, and then moved to Dallas to be closer to her family.

Currently she is working at Baylor Scott and White Medical Center, Waxahachie, TX.

She is married and has two kids, she loves to spend time with family, hiking and biking.

PERIODONTAL DISEASE AND ITS ORAL AND SYSTEMIC EFFECTS

Puja Sainju
DDS

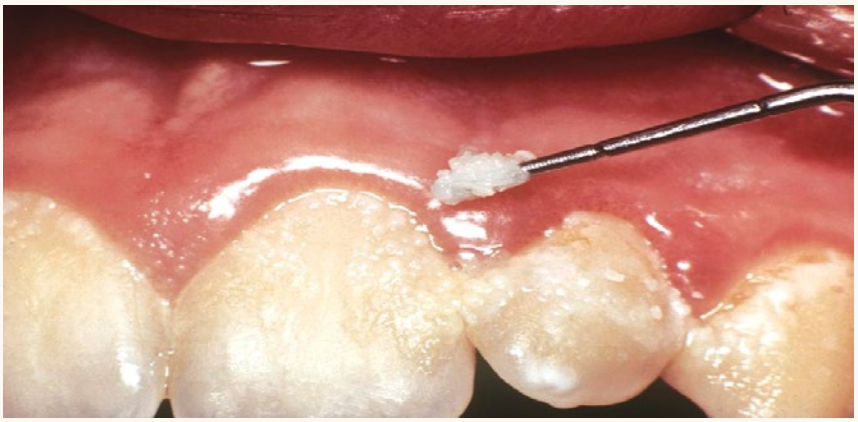
Periodontology is the specialization in dentistry, which examines supporting structures of teeth and diseases and conditions that affect them. Hence, periodontal disease affects the gum and bone supporting the teeth. It is a leading cause of tooth loss and may be associated with other chronic systemic diseases including diabetes and heart disease.

Millions of people do not know they have this serious infection that can lead to tooth loss if not treated. Gum disease is often silent, whose symptoms may not appear until an advanced stage of the disease.

The progression of periodontal disease

Periodontal disease begins with gingivitis due to the bacteria in dental plaque (the sticky, whitish/colorless film) that constantly forms on your teeth. If left untreated, gingivitis can turn into periodontal disease with chronic accumulation of hardened form of dental plaque known as calculus or tartar. The gum tissue become loose around the root of the tooth, creating a gum pocket that gradually deepens. Eventually, the gum infection and inflammation can cause the tooth to loosen and possibly fall out.

1. Gingivitis due to Dental Plaque Accumulation



> "Patients with risk factors and dry mouth may need to visit dentist more frequently every three to four months. The high risk patients with restricted hand movement due to arthritis may have to use electric toothbrushes in conjunctions with electric water flossers to maintain their oral health."

2. Early Moderate Periodontal Disease

3. Moderate to Advanced Periodontal Disease

4. Advanced Stage of Periodontal Disease

Warning signs of gum disease as follows:

- Red, swollen or tender gums or other pain in your mouth
- Bleeding while brushing, flossing, or eating hard food
- Gums that are receding or pulling away from the teeth, causing the teeth to look longer than before and may cause teeth sensitivity
- Loose or separating teeth
- Pus between your gums and teeth
- Sores in your gum tissue
- Persistent bad breath
- A change in the way your teeth fit together when you bite
- A change in the fit of partial denture

Risk factors of periodontal disease

Age: A recent CDC provides the following data related to prevalence of periodontitis in the USA: 47.2% of adults aged 30 years and older have some form of periodontal disease. Periodontal disease increases with age, 70.1% of adults of 65 years and older have periodontal disease.

Smoking: Studies have shown that tobacco may be one of the most significant risk factors in the development and progression of periodontal disease.

Genetics: Research has indicated that some people may be genetically susceptible to gum disease. Identifying these people with a genetic test before they even show signs of the disease and getting them into early intervention treatment may help them keep their teeth for a lifetime.

Stress: Research demonstrates that stress can make it more difficult for the body to fight off infection, including periodontal diseases.

Medication: Some drugs, such as oral contraceptives, anti-depressants, and certain heart medicines can affect your oral health. Such medications should be informed to the dentists if you are taking them.

Obesity and Poor Nutrition: Research has shown that obesity may increase the risk of periodontal disease. Because periodontal disease is an infection, poor nutrition can worsen the condition of your gums because poor diet can compromise the body's immune system and make it harder for the body to fight off infection.

Systemic Diseases like Diabetes, Rheumatoid Arthritis and Heart Disease interfere with the body's inflammatory system may also worsen the condition of the gums.

How to prevent periodontal disease

The daily practice of maintaining good oral hygiene by brushing your teeth for two minutes at least twice aily in the morning and before going to bed and

> Some drugs, such as oral contraceptives, anti-depressants, and certain heart medicines can affect your oral health. Such medications should be informed to the dentists if you are taking them.

flossing at least once a day to clean away the loosened food particles to prevent bacterial accumulation on the teeth surface and inside the gum tissue. Mouth rinse can help reduce plaque between your teeth, if recommended by your dentist. Supplement brushing and flossing with an interdental cleaner, such as a dental pick, interdental brush or dental stick specially designed to clean between the teeth. Regular dental visits every six to twelve months. Patients with risk factors and dry mouth may need to visit dentist more frequently every three to four months. The high risk patients with restricted hand movement due to arthritis may have to use electric toothbrushes in conjunctions with electric water flossers to maintain their oral health.

Treatment of periodontal disease

If periodontitis is not advanced, treatment may involve less invasive procedures like **scaling and root planing** performed using a laser or an ultrasonic device to remove tartar and bacteria from tooth surfaces and beneath the gums. Root planing smooths the root surfaces, discouraging further buildup of tartar and bacteria, and removes bacterial population that contribute to inflammation and delay healing or reattachment of the gum to the tooth surfaces. Topical or oral antibiotics can help control bacterial infection. If periodontitis is advanced, treatment may require dental surgery, such as flap surgery, soft tissue and or bone grafting, guided tissue regeneration and tissue stimulating proteins.

Complications of periodontal disease: Apart from loosening and losing teeth, the bacteria from gum tissue can enter into the bloodstream possibly affecting other parts of the body. To date, scientists have found links between periodontal disease and a number of other problems such as: Heart disease, diabetes, lung disease, dementia, rheumatoid arthritis and premature birth.

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ABOUT THE WRITER

Dr. Puja Sainju is a General Dentist and Co-owner of Smile Breeze Dentistry at Frisco, Texas. Her primary focus is to promote good oral health in the community, to prevent diseases of mouth and to provide top quality dental services with utmost care, compassion and competence in a relaxed dental environment.

Dr. Sainju received Bachelor of Dental Surgery (BDS) from Dhaka University and Doctor of Dental Surgery (DDS) from New York University College of Dentistry in 2005. She completed her General Practice Residency (GPR) in 2006 from Flushing Hospital Medical Center. She has worked as Managing Clinical Director in Stroudsburg, PA until 2012.

After moving to Texas, she has been practicing in private dental offices. She is actively volunteering at Texas Nepalese Medical Association (TNMA) and has participated in Health Camps organized by Nepalese Society of Texas (NST) and TNMA. She has been a member of American Dental Association since 2005 and Texas Dental association since 2013.

Jharana Shrestha
M.D; FACR

Kalee Moore
D.O.

"Osteoporosis does not cause pain, weakness, or any other symptoms. In fact, many people who have undiagnosed osteoporosis are not aware of their thin bones until a fracture occurs. This is why properly screening for osteoporosis should never be overlooked."

OSTEOPOROSIS

Preventative health plays a major part in making ourselves healthy and live longer. The general public is aware of the importance of common preventative health measures such as application of sunscreen, yearly checkup, mammogram and so on. However, osteoporosis screening is not usually included in the checkup list. Therefore, it can result in poor quality of health in the long run. Let's look at osteoporosis and recommend a screening for it and its available treatments.

Osteoporosis simply means having lower than normal bone density mass. In other words, the bones become porous and brittle. The first sign is often a fracture caused by a minor jolt. That is why you might hear your physician and others refer to it as "thin bones." You might also hear about "osteopenia" which means having some thinning and weak bones, but not as severe as osteoporosis. Think of building a house without all of the necessary support beams and walls. This is similar to osteoporosis and osteopenia where the bones have less support structure, making them more fragile and prone to damage. A simple, accidental trip and fall can cause your bones to break if you have osteoporosis or osteopenia. Hip fractures are one of the dreaded possible outcomes of falling, especially in the elderly people. The estimated risk of death within 1 year of having a hip fracture can be anywhere from 12-37%. Osteoporosis does not cause pain, weakness, or any other symptoms. In fact, many people who have undiagnosed osteoporosis are not aware of their thin bones until a fracture occurs. This is why properly screening for osteoporosis should never be overlooked.

There are many factors in maintaining healthy bones including calcium such as vitamin D, weight bearing exercises and walking. Estrogen, a common hormone, also plays a key role in maintaining bone health. Our bones are constantly remodeling themselves. Breaking down of bone needs calcium for building new bone material in its place. Estrogen is important for building the new bone material. This is why osteoporosis is more common in women past the menopause when their estrogen levels suddenly lower. Hence physicians follow a strict guideline for screening women over 65 years old for osteoporosis. However, men and women who are at higher risk of bone fractures might also need screening. This includes history of a low-trauma

fracture such as a trip and fall, family history of hip fractures, cigarette smoking, long use of steroid, loss of height by 1.5 inches and having rheumatoid arthritis. Always ask your doctor if you should be screened for osteoporosis if he has not already discussed it with you.

Screening for osteoporosis is simple and should be done every 2 years. An X-ray is taken for osteoporosis by means of a high-tech machine "DEXA scan." The advanced mammogram machine also has a DEXA scan, which makes it very convenient to get both done at one place and possibly with one appointment. The amount of radiation extremely low and even less than having a chest X-ray. It takes approximately 10-30 minutes for screening. It is an open machine (with no tubes or enclosures) and people with claustrophobia can tolerate it very well. A radiologist examines the scan, and your doctor should have your results within a few working days.

If your DEXA scan results are abnormal, the first thing you should do is take a deep breath. No panic. Osteoporosis is very easily treated. You and your doctor can discuss which option is best for you. Many factors are involved in deciding which treatment suits you depending on financial/insurance factors including your preference for once-a-week, once-a-month pills, injections and intravenous options. In addition to the prescribed treatment, those with with osteoporosis and osteopenia should never smoke. They should have enough calcium, vitamin D intake and physiotherapy. Even after the treatment, those who want to prevent osteoporosis and maintain healthy bones they need a follow-up check-up for bone health. There are different opinions amongst physicians on how to monitor osteoporosis, but it is commonly done by DEXA scan.

You should always ask your doctor for your preventative health status update. While we as doctors do our best to update your health status and at the same time you should also maintain your own health. Last but not the least, stay safe and well.

ABOUT THE WRITERS

Dr. Shrestha is a board certified Internist and Rheumatologist. She is also a Certified Clinical Densitometrist.

She is a clinical assistant professor for the UNT health system and trains and teaches the next generation of doctors.

She attended medical school at Lady Hardinge Medical College in New Delhi, India; residency at Metro Health - Case Western Reserve University and fellowship at University of Texas Medical Branch.

She has been in private practice rheumatology for 20 years.

During the devastating earthquake of Nepal in 2015, she was one of the first team of doctors providing care in the remote villages of Nepal. She along with her husband Dr. Sanjeeb, were the first doctors to start up the free health camp at Nepalese Society of Texas.

In her spare time she likes to run races and has participated in many races including the Chicago, Dallas and Fort Worth Marathons. She says running is her third passion after motherhood and medicine.

Dr. Moore grew up in Texas on a cattle ranch. She went to college at The University of Texas at Arlington and majored in Biology. She then attended medical school at the Texas College of Osteopathic Medicine on the UNT Health Science Center campus in Fort Worth, Texas. During medical school, she was a scholar in the Rural Osteopathic Medical Education program. This program gives medical students special skills for working in low-resource areas. Dr. Moore is now a second year Internal Medicine resident at Medical City Weatherford. She lives in Weatherford, Texas, with her husband and 2 dogs. She enjoys yoga and all outdoor activities.

Nita Thapa
OBGYN, FACOG, MD

> It's normal to feel anxious or worried about COVID-19. If you are pregnant, you might feel sad about having to cancel celebrations and stay away from relatives and friends.

CORONAVIRUS DISEASE 2019 (COVID-19) AND PREGNANCY

What is COVID-19?

COVID-19 stands for Coronavirus Disease 2019. It is caused by a virus called SARS-CoV-2. The virus first appeared in late 2019 and quickly spread around the world.

People infected with COVID-19 can have fever, cough, difficult breathing, and other symptoms. Problems with breathing happen when the infection affects the lungs and causes pneumonia.

This article has information for pregnant women.

How is COVID-19 usually spread?

The virus that causes COVID-19 mainly spreads from person to person. This usually happens when an infected person coughs, sneezes, or talks with other people. The virus can pass on to people who live together. But it can also spread at gatherings where people are talking close together, shaking hands, hugging, sharing food, or even singing together.

What are the symptoms of COVID-19?

Symptoms usually start 4 or 5 days after a person is infected with COVID-19. But some people can take two 2 weeks for symptoms to appear. Some people never show symptoms at all.

What are the symptoms?

- Fever
- Cough
- Difficult breathing
- Feeling tired
- Shiver with cold
- Muscle ache
- Headache
- Sore throat
- Loss of smell or taste

Are pregnant people at high risk for severe symptoms?

Experts do not yet know a lot about COVID-19 and pregnancy. From what they know so far, pregnant women do not seem more likely than other people to get the infection.

What should I do if I have symptoms?

If you have fever, cough, difficult breathing, or other symptoms of COVID-19, call your doctor, nurse, or midwife. They can tell you what to do and whether you need to visit a doctor. They will also tell you if you should be tested for the virus that causes COVID-19.

If I am pregnant and get sick, can I pass the virus to my baby?

It might be possible for a baby to get the infection while still in the uterus (womb). But this seems to be very uncommon. And when it does happen, most babies do not get very sick. It is also possible to pass the virus to the baby during childbirth or after the baby is born. If you have COVID-19 when you give birth, there are ways to lower this risk.

Can COVID-19 cause problems with pregnancy?

Most women who get COVID-19 during pregnancy will not have serious problems. But problems can happen if they become seriously ill. Pregnant women who get COVID-19 might have an increased risk of preterm

birth. This is when the baby is born before 37 weeks of pregnancy. This seems to be more of a risk in people who get very sick and have pneumonia.

How is COVID-19 treated?

There is no specific treatment for COVID-19. Most people with mild illness will be able to stay home while they get better. Mild illness means you might have symptoms like fever and cough, but you do not have difficult breathing.

People with serious symptoms or other health problems might need to go to hospital.

Fever is a common symptom of COVID-19. Acetaminophen (Tylenol) can be used to treat a fever and is generally safe to take it during pregnancy.

Can COVID-19 be prevented?

There is no vaccine yet to prevent COVID-19. Generally it's good to be extra careful by handwashing and avoiding sick people when you are pregnant.

How to help contain the spread of COVID-19:

- Maintain social distancing.
- Wear a cloth face mask when you need to go out.
- Wash your hands with soap and water for 20 seconds
- Avoid touching your face with your hands, especially your mouth, nose, or eyes.
- Avoid traveling if you can.

Will my regular prenatal appointments change?

Your doctor, nurse, or midwife will advise you to make a plan for your visits during pregnancy. If you live in an area where COVID-19 is spreading quickly, there will likely be some changes. For example:

Your partner might not be able to join you in visiting your doctor.

If you have any symptoms of COVID-19, you will probably need to wear a medical mask during your appointments with doctor.

Your doctor, nurse, or midwife might suggest replacing some visits with a phone or video call. These changes can be stressful. It can help to protect yourself and others.

What will my delivery be like?

You will be checked for fever and other symptoms of COVID-19 when you get to hospital or birth center. This will happen earlier if you are scheduled to be "induced" or have a cesarean delivery ("c-section"). You might be tested for the virus, too. You are also expected to wear a mask during labor and delivery.

You will probably still be able to have a vaginal birth, if that is what you planned. You don't need a c-section just because you are sick.

If we are both healthy, can my partner be with me for the birth?

In areas where COVID-19 is spreading quickly, some hospitals have rules about who can be in the room during labor and delivery. Your partner will not be allowed to be there if he has symptoms of COVID-19, has tested positive for the virus, or might have been exposed to someone who has it.

What if I want to breastfeed?

Breastfeeding has many benefits for both you and your baby. It is not known if the coronavirus passes on to a baby through breastfeeding.

What can I do to cope with stress and anxiety?

It's normal to feel anxious or worried about COVID-19. If you are pregnant, you might feel sad about having to cancel celebrations and stay away from relatives and friends.

Take breaks from the news.

Get regular exercise and eat healthy foods.

Try to find activities that you enjoy and can do at your home.

Stay in touch with your friends and family members.

Pregnant or not pregnant women should follow the same recommendations to avoid exposure to the COVID -19.

ABOUT THE WRITER

Dr. Nita Thapa is American board certified Obstetrician and Gynecologist.

Currently, she has been serving as Obstetrician and Gynecologist at Eau Claire Health Cooperative Centers, Columbia, SC.

She received her medical degree from Institute of Applied Health Science, Chittagong, Bangladesh; and received her Fellow MRCOG from Royal College of Obstetricians and Gynecologists, London, UK; and did her residency in Obstetrics and Gynecology at University at Buffalo, New York.

She has been champion of numerous professional and academic awards and honors.

Ghana S Khadka
MD
Pulmonary & Critical Care Medicine

> "You should also minimize your exposure out in public if safety precautions could not be implemented. COVID-19 virus is here to stay and it is not going to go away anytime soon."

LIVING WITH ASTHMA IN COVID-19 PANDEMIC

Asthma is a disease of the airway that affects the breathing tube. This disease has a tendency to constrict and thicken the breathing tube when flare-up or attack occurs. This disease occurs in children and adults. Majority of the children that have this disease outgrow when they become adult. However, some children will not outgrow it and carry it to adulthood. Typical symptoms that occur with this condition is shortness of breath, wheezing, chest tightness or heaviness and cough. These symptoms are very similar to those of another disease of the lung called chronic obstructive lung disease which occurs mostly in adult smokers. Asthma occurs mostly in non-smokers and could occur concomitantly in smokers with chronic obstructive lung disease.

There are a variety of trigger factors that could exacerbate asthma. Typical triggers include seasonal environmental allergy (pollen), cigarette smoke exposure, strong perfume, pets such as birds / cats and variety of infection of upper respiratory tract such as sinus infection.

Many preventive and treatment escalation measures could be utilized to keep asthma symptoms under control. These include avoiding trigger factors, following asthma action plans as recommended by your lung specialist which may include noticing decline in asthma

> The main safety guidelines of wearing a mask at all times when out in public, maintaining six feet or longer distance from other individuals and frequent hand washing or using hand sanitizer when new surfaces are touched out in public. If you are a patient of lung disease, it may be difficult for you to wear a mask and breath for a longer period of time while out in public.

control, measuring peak flow meter value and adjusting inhalers medicine at home as needed to have better control of symptoms.

Are patients with asthma at higher risk of getting COVID-19 infection? Everyone is at risk of getting COVID-19 viral infection if proper preventive steps are not taken whether they have asthma or not. COVID-19 viruses do not discriminate among individuals to infect or not to infect. It is a fair game for everybody for the virus. So, it is important to stay safe as much as possible. If a patient with asthma gets COVID- 19 infection, how sick they get depends on a myriad of factors and not one disease process only. On one side of spectrum, I have seen patients in their 80's with multiple medical problem including lung disease making full recovery from Covid-19. On the other side of spectrum I have seen patients in their 30's with no medical problem getting very sick with COVID-19 infection needing many weeks of hospitalization leading to survival with disability and some of them have lost their life. I am of the view that it is acceptable for patients with asthma to continue to live their life as they want if standard CDC guidelines for safety are followed consistently. The main safety guidelines of wearing a mask at all times when out in public, maintaining six feet or longer distance from other individuals and frequent hand washing or using hand sanitizer when new surfaces are touched out in public. If you are a patient of lung disease, it may be difficult for you to wear a mask and breath for a longer period of time while out in public. In that case, it may be better to stay as far away as you can from other people and take the mask off intermittently to ease breathing. You should also minimize your exposure out in public if safety precautions could not be implemented. COVID-19 virus is here to stay and it is not going to go away anytime soon. Take your medications properly and regularly, follow CDC preventive and safety guidelines and enjoy your life to the fullest.

ABOUT THE WRITER

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Health Camps

HEALTHY EATING PLAN: A MINDFUL DECISION

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When it comes to staying healthy, eating well is fundamentally important to provide necessary nutrients to the body. A poor diet is a major contributor of bad health and a risk factor of preventable chronic disease. What makes a healthy eating plan? What are the characteristics of quality foods? These are commonly asked questions regarding healthy eating. Eating a diet consisting of essential macro- and micro-nutrients in the right proportion and time is the basis of a healthy eating plan. Knowing what nutrients and food components are contained in the meal is important as they are associated with taste and smell of the final product. However, it can be difficult to predict what exactly is in the eating plate since it may have been chemically modified beforehand.

Portion size (i.e. how much we choose to eat at one time) is another factor that makes a significant impact in a healthy eating plan. Taking larger portions of foods and beverages means we are consuming more calories. For example, 20 years ago, a bagel would consist of 140 calories; today, it is now around 350 calories https://www.nhlbi.nih.gov/health/educational/wecan/eat-right/portion-distortion.htm. This indicates that food sizes have gotten bigger and it can be hard to gauge how many slices of bagels I am supposed eat for breakfast. In addition, the time gap between breakfast and dinner, also known as meal timing, is another factor that needs to be considered. While there are a number of issues involved in a healthy eating plan, it is not overly complicated and difficult as it seems.

> "A healthy meal should provide not only needed nutrients but also a source of gratification. Since eating is a sensory perception, we enjoy certain foods more than others due to their perceived freshness. As a result, fresh foods grown in our kitchen garden not only taste better but also smell better."

Eating Consciously

Eating is not only for satisfying hunger and savoring the taste, but also for maintaining a healthy lifestyle. The types of food and the amount you should be eating depend on your age, gender, and physical and mental activities. Traditionally, foods are categorized as *sattvik, tamasik,* and *rajasik* depending on their composition and health effects. *Sattvik* is a simple vegetarian meal consisting of cereals, fruits, vegetables and nuts. *Tamasik* is rich in animal-derived foods, garlic, onions, mushrooms and alcoholic beverages etc. whereas *rajasic* refers

to calorie rich tasty foods such as sour, sweetened, salty and spicy foods etc. *Sattvik* foods, being light, nourishing, and disease-preventing, it can be a better choice to have an active, energetic, and healthy life. However, some *tamasik* and *rajasik* foods are healthy as well, if eaten in limited amounts.

Another important aspect of conscious eating is the combination of different parts of food. A healthy eating plan consists of many items in small amounts derived from seeds, leaves, roots, tubers, flowers, and fruits. For example, dry seeds and nuts such as pumpkins and walnuts are proteins and oil rich and easy to eat. On the other hand, fresh green vegetables are packed with vitamins, minerals, and phytochemicals, which are usually only eaten when cooked. Starchy foods such as yam and sweet potatoes are nutritious and healthy, and they should be consumed once or twice a week. Low-calorie root vegetables such as carrot and radish are not only tasty but also nutrient rich, and therefore, they should not be missed. The traditional Okinawan diet well-known for promoting good health and longevity consists of foods such as sweet potatoes, bitter gourd (karela), daikon radish (mula), mushrooms, soy products.

A healthy meal should provide not only needed nutrients but also a source of gratification. Since eating is a sensory perception, we enjoy certain foods more than others due to their perceived freshness. As a result, fresh foods grown in our kitchen garden not only taste better but also smell better. Fresh or raw products contain natural enzymes needed for metabolism of nutrients. For example, when raw garlic is crushed, chopped, or chewed, an enzyme named *alliinase* is released and converts sulfur compound *alliin* into *allicin* which is a biologically active compound with a unique taste and smell. This goes to show that eating certain types of raw foods is important to keep a person healthier and happier.

However, this does not mean that only fresh foods are better. Some frozen or dry foods are equally nutritious and cheaper. Cherries and berries are examples of healthy frozen fruits. On the other hand, fruits like mangos and bananas are usually picked slightly unripe and need no refrigeration since they continue to ripen at room temperature. Some fermented foods such as gundruk and khalpi smell stronger when they are fresh and are healthy diet choices. Overall, it is imperative that a healthy eating plan includes a combination of different kinds of fresh, fermented, dried and frozen foods.

Eating well can be a budgetary issue. However, there are ways to eat and drink healthy on a budget. For example, in lieu of commercial drinks, you can make lemonade with honey at home since it offers vitamin C as well as great taste. Also, inexpensive beans and legumes can be a good alternative for meat or dairy products.

Eating - A personal Requirement / Choice

What we should eat and how much depends on how efficiently our body burns off calories. Because everyone is unique in terms of body metabolism, nutritional requirements vary accordingly. Eating patterns also change with age and physiological condition of the body as well. For example, nutritional requirement during pregnancy is somewhat different from non-pregnancy where foods rich in iron and folate, such as dark green leafy vegetables and beans, get high priority during pregnancy.

If you are overweight, food choices should be different. Low-calorie foods such as whole grains, fruits, and vegetables should be considered. Eating filling foods such as high fiber barley or oats are likely

“If you are overweight, food choices should be different. Low-calorie foods such as whole grains, fruits, and vegetables should be considered. Eating filling foods such as high fiber barley or oats are likely to reduce portion size.”

to reduce portion size. Basically, protein and fiber dense foods are satiating and can be beneficial for weight management. Even desserts are not bad if eaten consciously in a small portion, preferably before a meal.

Simple Eating Rules

While there are a plethora of information and suggestions from nutrition experts and others pertaining to healthy eating, they often seem to be confusing and contradictory. Here are some tips for healthy eating.

1. Prioritize plant-based diet, preferably dark colored fruits and vegetables. Include 1 to 2 cups of fruits and 2 to 2-1/2 cups of vegetables in your eating plate daily.
2. Eat a little less than what you can. Follow the Japanese eating rule - eat you until feel 80% full.
3. Eat when you feel slightly hungry and enjoy the taste and flavor of the meal with friends and family. Make a habit of eating local products, if available.
4. Cut back on refined, processed, sugary, and salty foods.
5. Eat on time and try to avoid late night dinner. Maintain mealtime consistency.

ABOUT THE WRITER

Dr. Jeevan K. Prasain is an Associate Professor of Pharmacology and Toxicology, University of Alabama at Birmingham. His current research focus includes delineation of unconventional prostaglandin synthesis mechanism, mass spectrometry-based metabolomics/lipidomics, and roles of dietary botanicals in human health and diseases. He has authored or co-authored over 100 peer-reviewed scientific papers as well as health related articles. Dr. Prasain is also the author of three Nepali books related to health and wellness.

Smriti Shrestha
MD

> "Symptoms of acute hepatitis may include fever, feeling tired, loss of appetite, diarrhea, nausea, vomiting, abdominal discomfort, dark colored urine, gray or clay colored stools, joint pains, yellowish eyes and skin called jaundice."

VIRAL HEPATITIS

What is hepatitis?

Hepatitis is an inflammation of the liver. Inflammation is swelling that occurs when the tissues of the body become injured or infected and can damage organs. Viral hepatitis is caused by viruses.

Several viruses can cause hepatitis including hepatitis viruses A, B, C, D and E. These viruses can cause acute or chronic infections. In acute infection, body is able to fight off the infection and the virus goes away. It usually lasts for less than 6 months. Hepatitis A and E typically causes only acute or short term infections.

Chronic hepatitis occurs when body isn't able to fight off the infection, and virus does not go away. The hepatitis B, C and D viruses can cause both acute and chronic infections.

Doctors might not be able to identify the virus causing hepatitis as one of these. Other viruses such as Cytomegalovirus, Epstein-Barr virus and Herpes simplex virus can also hepatitis.

How does someone get or spread viral hepatitis?

Hepatitis A and E are mostly transmitted by fecal-oral route which means they spread through contact with food or water that has been contaminated by infected person's stool. Hepatitis E is also spread from animals to people, when people eat undercooked pork or wild game, such as deer. Hepatitis A can also be transmitted by sexual contact.

Hepatitis B spreads through contact with infected person's blood, semen and other body fluids. This can occur by being born to a mother with hepatitis B, having unprotected sex with an infected person, sharing dirty needles, getting needle stick injuries, being tattooed or pierced with tools that are used on infected person and are not properly sterilized, having contact with the blood or open sores of an infected person, using an infected person's razor, tooth brush or nail clippers.

An infected mother has a high chance of giving hepatitis B to her child during or after birth. All pregnant women should be tested for hepatitis B. A baby can't get hepatitis B from breast-feeding.

Hepatitis C virus spreads through contact with an infected person's blood. This can occur by means of infected needles and the tattooed tools used on an infected person.

Blood products are currently tested for hepatitis B and C, so it is not likely that a person will get hepatitis from receiving them. However, blood transfusion or organ transplantation before 1992 might not have been tested for hepatitis. If you received a procedure before 1992, you might want to get tested for hepatitis.

Additionally "baby boomers" born in the US between 1945 and 1965 are at increased risk of having hepatitis and should be screened for hepatitis C even in the absence of risk factors listed above.

Hepatitis D virus spreads with an infected person's blood and body fluids. It rarely spreads from mother to child during birth. You can only get hepatitis D if you have hepatitis B.

How common is viral hepatitis?

According to WHO, 325 million people globally live with hepatitis infection.

Hepatitis A is relatively uncommon in the United States. It is more common in parts of Africa, Asia, Central and South America and Eastern Europe, where sanitation is poor and access to clean water is limited. In the United States, large outbreaks have been reported among homeless people and people who use drugs.

Researchers estimate that about 850-2.3 million people in the United States have chronic Hepatitis B. Asian Americans and African Americans have higher rates of chronic hepatitis B. Hepatitis B is more common in Africa, Asia, and in some parts of Middle East, Eastern Europe, South and Central America than in the United states.

Hepatitis C is one of the most common causes of liver disease in the United States. 75%-85% of people who acquire hepatitis C develop a chronic liver infection. It is estimated that about 2.7 million to 3.9 million people in the United States have chronic hepatitis C.

Hepatitis D and E are less common in the United States. Hepatitis D is more common in certain geographical hotspots including Mongolia, Republic of Moldova, and countries in Western and Middle Africa. Hepatitis E is found world-wide but the disease is more common in East and South Asia.

What are the symptoms of hepatitis?

Symptoms of acute hepatitis may include fever, feeling tired, loss of appetite, diarrhea, nausea, vomiting, abdominal discomfort, dark colored urine, gray or clay colored stools, joint pains, yellowish eyes and skin called jaundice.

Chronic hepatitis may not cause any symptoms until complications develop.

What are the complications of hepatitis?

Most patients with hepatitis A and E recover from acute hepatitis without complications. In rare case, hepatitis A may be severe and lead to liver failure. Liver failure due to hepatitis A is more common in adults older than 50-year old and in people who have another liver disease.

About 90 percent of infants infected with hepatitis B develop chronic infection. About 20-50 percent of children infected between ages 1-5 years develop chronic infections. Howeve, only about 5 percent of people infected during adulthood develop chronic hepatitis B.

About 75-85 percent of people with acute hepatitis C will develop chronic Hepatitis C.

Early diagnosis and treatment of chronic hepatitis B and C can prevent liver damage. Without treatment, chronic hepatitis B and C can cause chronic liver disease, cirrhosis, liver failure, or liver cancer.

Who are at risk of getting hepatitis?

People who are more likely to get hepatitis are:

- People sharing needles to takes drug
- People who practice unprotected oral/anal sex
- People infected with HIV
- Homeless people
- Healthcare workers who have been in contact with blood or infected needles at work
- People who lived or travelled in the parts of the world where certain hepatitis are more common
- People taking medicine that weakens the immune system such as steroids, chemotherapy
- People who received long-term kidney dialysis
- People who have had tattoos or body piercing
- People have worked or lived in prison

How is hepatitis diagnosed?

Hepatitis is diagnosed on the basis of medical and family history, symptoms, physical examination and blood tests.

Can hepatitis be treated?

Treatment for hepatitis A and C includes resting, drinking plenty of liquids and eating healthy foods to help relieve symptoms. Patients should avoid alcohol and medications such as Acetaminophen that can cause additional liver damage.

There are antiviral medications to treat chronic hepatitis B, Hepatitis C, chronic hepatitis D and chronic hepatitis E.

How to prevent from hepatitis?

- Getting vaccines for hepatitis A and hepatitis B.
- Using condom during sex.
- Avoid sharing needles.
- Practice good personal hygiene with thorough hand-washing with soap and water.
- Avoid sharing infected person's personal items.
- Take precautions when getting any tattoos or body piercings.
- Take precautions when traveling to the areas of the world where hepatitis is more common.

Sumira Koirala
MD, FAAFP

> Blood pressure also varies from person to person and from time to time in the same person. It is influenced by general health, heredity, age, activity, and emotional state.

HYPERTENSION

Hypertension is the medical term for blood pressure. It is circulating blood pressure against the walls of the blood vessels with a force that fluctuates with every heartbeat. The pressure is greatest during the SYSTOLE, when the heart contracts and forces blood into the arteries of the body. This maximum pressure is called systolic pressure. During the DIASTOLE when the heart expands the pressure drops to a minimum. It is called diastolic pressure.

What is normal blood pressure?

If the systolic pressure is less than 120 is considered normal, and if the diastolic pressure is less than 80 it is also considered normal. But if the systolic pressure is over 120 it is called elevated blood pressure, and if diastolic pressure is below 80 it is also called elevated.

Causes of Blood Pressure

There are genetic and environmental causes. Blood pressure also varies from person to person and from time to time in the same person. It is influenced by general health, heredity, age, activity, and emotional state. Related causes can be obesity, contraceptive pill, heavy drinking and smoking. It is rarely caused by kidney disease.

In addition to these causes, the following are the most common ones:

- A diet high in salt, fat, and/or cholesterol.
- Chronic conditions such as kidney and hormone problems, diabetes, and high cholesterol.
- Family history, especially if your parents or other close relatives have high blood pressure.
- Lack of physical activity.
- Older age (the older you are, the more likely you are to have high blood pressure).
- Being overweight or obese.
- Race (non-Hispanic black people are more likely to have high blood pressure than people of other races).
- Some birth control medicines and other medicines.
- Stress.
- Tobacco use or drinking too much alcohol.

Treatment

1. Dietary changes such as making changes to what you eat can help to control high blood pressure.

- Reduce sodium (salt) — Reducing the amount of sodium you consume can lower blood pressure if you have high or borderline-high blood pressure. The main source of sodium in the diet is the salt contained in packaged and processed foods and in foods from restaurants. Although the ideal target for daily sodium intake remains controversial, the optimal goal is less than 1500 mg per day. For most adults with hypertension, however, a 1000 mg per day reduction in serum sodium intake (compared with current intake) can help reduce your blood pressure.
- Reduce alcohol — Drinking an excessive amount of alcohol increases your risk of developing high blood pressure. A "drink" is defined as 5 oz of wine, 12 oz of beer, or 1 oz of hard liquor. People who consume more than two drinks per day have an increased risk of high blood pressure compared with nondrinkers, and binge drinking (consuming four to five drinks within two hours) is an even greater problem for overall health and hypertension.
- Eat more fruits and vegetables — Adding more fruits and vegetables to your diet may reduce high blood pressure or protect against developing high blood pressure. A strict vegetarian diet may not be necessary.
- Eat more fiber — Eating an increased amount of fiber may decrease blood pressure. The recommended amount of dietary fiber is 20 to 35 grams of fiber per day. Many breakfast cereals are excellent sources of dietary fiber.
- Eat more fish — Eating more fish may help to lower blood pressure, especially when combined with weight loss.
- Caffeine — Caffeine may cause a small rise in blood pressure, although this effect is usually temporary. Drinking a moderate amount of caffeine (less than 2 cups of coffee per day) does not increase the risk of high blood pressure in most people.
- Dietary Approaches to Stop Hypertension (DASH) eating plan — The DASH eating plan combines many of the interventions noted above. It is high in fruits and vegetables, low-fat dairy, and fiber. Patients who strictly follow the DASH eating plan can also have significant reductions in blood pressure, particularly when combined with a low-sodium diet.

2. Physical Exercise

Regular exercise such as walking, jogging or running (75 minutes per week of strenuous activity or 150 minutes per week of moderate activity) can lower your blood pressure, even if weight isn't lost. To maintain this benefit, you must continue to exercise; stopping exercise will allow your blood pressure to become high again

3. Avoid taking medications and supplements that increase blood pressure

in susceptible individuals, nonsteroidal anti-inflammatory drugs, otherwise known as NSAIDs (ibuprofen, naproxen, etc), can increase blood pressure. Oral contraceptive pills may increase blood pressure in some women. Additionally, any stimulant,

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including those found in some decongestants, weight loss products, and illicit drugs, can increase blood pressure

4. Medications

There are various medications that are commonly used to treat high blood pressure. Some of the common medications used to treat hypertension are **Diuretics** (water pills), **Angiotensin-converting enzyme inhibitors** (ACE-I), **Angiotensin II receptor blockers** (ARBs), **Beta blockers** (BB), **Calcium channel blockers** (CCBs)

Some people will respond well to one drug but not to another. Therefore, it may take time to determine the right drug(s) and proper dose to effectively lower blood pressure with a minimum of side effects.

Although generally well tolerated, high blood pressure medications can cause side effects; the side effects depend upon the specific drug given, dose, and other factors. Some side effects result from lowering of the blood pressure, usually if the blood pressure lowering is abrupt, and therefore can be caused by any high blood pressure medication. These include dizziness, drowsiness, lightheadedness, or feeling tired. They usually subside after a few weeks when the body has adapted to the lower blood pressure.

ABOUT THE WRITER

Dr. Sumira Koirala is a board-certified family physician working in the state of Ohio.

Currently, she is an Associate Program Director at St. Elizabeth Boardman Family Medicine Residency Program; Clinical Site Director and Clerkship Site Director for North East Ohio Medical University.

She holds faculty ranks at several other medical universities in Ohio. She received her medical degree from Nepal Medical College, Kathmandu University and did her residency in family medicine at St. Elizabeth Hospital in Youngstown, Ohio.

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HEMORRHOIDS

Anuj R Kandel
MD, FACS, FASCRS

Hemorrhoidal disease commonly known as piles is the most common reason for bleeding during bowel movement due to swollen veins in the lower part of the anus and rectum. Though hemorrhoids can be painful they are easily prevented and treated. Other disease processes can also precipitate bleeding like anal fissures, traumatic ulcers, sexually transmitted diseases, colitis/proctitis, diverticular diseases, angiodysplasia and colorectal polyp/cancer.

Hemorrhoids are vascular cushion present within and around anal canal. It acts like a cushion. Certain behavior and comorbidities have been suggested as possible causes of symptomatic hemorrhoids. Venous congestion due to any causes as chronic constipation leading to straining leads to subsequent hypertrophy of internal hemorrhoids is the most leading cause of symptomatic hemorrhoids.

Patients tend to self-medicate with various over the counter medications prior to seeking medical help. It is approximated that prevalence of hemorrhoids is about 30-40 % of patients seeking care in general medical practice.

Hemorrhoids are categorized as internal or external. Internal hemorrhoids are higher up in anal canal above the dentate line and external originate below the dentate line in anoderm.

“Hemorrhoids are categorized as internal or external. Internal hemorrhoids are higher up in anal canal above the dentate line and external originate below the dentate line in anoderm.”

People with hemorrhoids complain of bleeding, itching, burning, swelling, painful lump, prolapse and mucus discharge. There are various conditions that overlap these symptoms: anal fissure, fistula, pruritis, abscesses, condylomas and rarely anorectal cancer or polyps.

Careful history and physical examination help us delineate various conditions from other causes that may be serious.

Treatment

It needs to be understood that hemorrhoids are a normal component of human anatomy and it is not necessary to remove all hemorrhoidal tissue. Various treatment options are:

1. Medical management: It includes toileting behavior, and everyone is recommended to eat high fiber (males: 38 g/day; females: 35 g/d), drink at least 65 oz water daily. It is highly

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recommended to get these fiber supplements from naturally available sources like: greens, beans and berries if not palatable than various fiber supplements available.

2. Office-based treatment: various office-based treatments for internal hemorrhoids are: rubber band ligation, infrared coagulation, bipolar diathermy, injection sclerotherapy and cryotherapy among many.
3. Operative therapy: operative hemorrhoidectomy is indicated for patients who fail non-operative management techniques or significant external hemorrhoids requiring excision.
    a. Hemorrhoidectomy involves cutting excessive and prolapsed tissue preserving sphincter function, overzealous excision of hemorrhoidal tissue is also not recommended. Excision is also commonly preferred for acutely thrombosed external hemorrhoids.
    b. Transanal Hemorrhoidal Dearterialization is relatively newer procedure for moderate sized internal hemorrhoids which does not involve cutting of tissue rather employs doppler guided ligation of arterial inflow to hemorrhoids along with suture rectopexy with best outcome with less pain.

I'd like to alert everyone to any bleeding is serious but it is not necessarily due to hemorrhoids unless other serious causes are ruled out. Recently we are aware of increasing incidences of colorectal cancer in younger populations. It is not known why the trend is alarming and concerning. Screening with colonoscopy at the age of 45 seems too late. Please consult with your physician for any symptoms. It could be a red flag to something serious if discovered in early stage, which is potentially treatable.

ABOUT THE WRITER

Dr. Kandel, was born and raised in Bharatpur, Nepal. He completed school from Gandaki Boarding in Pokhara and MBBS from Manipal College of Medical Sciences, Nepal.

Dr. Kandel came to United States for advanced training, completing General Surgery Residency from North Shore University in Long Island, NY. He then further specialized in Colon and Rectal Surgery from Greater Ba ltimore Medical Center in Maryland.

Dr. Kandel has been on practice since 2012, and practicing in Texas from 2016. He feels Texas home away from home and have been living with his beautiful wife, Dr. Neeti Pokharel and two amazing childrens: Nirvan and Avani.

Dr. Kandel is board certified by both the American Board of Surgery and the American Board of Colon and Rectal Surgery and is considered a

top colon doctor in Waxahachie, Texas. He sees patients and treats them for wide array of colorectal disorders including colorectal cancer, diverticulitis, hemorrhoids, and fistula; performs minimally invasive colon and rectal surgery using Laparoscopes and Robotic instruments. **Dr. Kandel** can be reached at his email with any questions: anujkandel@gmail.com

AN INVESTIGATION OF CHRONIC DIARRHEA

Sanjeeb Shrestha
MD, FACG

Anuj Vyas
MD

Introduction

Diarrhea is a common complaint and can be classified according to stool frequency, consistency, volume or weight.

When evaluating patients with complaints of diarrhea several clinical distinctions need to be made, i.e. the diarrhea acute, less than three weeks duration or chronic or more than 3 weeks. Is it secretory or osmotic diarrhea? Is it inflammatory or noninflammatory diarrhea? And does diarrhea arise from colonic disease or small bowel disease? An acute diarrhea is usually caused by infection and in most instances will resolve with supportive management.

Chronic diarrhea is regarded as persistently altered stool from the normal with loose stool and increased frequency and lasting more than four weeks. Chronic diarrhea is one of the most common reasons for a referral to Gastroenterology. It's prevalence in the Western population, whichi is approximately 4-5%. This review focuses on the workup of chronic diarrhea with a discussion of Ulcerative Colitis, one of its inflammatory etiologies.

Primary Clinical Assessment

In the primary care setting, an initial assessment begins with a detailed history and examination, stool tests and laboratory findings. It is important to gauge whether any alarm features such as blood in stool, weight loss or obstructive symptoms to differentiate malabsorptive from inflammatory forms of diarrhea and to identify potential infectious causes of the diarrhea.

Initial Workup includes stool cultures for bacterial organisms Salmonella, Shigella, Campylobacter and Yersinia, stool for Clostridium difficile and parasitic organisms including Giardia, Cryptosporidium, Cyclospora and E. histolytica an viral culture including Norwalk and rotavirus, ova and parasites and stool for Hemoccult. Further investigations include stool for fecal fat and stool electrolytes. Often these initial siardia tool studies may help to determine the cause of the diarrhea.

Pertinent initial labs associated with an organic cause of diarrhea

> "Noninflammatory diarrhea is characterized by watery stool frequently large-volume more than 1 L per day without blood or mucus and normally not associated with abdominal pain or fever."

include a high erythrocyte sedimentation rate, C reactive protein, anemia, or low albumin. Screening for malabsorption includes a complete blood count and metabolic panel, vitamin B12 and folate, ferritin and TSH. A stool osmotic gap can also be obtained which guides further workup. T-Tests for Celiac disease consist of an Endomysial and tissue transglutaminase antibody test. Further tests pursuing the diagnosis of Celiac diseases can also be performed if warranted.

Colonoscopy is necessary to determine inflammatory or ischemic causes of diarrhea and to rule out underlying colorectal malignancy.

Chronic diarrhea can broadly be categorized into **inflammatory** versus **secretory** diarrhea on the basis of stool lactoferrin. Inflammatory diarrhea is characterized by blood and mucus in the stool, maybe accompanied with rectal urgency and pain, fever or lower abdominal pain. Stool studies often show **fecal leukocytes** and **stool lactoferrin**. There may be blood and mucus visible in the stool. Noninflammatory diarrhea is characterized by watery stool frequently large-volume more than 1 L per day without blood or mucus and normally not associated with abdominal pain or fever.

Colonoscopy is necessary to determine inflammatory or ischemic causes of diarrhea and to rule out underlying colorectal malignancy.

Symptoms suggestive of an organic etiology of chronic diarrhea include a duration of longer than a month, nocturnal or continuous symptoms, and weight loss. Other causes of diarrhea such as malabsorption may also need to be investigated.

Chronic diarrhea can also be caused by infectious organisms in immunocompromised patients. These organisms are usually Protozoans and stool tests for ova, cysts and parasites lead to their diagnosis. Clostridium difficile associated diarrhea must also be considered in appropriate patients and is diagnosed with enzyme immunoassay or nucleic acid amplification (PCR) along with identifying toxin production.

Common Causes of chronic diarrhea

- Inflammatory bowel disease (Crohn's disease and ulcerative colitis)
- Disaccharide intolerances
- Malabsorption including celiac diseases
- Functional or irritable bowel syndrome
- Bile salt malabsorption
- Microscopic or collagenous colitis.
- Diabetic diarrhea
- Infectious etiology including Giardia and bacterial overgrowth.
- Drug induced diarrhea
- Food allergy
- Laxative overuse

Inflammatory diarrhea

Stool tests to assess inflammation include stool lactoferrin, fecal calprotectin, occult blood and immunochemical tests. Inflammation releases calprotectin into the intestinal lumen and its level in fecal material, which can quantify the degree of inflammation. It is particularly valuable in the assessment of Inflammatory Bowel Disease. Endoscopy plays a critical role in the workup for chronic diarrhea when cancer or inflammation is suspected. Biopsies obtained during endoscopy also assist in the diagnosis of pathology and inflammatory bowel disease including Crohn's colitis and ulcerative colitis

Ulcerative Colitis

Ulcerative Colitis is an Inflammatory Bowel Disease affecting 3.1 million Americans with a growing incidence globally. The etiology of the disease is thought to involve interactions between the immune system, environment and microbiome. The condition entails colonic inflammation resulting in ulcers of the colon and rectum. Symptoms include bloody diarrhea along with abdominal pain, weight loss and fever. Patients experience periods of active disease flares and remission. These are associated with systemic complications such as colorectal cancer, along with musculoskeletal, dermatological, or hepatobiliary extra intestinal manifestations and in severe cased toxic megacolon which may require emergency colectomy. Diagnosis entails endoscopic visualization of ulceration as well as histological evidence of inflammatory changes with chronic inflammatory cells including paneth cells and crypt abscesses noted in the pathology specimen.

Treatment for Ulcerative Colitis

Mainstays of treatment are medications includling mesalamin compounds, immunosupresants like Imurana and more potent biological medications like tumor necrotic factor blockers (TNF Blockers) like Remicade and Humira and Entyvio. These medications are tailored to the severity of disease, mild/moderate to severe.

Main medications used to achieve remission include aminosalicyclates compounds including Asacol, Pentasa, Lialda and Aprisio.

TNF Blockers like Remicade, Humira and Entyvio are reserved for moderateto severe disease. Steroids are often used during times of disease flare. Tapering prednisone over a period of four weeks are often necessary for flareups. In cases of failure to respond to medical therapy and significant complications like toxic megacolon colectomy may be required.

Osmotic diarrhea

Osmotic diarrhea is related to non-absorable ion or solutes in the intestinal lumen. Since these cannot be absorbed they exert an osmotic force on the enterocytes resulting in water being drawn into the lumen and causing diarrhea. Common causes of osmotic diarrhea include the ingestion of poorly absorbed solutes (magnesium, phosphate-containing laxatives and sugar substitutes like sorbitol and mannitol.

Functional Bowel Disease (IBS)

Functional bowel disease is a disease of exclusion and requires the fulfillment of symptom based diagnostic criteria according to Rome IV criteria. Criteria include the presence of recurrent abdominal pain at least three days per month in the last three months, associated with a change in stool frequency or form and improvement with defecation. IBS is often one of the most common etiology for chronic diarrhea. However, it is important to rule out underlying inflammatory bowel disease or colorectal malignancy.

Common Disorders

Bile acid diarrhea: Bile acids are required for the digestion of fat, but an excess amount of these acids in the colon can lead to diarrhea. This can also be seen in people who have distal small bowel resection of less than **100 cm** or abdominal radiation. This is often responsive to low dose of Cholestyramin (Bile binders).

Microscopic colitis: This condition will present with non-bloody watery diarrhea along with an increased number of intraepithelial and lamina propria lymphocytes. Diagnosis with histological assessment and Budesonide is a proven medication for treatment.

Malabsorption

The most common cause of diarrhea in this setting is linked to pancreatic exocrine insufficiency. Pancreatic dysfunction is usually caused by conditions such as chronic pancreatitis. Chronic diarrhea with an increased content of fecal fat will result. Addressing the chronic pancreatitis is a form of treatment. Diagnosis of this condition is through measurement of **fecal elastase** along with further imaging studies if warranted.

Malabsorption of fructose-based carbohydrates, lactose and polyhydric alcohols- patients deficient in enzymes needed to digest these molecules will result in their fermentation in the colon producing diarrhea. Carbohydrate breath tests for diagnosis of this condition have mixed results and dietary avoidance of trigger foods is the best course of action.

Small bowel bacterial overgrowth is another cause of diarrhea due to malabsorption. Individuals predisposed to this condition often have anatomical irregularities such as history of gastric surgery or conditions such as diabetes. Diagnosis is difficult and relies on culturing small bowel aspirate along with empiric treatment with antibiotics.

Diabetic Diarrhea

Diabetic diarrhea is also common in Type I diabetes who are on prolonged use of Insulin. The patients often have evidence of end organ damage such as retinopathy or nephropathy and autonomic neuropaty. The mechanism for diabetic diarrhea is not exaclty understood but is often due to autonomic dysfuntion of the intestine. Treatment is problematic. However patients often respond to Lomotil round the clos or alpha-adrenergic agonist like Clonidine. Octreotide may helpful is some patients.

Structural Causes of Diarrhea

Fecal incontinence due to sphincter dysfunction resulting from factors such as age, trauma and

neurogenic conditions often result in diarrhea. Various diagnostic tests such as anorectal manometry, pelvic MRI and defecogram exist, however clinical assessment with conservative measures are often first line of management. Diarrhea can also result after surgical procedures to the gastrointestinal tract, due to physiological dysfunction or creation of environments leading to bacterial overgrowth.

Rare Causes

Neuroendocrine tumors (Carcnoid tumor), especially those from gastroenteropancreatic tissue, often secrete hormones resulting in diarrhea. Diagnosis relies on the measurement of serum serotonin hormone concentration. Some notable examples include vasoactive intestinal peptide tumors, glucagonomas, and carcinoid syndrome. Testing for these conditions is recommended after exclusion of more common etiologies.

Factitious diarrhea due to laxative misuse is an uncommon chronic diarrhea.

Confirmatory tests are often required for these scenarios.

Conclusion

Assessing diarrhea can be a complex task necessitating a careful history and physical examination. Ruling out common conditions such as Celiac disease can be performed initially along with relevant initial investigations in a primary care setting. Doing so will often lead to a diagnosis, avoiding the need for referral to specialist care and invasive testing. However, the suspicion for inflammatory conditions or neoplasms should be kept high in appropriate scenarios along with invasive testing like Colonosocopy as warranted.

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Dr. Shrestha served in Medical City Weatherford Hospital in various capacities:

Chief of Staff: 01/2015 – 2016

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Chief of Medicine: 01/2011 – 12/2012

He was the President of Parker County Medical Society in 2011and started the Annual Parker County Medical Society Health Fair.

He was Medical Director in East End Health Center, Cincinnati, Ohio 1995-1998.

He is the Chairperson of NST Free Health Camp since 2009. He led the NST Medical Camps to Nepal in 6/2015 during the devastating earthquake.

He is a partner at Texas Digestive Disease Consultants the largest Gastroenterology group in the country.

In his spare time he likes to bicycle, swim, run and play the guitar.

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BLOOD DONORS OF AMERICA IN COVID-19 PANDEMIC OUTBREAK

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I have already explained a few scientific facts related to blood donation and opportunity of getting health benefit for the blood donors in general in my previous article, 'Blood Donation' in *Compassion* (1st Issue of November 2019) including my endeavor in the social obligation of individual and social organizations. Now I would like to focus on how blood donation is critical in the coronavirus pandemic situation. I emphasize that the regular blood donor can be safe to donate blood even during this outbreak and still can get additional benefit like testing of COVI –19 antibody free of cost. In addition, donation of convalescent plasma to save life in emergency is also essential.

COVID – 19 Outbreak and Scientific Efforts

Introduction

Severe Acute Respiratory Syndrome Corona Virus -2 (SARS-CoV-2) that causes COVID – 19, was first reported in Wuhan, China in December of 2019. COVID – 19 is basically a disease of respiratory system that causes pneumonia in patients to lose the life because of respiratory failure if left untreated. World Health Organization (https://www.who.int/) named the disease as Noble COVID – 19 in February 11, 2020.

As per the scientific facts, Corona virus was first identified in domestic fowls in 1930, later in 1940 found in rats. It was also reported in swine as gastrointestinal virus and in human in 1960. This is a single stranded RNA virus. For the present infection, it is assumed that the virus came to human from Pangolin, a mammal which is highly valued for a rare meat source in China and Vietnam, in a meat market of Wuhan city, Hube, China in the late 2019.

Epidemiology

According to the official website of Johns Hopkins University of Medicine (https://coronavirus.jhu.edu/map.html), COVID – 19 has been spread to almost all countries of the world, infected 27 million people with 0.9 million death toll all over the world. In USA alone the death is more than 0.18 million. The number is not stable yet, nor reached to peak and the data is changing every day. According to the United Nations forecast, the global economy is expected to lose nearly $8.5 trillion in output over the next two years due to the COVID -19 pandemic (https://www.un.org/development/desa/en/news/policy/wesp-mid-2020-report.html).

COVID-19 became a devastating and mentally stressful disease of this era across the world and can infect 7.5 billion people. In the beginning,

> "Until the vaccines become available in the market, several drugs such as Favipiravir, Chloroquine and hydroxyl chloroquine, non-steroid anti-inflammatory drugs etc. have been tried with big controversy. Convalesce plasma is also in practice under emergency use authorization policy."

there was a confusion and suboptimal guidelines from the Centers for Disease Control and Prevention (https://www.cdc.gov/) to some extent to be opted by ordinary people in daily life. A shut down policy and other scientific measures are helping to slow down its spread.

Scientific Research

To combat the COVID - 19, the world-class research institutions and their leaders are actively engaging in finding its prevention to relieve the world by introducing drugs and vaccines against the disease. A search term "COVID - 19" in PubMed (https://www.ncbi.nlm.nih.gov/pmc/?term=COVID-19) as of today, Sep 7, 2020 hits 53, 918 peer reviewed scientific literatures. This is a huge number of scientific papers that suggests how much efforts from scientists have been invested in research to identify the remedy of this invisible culprit.

The range of research coverage extends from epidemiology, treatment strategy, psychological categories, effect of COVID - 19 in carrier conditions including hypertension, diabetes and cancer, usage of convalescence plasma as an emergency therapy, and vaccine development for the proper prevention.

The literatures also discuss the factors that may influence in susceptibility to the disease such as age, gender (studies show that male patients are dying from COVID-19 at a much higher rate than women despite similar rates of infection; https://utswmed.org/whattoknow), diet, life style (public transporter users), population density, cultural habits, and most importantly individual variability in immune system.

It has shown a high degree of contagious characteristic from one person to other and may pass from one to another even in asymptomatic situations. This characteristics impose a big hurdle to trace out the careers getting infiltrated into the healthy population.

Therapeutics Approach

Usage of nonpharmacological interventions such as face mask in addition to frequent hand washing with soap and water, and maintaining a 6-feet physical distance etc. came into practice a bit later. Social distancing and use of mask are understood to significant impacts on reducing the spread of this disease (https://utswmed.org/covid-19).

As explained above, scientists of the world are working hard to bring out the vaccines against this diseases as soon as possible. According to the clinical trial research (https://clinicaltrials.gov/), more than 3000 trial research are proposed up to now. However, more than 1600 trials have been in active phase of recruiting at the moment, whereas 100 trials are enrolling for trial. We do anticipate that the vaccine will be available soon in the market.

Until the vaccines become available in the market, several drugs such as Favipiravir, Chloroquine and hydroxyl chloroquine, non-steroid anti-inflammatory drugs etc. have been tried with big controversy. Convalesce plasma is also in practice under emergency use authorization policy.

Efforts of BDA to Save Human Life and Mental Health

Blood Donors of America (BDA) established in 2009 basically works creating awareness in blood donation and healthy life style. Saving human life with the help of blood donation is its primary arena of contribution and sole field of activities. However, its objective is not limited merely to blood donation but also it works and supports health education.

BDA organized distant educational talk programs about COVID - 19 in the early days of its outbreak to pass scientific information to its members and communities through series of ZOOM programs. In the several episodes of interactive programs, many subject matter specialists tried to pass scientific facts to the community in non-technical language to boost the understanding.

Our official records show that BDA contributed more than 100 pints of blood during this COVID-19 pandemic outbreak period from March to August, 2020 through 11 blood donation events organized across the USA. This data excludes individual volunteer's donation count who donated blood in the blood bank in times other than event date. Blood banks are open and regulated as per the guidelines of CDC and local governments. We did donation in several states of the USA in this pandemic to boost mental health of individuals.

The purpose of keeping blood donation continue is to supply the blood to hospitals during this harsh situation. Because of COVID - 19, people are not able to get out from their shelter of primary residence and have to be locked at home. Donating

blood makes them feel better and happy at these difficult circumstances. Thus, it is not only being a means of life saving event but also a means of mental health support therapy.

Meantime we also looked for an alternative way to help people in this hard time and found a way to extend relationship with several other organizations. We discussed and completed memorandum of understanding with Nepalese Association in Southeast America (NASeA) in the USA during this period. The aim of this plan is to motivate as many people to bring in as possible in blood donation. We anticipate that this plan will enhance the blood donation activities in larger area and will help saving many human lives.

Everyone understands that the viral disease COVID - 19 will not be controlled unless the vaccines are available. However, vaccines are on the way but not yet available. Medical scientists are in favor of convalescent plasm, although not fully approved by FDA, but it is approved in a condition called Emergency Use Authorization (EUA).

Future Action Plan of BDA

BDA is closely working together with its health division advisers to go for convalescent plasma donation. Convalescent plasma is the plasma that is received from donors who react positive for COVID – 19 test. Both patients of COVID – 19 who noticed their infection or who do not but react positive for the test can donate plasma. This plasma has been used in critical COVID – 19 patients to save life.

In this effort, BDA has invited and requested all previously COVID - 19 infected or tested positive volunteers to donate their plasma that could be very valuable to treat COVID - 19 patients, especially the elderly with medical conditions when the other means of treatment are ineffective.

Since COVID - 19 may be closely associated with flu in the cold season which can aggravate the disease condition and can face challenges. Thus, BDA is willing to work with Texas Nepalese Medical Association (TNMA) to spread the message of Flu vaccination importance and encourage people to get the Flu vaccine on time.

Those donors who donated blood after June 22, 2020, their blood is likely to be tested for COVID-19 exposure by antibody test. This policy is still active and those who donate blood will be tested if they got any exposure in the past. This information will help them and their family and friends.

I would like to invite all blood donors to join Blood Donors of America (http://blooddonorsofamerica.org/) and social organizations to organize blood donation events in support of community.

ABOUT THE WRITER

Dr. Nanda Regmi, a Senior Research Scientist in the University of Texas Southwestern (UTSW) Medical Center at Dallas, TX, a world class university of this age. A first veterinary graduate of Nepal, Dr. Regmi received his Ph.D. from Tokyo University of Agriculture and Technology, Tokyo, Japan in pharmacology and completed his postdoctoral training in UTSW with internationally recognized scientists. Dr. Regmi also served Nepal government in multiple capacities such as assistant professor of Tribhuvan University and Veterinary Officer of Livestock Services. Dr. Regmi has been recognized with numerous awards, honors and memberships of different professional organizations.

In addition, Dr. Regmi is also known for his philanthropic contributions, as being the first elected president of Blood Donors of America (BDA), a charitable organization. BDA, highly prestigious organization holds members like the Guinness book record holder in whole blood donation, Mr. John Sheppard. Dr. Regmi is also a life member of International Nepali Literary Society a founder member of Nepalese Cultural and Spiritual Center; and a founding member and a member of board of trustees of Indreni Cultural Association of Dallas, TX. Dr. Regmi is listed as one of the outstanding biomedical scientists and philanthropists in the USA by a book "Nepali WHO IS WHO IN THE USA, 2019".

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Sarmila Shrestha
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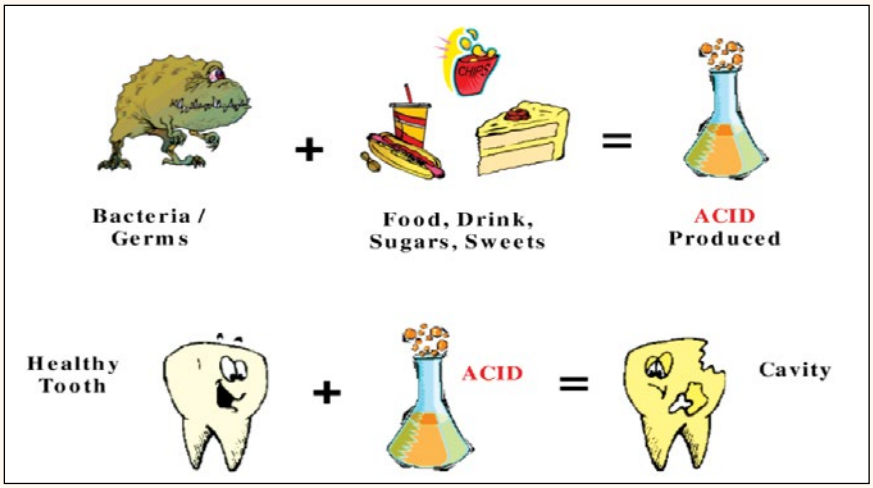
"When the cavities are small and diagnosed early, it can be easily treated by fillings. Fillings are the most common and the least expensive form of treatment. The dentist drills into the affected area(s) of the teeth, removes the decay and fills the empty space with an appropriate filling material."

TOOTH DECAY

Tooth decay, also known as cavities or dental caries, is the destruction of the hard outer layer of the tooth due to acid produced by the bacteria in the mouth, thereby causing holes. The main cause of tooth decay stems from plaque - a yellowish white film of bacteria that endlessly forms on the teeth. When the bacteria in the plaque come in contact with sugary foods, they produce acid that attacks the tooth enamel.

Tooth decay is a major health problem in most industrialized countries, and impacts those of all ages. According to WHO, approximately 2.3 billion people worldwide have tooth decay in their permanent teeth, and additionally another 620 million children suffer from tooth decay in their baby teeth.

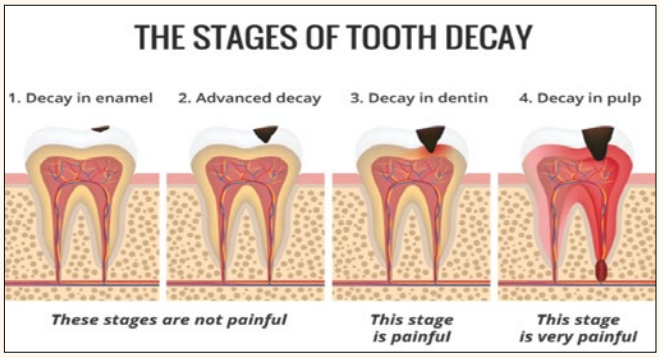


Types of tooth decay:

Cavities on the chewing surface

Cavities in between the teeth

Cavities at the gumline



Signs and symptoms:

The signs and symptoms of cavities depend on their severity. When a cavity is just beginning, you may not have any symptoms at all. As the decay gets larger, it may cause:

- Toothache - spontaneous pain or pain when biting down
- Sensitive teeth
- Mild-to-sharp pain when eating or drinking something sweet, hot or cold
- Visible holes or pits in your teeth
- Brown, black or white staining on any surface of a tooth

Risk factors:

- Poor oral hygiene from inadequate brushing and flossing
- Dry mouth
- Excessive consumption of sugary, starchy or acidic foods or drinks
- Frequent snacking or sipping. When you snack or sip sugary drinks frequently, you give mouth bacteria more fuel to produce acid that attacks your teeth and causes cavities.
- Bedtime bottle: Putting the babies to bed with a bottle filled with milk or formula causes severe tooth decay called Baby Bottle Syndrome.

Baby bottle syndrome

- Not getting enough fluoride: Fluoride, a naturally occurring mineral, strengthens your teeth and can even reverse the earliest stages of tooth decay.
- Worn fillings or dental devices allow plaque to build up more easily and make it harder to remove.
- Heartburn, gastroesophageal reflux disease, or eating disorders such as anorexia and bulimia, can cause stomach acid to flow into your mouth causing damage to your teeth.

Complications:

If left untreated, tooth decay may cause:

- Pain and swelling that interferes with daily living
- Damaged or broken teeth
- Weight loss or nutrition problems from difficulty eating or chewing
- Shifting of teeth after tooth loss
- Lack of confidence and self-esteem due to change in appearance
- Tooth abscess (pocket of pus caused by infection) may trigger life-threatening complications. In rare case, the bacteria from the abscess enters the bloodstream and cause sepsis

Treatment:

Treatment of cavities varies, depending on the severity. It's always best to get treatment done as soon as the cavities are diagnosed. If you wait, you risk the cavity growing worse, requiring a more expensive and complicated procedure.

- **Fillings**: When the cavities are small and diagnosed early, it can be easily treated by fillings. Fillings are the most common and the least

expensive form of treatment. The dentist drills into the affected area(s) of the teeth, removes the decay and fills the empty space with an appropriate filling material.

- **Crowns**: For more severe decay, when a big portion of tooth structure is lost, a large filling can make the tooth more vulnerable to fracture. So your dentist may place a custom-fit cap over your tooth to replace its tooth structure.
- **Root Canal**: As tooth decay progresses deeper into the nerves, causing severe inflammation or death of the nerves, the tooth becomes extremely painful and root canal treatment is needed to save the tooth. During this procedure, the dentist removes all the decay and the infected nerve tissues, cleans the root canals and fills them with some sealing materials.
- **Extraction**: If the cavities are left untreated, the tooth may be damaged beyond repair and must be extracted. The missing tooth is then replaced by implant, bridge or partial denture.

Prevention:

Good oral hygiene can help you avoid tooth decay. Here are some tips to help prevent cavities.

- Brush twice a day with fluoride toothpaste.
- Clean between your teeth daily with floss or interdental cleaner.
- Eat nutritious and balanced meals and limit snacking
- Limit consumption of sugary and acidic foods, like sweets, candy, juice, soda, and refined carbohydrates.
- Ask your dentist about the supplemental fluoride treatment, and dental sealants (a plastic protective coating) applied to the chewing surfaces of the back teeth to protect them from cavities.
- Visit your dentist every 6 months for professional cleanings and oral examination starting from the age of 6 months.

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Dr. Sarmila Shrestha is a dentist based in Dallas, Texas. She is the co-owner of Care N' Cure Dental (Garland, TX) and Round Grove Family Dentistry (Lewisville, TX). She has been in private practice since 2007. She practices a conservative approach to treat her patients. Her goal is to educate patients to establish a long-term commitment towards optimal oral health. She has been volunteering at the Nepalese Society of Texas/Texas Nepalese Medical Association health camps and providing dental consultation to her community members since 2011.

Dr. Shrestha received her Bachelor of Dental Surgery from Dhaka University Dental College and Doctor of Dental Surgery (DDS) degree from New York University College of Dentistry.

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TODDLERS:
A SHORT GUIDE

Kamala Adhikari
RN

Introduction

During this period, children are advancing from infancy toward and into the preschool years. Their physical growth and motor development will slow, but you can expect to see some tremendous intellectual, social, and emotional changes. According to Erik Erikson's psychosocial theory toddlerhood is the stage of "autonomy vs shame and doubt". Toddlers learn exercise of self-control and influence the environment directly as positive outcomes. They also demonstrate defiance negativism as a negative outcome.

Traits of a Toddler

A. Physical

a. Walking independently
b. Towing toys behind while walking
c. Beginning to run
d. Standing on tiptoes
e. Kicking a ball

B. Social

a. Imitating the behavior of others
b. Being aware of themselves as separate from others
c. Being enthusiastic about the company of other children

C. Cognitive

a. Ability to find objects even when hidden two or three levels deep
b. Ability to sort out by shape and color
c. Playing make-believe

Terrible Twos

Around your toddler's second birthday, sometimes even earlier, you may wonder what happened to your adorable, sweet child. This phase is more stressful to the parents, and many may believe that something is wrong; however, this period is normal and an expected part of the growth of a child. Your child's behavior is a way of expressing their need for independence along with their frustration being in no control all the time.

Common Behavior

(1)Screaming; (2) Temper Tantrums; (3) Kicking and biting; (4) Sibling fighting; (4) Total meltdowns; (5) Separation anxiety.

During this growing phase, help them to grow. Do not discipline them. As a toddler or preschooler, your child may lack the self-control to express anger peacefully and may naturally lash out, perhaps hitting or biting in frustration. Help your child to express anger and frustration in a healthy manner, stay calm, as discipline means only distraction and unhealthy behavior.

Dealing with Separation Anxiety: Unlike when s/he is a baby, your toddler now knows when you leave and you come back. That's why your toddler clings to you every time you go out. While separation anxiety isn't easy it's completely normal and should fade by the time your child reaches his second birthday. Say "Goodbye" each time you leave home and have someone to distract him and get out quickly. Give him a big hug once you return. Follow the same rule each time even if only for a few minutes.

"As a toddler or preschooler, your child may lack the self-control to express anger peacefully and may naturally lash out, perhaps hitting or biting in frustration. Help your child to express anger and frustration in a healthy manner, stay calm, as discipline means only distraction and unhealthy behavior."

Dealing with Tantrums: Tantrums can be stressful for both you and your child. They also can be embarrassing, especially if your child picks a public place for her fit. Stay calm and help them express their emotions in a way that is not harmful to them or surrounding people

Help Tips

A. Teach your children the house rules.

a. Children do not know the rules of the house until they have been taught. Toddlers are normally interested in touching and exploring. Consider setting up a separate space or room of your home where your child can play with books and toys.

B. Threats are overrated.

a. It is always more effective to positively reinforce desired behaviors and to teach children alternative behaviors rather than just say, "Stop it or else." Tell them that the next time they are angry, they should use their words instead.

C. Use healthy distractions

a. Distract your kids while actively teaching them alternative methods to respond.

D. "We don't hurt each other"

a. Supervise your child carefully while they are involved in disputes with playmates. If a disagreement is minor, keep your distance and let the children solve it on their own.

E. Great Job!

a. Praise your children for appropriate behavior and help explain how "grown-up" they are acting whenever she uses these tactics instead of hitting, kicking, or biting. Always reinforce and praise behavior when you catch your child being kind and gentle.

F. Safety

a. Turn pot handles towards back of stove
b. Put safety locks on drawers
c. Teach swimming and water safety
d. Always supervise them playing outdoors
e. Avoid large chunk of meat
f. Use car seat properly.

Instead of fighting: Teach your child to say "No" in a firm tone of voice, to turn his back, or to find compromises instead of fighting with his body. Through example, you are teaching your child to settle differences with words—more effective and more civilized—than with physical violence.

Reinforcement:

Time-outs are OK. Giving a child a time-out can be a useful tool to help them cool down and learn good behavior. There is also nothing wrong with using a time-out when your child's behavior is inappropriate, and they can be used for children of one year old. Warn your child first, "If you don't stop, you'll have a time-out."

Have your child go to a quiet place, like a corner of a room, not a bedroom or a playroom.

Start the timer—1 minute for each year of age. For example:

- 2 years old = 2 minutes
- 3 years old = 3 minutes

Control your own temper. If you express your anger in quiet, peaceful ways, your child will follow you.

Last Words

At this age, your child will seem to be continually on the go—running, kicking, climbing, jumping. This year-long energy spurt certainly will keep you on the go. But take heart—his /her activity level will strengthen his body and develop his coordination.

Toys:

- For locomotive skills
  - push toys, riding toys or tricycles, rocking horse, swing and slides
- As an outlet for aggressive behavior
  - work bench, toy hammer, nails, drums, pots, pans
- To develop fine motor skills and problem solving
  - puzzles, blocks, finger paints, crayons

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Jaff M pediatric nursing care plan

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Kamala Adhikari is a registered nurse, who has an experience of 25 years plus combining both in Nepal and in the United States.

Previously, she has served as a nursing professor at Yeti Health Science Academy and various nursing schools in Nepal. She has focused her energy in pediatric nursing and has a great passion working with children.

In her personal life, Kamala enjoys writing, actively serving her community, and focusing on educating the Nepali community on health and safety.

STROKE

Sandeep Pandey
MD

A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or bursts (or ruptures). When that happens, part of the brain cannot get the blood (and oxygen) it needs, so it and brain cells die.

Stroke kills about 140,000 Americans each year—that's 1 out of every 20 deaths. Someone in the United States has a stroke every 40 seconds. Every 4 minutes, someone dies of a stroke.

Stroke symptoms:

Use the letter in F.A.S.T. to spot stroke signs and know when to call 9-1-1.

F: Face Drooping:

Does one side of the face droop or is it numb? Ask the person to smile. Is the person's smile uneven or lopsided?

A: Arm Weakness:

Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?

S: Speech:

Is speech slurred? Is the person unable to speak or hard to understand? Ask the person to repeat a simple sentence.

T: Time to call 9-1-1

If the person shows any of these symptoms, even if the symptoms go away, call 9-1-1 and get them to the hospital immediately.

Additional symptoms of Stroke:

If someone shows any of these symptoms, call 9-1-1 or emergency medical services immediately:

- Sudden numbness or weakness of face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache with no known cause

> "If you get to the hospital within 3 hours of the first symptoms of an ischemic stroke, you may get a type of medicine called a thrombolytic (a "clot-busting" drug) to break up blood clots. Tissue plasminogen activator (tPA) is a thrombolytic. tPA improves the chances of recovering from a stroke."

Type of Stroke:

Ischemic Stroke (Clots):

Ischemic stroke occurs when a vessel supplying blood to the brain is obstructed. It accounts for about 87 percent of all strokes.

Hemorrhagic Stroke (Bleeds):

Hemorrhagic stroke occurs when a weakened blood vessel ruptures. The two types of weakened blood vessels that usually cause hemorrhagic stroke are aneurysms and arteriovenous malformations. The most common cause of hemorrhagic stroke is uncontrolled high blood pressure.

There are 2 types of hemorrhagic strokes:

- Intracerebral hemorrhage is the most common type of hemorrhagic stroke. It occurs when an artery in the brain bursts, flooding the surrounding tissue with blood.
- Subarachnoid hemorrhage is a less common type of hemorrhagic stroke. It refers to bleeding in the area between the brain and the thin tissues that cover it.

TIA (Transient Ischemic Attack):

Called a "mini stroke," it's caused by a serious temporary clot. This is a warning stroke and should be taken seriously.

It is important to know that:

- A TIA is a warning sign of a future stroke.
- A TIA is a medical emergency, just like a major stroke.

Strokes and TIAs require emergency care. Call 9-1-1 right away if you feel signs of a stroke or see symptoms in someone around you.

There is no way to know in the beginning whether symptoms are from a TIA or from a major type of stroke.

Like ischemic strokes, blood clots often cause TIAs.

More than a third of people who have a TIA and don't get treatment have a major stroke within 1 year. As many as 10% to 15% of people will have a major stroke within 3 months of a TIA.

Recognizing and treating TIAs can lower the risk of a major stroke. If you have a TIA, your health care team can find the cause and take steps to prevent a major stroke.

Cryptogenic Stroke

In most cases, a stroke is caused by a blood clot that blocks the flow of blood to the brain. In some instances, despite testing, the cause of a stroke cannot be determined. A stroke of unknown cause is called a "cryptogenic stroke."

Brain Stem Stroke

When stroke occurs in the brain stem, it can affect both sides of the body and may leave someone in a 'locked-in' state. When a locked-in state occurs, the patient is generally unable to speak or move below the neck.

Stroke Risk factors you can control treat and improve:

- High Blood Pressure: High blood pressure, or hypertension, is a leading cause of stroke and the most significant controllable risk factor.
- Smoking: The use of birth control pills combined with cigarette smoking can greatly increase the risk stroke.
- Diabetes: Good control of DM can be done by losing weight, regular exercise and medicines.
- Diet: Diet high in saturated fat, Trans fat and cholesterol levels. Diets high in sodium (salt) can increase blood pressure. Diets with high calories can lead to obesity. But, a diet containing five or more servings of fruits and vegetables per day may reduce the risk of stroke.
- Physical Inactivity: Aim for being active at least 150 minutes a week, but if you don't want to sweat the numbers, just move more and sit less.
- Obesity: Losing as little as 5 to 10 pounds can make a significant difference in your risks.
- High blood cholesterol: High LDL (bad cholesterol) is a risk factor for stroke.
- Carotid artery disease
- Peripheral artery disease
- Atrial fibrillation
- Sleep Apnea
- Coronary heart disease / heart failure
- Sickle cell disease

Can stroke be prevented?

High blood pressure is the single most important treatable risk factor for stroke. Preventing, diagnosing,

and controlling it through lifestyle changes and medicine are critical to reducing stroke risks.

There are several steps you can take to reduce your risk for stroke:

- Eat a healthy diet low in sodium with plenty of fruits and vegetables.
- Maintain a healthy weight.
- Be physically active.
- Don't smoke, and avoid secondhand smoke.
- Limit alcohol use.
- Prevent or manage your other health conditions, especially high blood pressure, high cholesterol, diabetes, and obesity.

What Happens at the Hospital?

At the hospital, health professionals will ask about your medical history and about the time your symptoms started. Brain scans will show what type of stroke you had. You may also work with a neurologist who treats brain disorders, a neurosurgeon that performs surgery on the brain, or a specialist in another area of medicine.

If you get to the hospital within 3 hours of the first symptoms of an ischemic stroke, you may get a type of medicine called a thrombolytic (a "clot-busting" drug) to break up blood clots. Tissue plasminogen activator (tPA) is a thrombolytic. tPA improves the chances of recovering from a stroke. Studies show that patients with ischemic strokes who receive tPA are more likely to recover fully or have less disability than patients who do not receive the drug. Patients treated with tPA are also less likely to need long-term care in a nursing home. Unfortunately, many stroke victims don't get to the hospital in time for tPA treatment. This is why it's so important to recognize the signs and symptoms, stroke right away and call 9-1-1.

Medicine, surgery, or other procedures may be needed to stop the bleeding and save brain tissue. For example:

Endovascular procedures: Endovascular procedures may be used to treat certain hemorrhagic strokes. The doctor inserts a long tube through a major artery in the leg or arm and then guides the tube to the site of the weak spot or break in a blood vessel. The tube is then used to install a device, such as a coil, to repair the damage or prevent bleeding.

Surgical treatment: Hemorrhagic strokes may be treated with surgery. If the bleeding is caused by a ruptured aneurysm, a metal clip may be put in place to stop the blood loss.

Stroke Rehabilitation:

After a stroke, you may need rehabilitation (rehab) to help you recover. Before you are discharged from the hospital, social workers can help you find care services and caregiver support to continue your long-term recovery.

What Happens Next?

If you have had a stroke, you are at high risk for another stroke: 1 of 4 stroke survivors has another stroke within 5 years.

The risk of stroke within 90 days of a TIA may be as high as 17%, with the greatest risk during the first week.

That's why it's important to treat the underlying causes of stroke, including heart disease, high blood pressure, atrial fibrillation (fast, irregular heartbeat), high cholesterol, and diabetes. Your doctor may give you medications or tell you to change your diet, exercise, or adopt other healthy lifestyle habits. Surgery may also be helpful in some cases.

Source: *CDC, American Society of Stroke*

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Elina Shakya
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> Diabetes can damage blood vessels of heart and can cause blockade of vessels leading to heart attack. Diabetes can also cause obstruction of blood vessels in brain causing stroke. Heart attack and stroke are leading causes of death.

DIABETES MELLITUS TYPE II

Why is it important to screen for Type II Diabetes?

In many people, **diabetes does not have any symptoms**. However, it can easily damage small and big blood vessels in body without causing any symptoms for many years. If diabetes is diagnosed at early stage, it is possible to avoid or decrease the damage to blood vessels on time by medications and lifestyle modification.

What exactly causes increase in blood sugar in Type II Diabetes?

Resistance to Insulin (produced inside body) causes increase in blood sugar. Insulin is produced by pancreas. Normally insulin acts on muscle, fat and liver to use glucose in blood to produce energy. But in Type II Diabetes, cells in these organs do not respond well to insulin and cannot use glucose from blood to produce energy. To make up for it, pancreas makes more insulin. Over the time blood sugar level goes up.

What kind of damage is caused by Diabetes?

By affecting the small blood vessels in body, **Diabetes can cause damage to eyes, nerves, and kidneys**. Damage to eyes can cause blindness without treatment. If nerves are affected it can cause numbness, burning, pain and tingling sensation to hands and feet. If kidneys are damaged by Diabetes, it can fail to work; ultimately making a person dependent on dialysis for one's life.

Diabetes can damage blood vessels of heart and can cause blockade of vessels leading to heart attack. Diabetes can also cause obstruction of blood vessels in brain causing stroke. Heart attack and stroke are leading causes of death. Diabetes can also damage blood vessels in extremities and can cut off blood supply for e.g. It can lead to gangrene of foot, which means death of part of foot due to lack of blood flow. In such situation, the only treatment is to cut off part of that foot.

Thus, Diabetes can prove to become extremely dangerous because of all complications as explained above.

What can a person with Diabetes do to decrease or prevent complications of Diabetes?

Often if a person is already diagnosed with Diabetes, lifestyle intervention (more about this later) only may not be sufficient to

control the disease. Thus, "**regularly taking the medications for Diabetes" as instructed by the doctor is the most important responsibility of a Diabetic person.** It is also vital to stay in touch with the doctor and frequently get investigations instructed by doctor. A diabetic person should also be tested for protein leak in urine once a year. He or she should also visit Eye doctor once a year to check for eye disease related to Diabetes (to prevent diabetic blindness). It is also important to get checked for nerve damage in feet, and thus take care of feet to avoid foot infection.

How is diagnosis of Diabetes Type II done?

Diagnosis of Diabetes is done by one of the following tests-

(i) A1C level of 6.5 percent or higher on two separate tests

(ii) Random blood sugar level more than 200 mg/dL

(iii) Fasting blood sugar is more than 126 mg/dL or higher on two separate tests

(iv) Oral glucose tolerance test- fasting overnight followed by drinking a sugary liquid, then sugar levels are tested for the next two hours. A reading of 200 mg/dL or higher after two hours suggests diabetes.

How often should blood glucose be tested in a day?

Blood glucose can be easily tested by glucometer. It is advised to check sugar in morning while fasting before breakfast, 1-2 hours after breakfast, before lunch, 1-2 hours after lunch, before dinner and at bedtime before sleep. Checking sugar at different times of the day is important to monitor the time of high sugar. This can help in adjusting medications for Diabetes.

What should be target for A1C in Diabetic person?

An adult person with Diabetes should **target to have A1C less than 7**

What should be target sugar level in morning before breakfast?

This should be less than 126 mg/dl

What should be target sugar level 1-2 hours after a meal?

This should be less than 180 mg/dl

What should be target sugar before meals?

This should be within 80-130 mg/dl

What kind of lifestyle intervention helps with Type II Diabetes?

Lifestyle intervention is any intervention that includes Exercise, Diet, and at least one other component (e.g., counseling, stress management, quitting smoking). Any physical activity including exercise can improve resistance to insulin (described above) and help with decrease in blood glucose. A diet low in carbohydrate is important for Diabetes control. Smoking along with Diabetes, High blood pressure and high cholesterol can increase risk of heart attack and stroke. Thus**, stopping smoking may prevent heart attack and stroke.**

What about diet recommendation for Diabetes?

This is one of most common questions asked about Diabetes. Answer is quite simple. **Diet for diabetic person should have less carbohydrate.** Increase in blood glucose is related to amount and type of carbohydrate intake. Rice, potatoes and white bread are common carbohydrates that increase sugar and should be taken in small amount. Any sugary drink like any juice or soda significantly increases sugar. A sweet fruit like mango and pineapple also increases

> "There are usually two types of insulin. One is long acting insulin, which will work for long hours like 12 or 24 hours in a day. Other is short acting insulin, which will work for several hours a day and is usually taken just before meals."

sugar. One should increase intake of protein and good source of fat to replace carbohydrate for controlling Diabetes.

When is insulin injection necessary for Diabetes?

If multiple oral medications fail to control Type II Diabetes, adding Insulin to regimen becomes necessary. Insulin is very potent and efficient in bringing down blood glucose. **One must remember that taking insulin can decrease need for other oral medications.** There are usually two types of insulin. One is long acting insulin, which will work for long hours like 12 or 24 hours in a day. Other is short acting insulin, which will work for several hours a day and is usually taken just before meals.

Should a Diabetic person also be aware of risk of low sugar?

Yes! A diabetic person who is taking multiple oral medications for Diabetes or taking insulin must be careful about low sugar. If he or she performs a prolonged physical activity like running, does not eat any snacks or meals for long hours, or if he or she does not have good appetite and eats less, there is a chance that sugar might drop too low (less than 70 mg/dl). Low sugar can cause symptoms like tremor, sweating, dizziness, lightheadedness, confusion. **One should immediately realize the symptoms of low sugar and eat accordingly in timely manner.** If not, one can even pass out due to low sugar.

If someone has Type II Diabetes, should he or she feel stressed?

No! Diabetes is extremely common disease, but it is also one of few diseases that can be treated with lifestyle modification, which is under one's control. If one has Diabetes, one should take this situation as an opportunity to make good choices, to become overall healthy and happy.

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CHRONIC KIDNEY DISEASE

Baroon Rai
MD

Human body is extremely complicated. There are different ways to understand and state the structure and function of the human body. Traditionally we have been defining the human body as a whole of multiple major organ systems; with one organ system being responsible for one vital function for survival and integrity of the human body. Following this convention, kidneys are thought to be primarily responsible for regulating the water and the electrolyte composition of the body. Additionally, kidneys secrete hormones necessary for red blood cell production from the bone, and they also activate vitamin D (to its active or usable form). Vitamin D is necessary for a myriad of body functions but most notably for calcium and bone health.

Chronic Kidney Disease, as the name implies, it is a more long-term and irreversible impairment of kidney function. It affects all the major functions of the kidney but most importantly the water and electrolyte regulation. Kidneys normally filter about 180 liters of blood every day, approximately around 120 ml every minute. This number is important and is called the filtration rate. The majority of this filtered fluid is water; in this water are electrolytes (Sodium, Potassium, Calcium etc.) and metabolic waste products in the form of urea and creatinine. Almost ninety-nine percent of the water is absorbed back to the bloodstream; this being the absorptive function of the kidney. Majority of the electrolytes are reabsorbed while some are eliminated along with the urea and creatinine in the urine. In chronic kidney disease all of these functions are altered. The filtering function which is easier to measure is impaired, usually below 60 ml per minute. The severity of this disease can be approximately graded by the decline in this filtering function.

> "Patients, who go on to develop advanced chronic kidney disease and end-stage renal disease requiring dialysis, suffer from a variety of complications including infection of the dialysis port and blood stream, metabolic complications including poor bone health and overall increased risk of dying from cardiovascular diseases."

Signs and Symptoms of Chronic Kidney Disease

One of the major difficulties identifying patients with chronic kidney disease is the relative lack of signs and symptoms until fairly late in the course of the disease. Most of these patients develop symptoms only when their chronic kidney disease is very advanced. Retention of water and accumulation of metabolic wastes lead to body swelling, shortness of breath, loss of appetite and sometimes sudden death. Rarely a patient can be very sleepy and can slip into a coma. Once these symptoms develop the patient will need dialysis. Dialysis is an artificial kidney replacement therapy and will be discussed later in this article.

Prevention and Risk factors for Chronic Kidney Disease

The major risk factors for Chronic Kidney Disease worldwide is Diabetes and Hypertension (High Blood Pressure). The major risk factors in the South Asian Population probably are the same. Obesity, genetic/hereditary factors and untreated throat and skin infection are other risk factors. The prevalence in the South Asian community could be as high as 10-15% of the general adult population. Uncontrolled Diabetes and Hypertension over a period of time, usually over 10 years, lead to chronic kidney disease in patients who are perhaps genetically predisposed. The rate of progression varies depending on the control of risk factors and the individual genetic predisposition but in general it is somewhat constant and predictable for an individual patient.

Dialysis and Kidney Transplantation

Once the kidney function is below a certain threshold (usually filtration rate of less than 15 ml/min) and patients start developing symptoms for dialysis. Hemodialysis is the most commonly used kidney replacement treatment in the US. The basic technique was first developed at the University of Washington in the 1960s. A patient's blood is run through a machine in sessions of 3-4 hr about 3-4 times a week to remove metabolic waste and excess water. The filtered blood is returned back. It is a life-saving technology before which end-stage Kidney disease is uniformly fatal. Peritoneal dialysis is an alternative technique where the peritoneum, the inside lining of the abdomen is used to filter the blood. The abdominal cavity is periodically filled (followed by draining) with dextrose solution which draws metabolic toxins and excess water from the blood that runs through the blood vessel in the peritoneal membrane.

Though dialysis is a life-saving technique it is not as effective as kidney, and it has some unique challenges and complications. Besides the medical complications and challenges, dialysis binds people to a rigorous schedule of hemodialysis for several hours three times a week or daily peritoneal dialysis. The better alternative for most patients is having a transplant kidney either from a living donor or a deceased person(cadaver). It gives the best chance to live a relatively normal life with near-normal life expectancy to most patients.

Outcome for Chronic Kidney Disease

Many chronic kidney disease patients suffer from other complications of the same risk factors that lead to their kidney disease. In addition to these risk factors, chronic kidney disease in itself is a significant risk factor for heart disease. They suffer more from ischemic heart disease "heart attacks" and stroke "brain attack".

Patients, who go on to develop advanced chronic kidney disease and end-stage renal disease requiring dialysis, suffer from a variety of complications including infection of the dialysis port and blood stream, metabolic complications including poor bone health and overall increased risk of dying from cardiovascular diseases. In fact, people on dialysis die at an annual rate of about 18-20% which is comparable to some advanced cancers.

Chronic kidney disease has emerged as a major health and economic burden for the entire global population including the United States. It is disproportionately higher in ethnic minorities in this country. An early intervention in risk factor modification in diabetes prevention, obesity prevention and blood pressure management is the most effective way of preventing chronic kidney disease. A close follow-up with a primary care doctor for risk factor control and for monitoring the progression of disease is the necessary next step. When the chronic kidney disease is advanced, referral to a nephrologist (kidney specialist) is required for a more sophisticated approach to disease control and for preparation for dialysis and kidney transplantation.

ABOUT THE WRITER

Dr. Baroon Rai is a critical care medicine specialist and currently practices at Sutter Medical Center in California.

He is the medical director for the intensive care unit and is deeply interested in working on system issues to improve patient safety and quality of patient care.

Dr. Rai is board certified in critical care medicine, nephrology and internal medicine.

MEDICARE

Dipesh Bista
MD

Medicare is the federal health insurance program. It is important to understand following when we talk about Medicare:

1) Eligibility
2) Parts of Medicare
3) Gaps and supplemental insurance
4) Medical advantage Plan

Eligibility

Following people are eligible for the Medicare Federal Healthcare Insurance Program:

- People who are 65 or older
- Certain younger people with disabilities
- People with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD)

It does not mean this it is free for these eligible individuals. It is very important for immigrants to understand Medicare, who have immigrated in later parts of their life and have not paid Medicare taxes long enough.

Let's try to understand different parts of Medicare first.

The different parts of Medicare help cover specific services:

- **Medicare Part A (Hospital Insurance**

  covers hospital stays (inpatient), care in short term skilled nursing facility and rehabilitation, hospice care, and some home health care.
  (Does not cover long term nursing home or assisted living facility).
- **Medicare Part B (Medical Insurance)**

  Part B covers certain doctors' services, outpatient care, medical supplies, and preventive services.
- **Medicare Part D (prescription drug coverage)**

  Helps cover the cost of prescription drugs (including many recommended shots or vaccines).

People aged 65 or older are eligible for free Medical Hospital insurance (Part A) if they have worked and paid Medicare taxes long enough, which is 40 quarters. This can be followed by creating an account at www.ssa.gov. You can follow Medicare and social security status with estimated benefits at this website after you create your account.

> "Your healthcare services are covered by the private insurance companies that have contract with Medicare and get reimbursed at their own terms. You cannot also have Medigap policies when you have Medicare Advantage Plan."

If you don't qualify for premium-free Part A, you can buy Part A. If you buy Part A, you'll pay up to $ 458.00 each month. If you paid Medicare taxes for less than 30 quarters, the standard Part A premium is $ 458.00. If you paid Medicare taxes for 30-39 quarters, the standard Part A premium is $ 252.00.

Once you have Medicare Part A, there are deductible ($1408.00) you would have to meet for each benefit period. After 60 days of hospital/ skilled nursing facility stay, there is also co-insurance you would have to pay.

Medicare Part B covers outpatient services, including doctor's fee, medical supplies, preventive services but it does not cover medications that your doctors may prescribe. This part is not free even if you have paid Medicare taxes in past. Premium for Part B is $ 144.60 (or higher depending on your income). This plan will cover only 80% of cost and you will have to pay the rest 20 % (co-insurance) after you have met your deductible.

Medicare Part D covers prescription drug which again you would have to buy (on top of Part A and Part B). Premium will vary by plan and income level.

Now we can see so many gaps in coverage. most people also opt to buy Medicare supplemental Insurance plan which is also called Medigap policies that will cover for those high deductibles and co-insurance. These are usually bought from private insurance company and are different from Medicare Advantage Plan. Your need to have Medicare Part A and Part B and not Medicare Advantage Plan to be able to buy Medigap policies.

We should remember Medicare does not cover long term care, vision or dental care, hearing aids, eyeglasses or private duty nursing.

Medicare advantage Plan: (Also called Plan C)

Medicare Advantage Plans are a type of Medicare health plan offered by a private company that contracts with Medicare to Provide all your Part A and Part B benefits. Most Medicare Advantage Plans also offer prescription drug coverage.

Your cannot opt for both original Medicare part A and B as well as Medicare Advantage Plan. Your healthcare services are covered by the private insurance companies that have contract with Medicare and get reimbursed at their own terms. You cannot also have Medigap policies when you have Medicare Advantage Plan.

These plans usually cover a broader range of service as compared to original Medicare and are more popular these days. Additional premium will vary according to the services covered.

There are different types of Medicare advantage Plans. HMO and PPO plans are more popular.

How to sign up

If you are already getting social security benefit, you are automatically signed up. For other, you need to sign up.

When you're first eligible for Medicare, you have a 7-month Initial Enrollment Period to sign up for Part A and/or Part B.Begins 3 months before the month you turn 65, which includes the month you turn 65 and ends 3 months after the month you turn 65.

Otherwise, there is General Enrollment Period between Jan1 - March31 each year. If you don't enroll during that period, you will have to pay a late enrollment penalty.

Also if you delay enrollment for years after eligibility, Premium will be higher. So it is better to enroll as soon as you are eligible for it.

If you continue to have health insurance through your employer at the time you are eligible for Medicare, you may be able to delay enrollment without getting penalty if you meet certain criteria like size of employer. Please follow Medicare website for these criteria. For others, earlier is better.

Information source: www.medicare.gov

ABOUT THE WRITER

Dr. Dipesh Raj Bista is an Internist. He has worked as a Hospitalist for the past 8 years in the USA and is currently working as an Associate Program Director for Internal Medicine Residency Program at Baylor Scott and White All Saints Medical Center, Fort Worth, Texas.

Dr. Bista is serving as a Treasurer in TNMA Executive Committee.

Dr. Bista grew up in Kathmandu, Nepal. He completed his medical school from Banaras Hindu University, Varanasi, India. He did his Internal Medicine residency training at University of Pittsburgh Medical Center, Mercy Hospital, Pittsburgh and he moved to DFW area in 2015.

He and his wife Nivedita Bista are blessed with a daughter and a son. He enjoys spending time with family and traveling when he is free.

RHEUMATOID ARTHRITIS

Rosy Rajbhandary
MD

Do you know RA?

Rheumatoid arthritis (RA) is a form of arthritis. RA can occur at any age, but most often appears at the ages of 25 and 50. RA affects women three times more often than men. People with RA have a higher risk of developing heart disease. Smokers have a higher rate of RA than non-smokers. RA can be effectively managed.

What is rheumatoid arthritis (RA)?

RA is a common, chronic disease affecting 1-2% of the population. It is a form of inflammatory arthritis and an autoimmune disease. For reasons no one fully understands, in RA the immune system – which is designed to protect our health by attacking foreign cells such as viruses and bacteria – instead attacks the body's own tissues, specifically the synovium, a thin membrane that lines the joints.

If inflammation is not controlled in the early stages of the disease it can lead to damage to bone and cartilage, which can result in instability and secondary degenerative damage.

Other organs

Sometimes other organs are involved. There may be inflammation in the eyes and mouth, causing them to become dry and irritable. Inflammation may also affect the lungs and rarely the membrane around the heart. Rheumatoid nodules (fleshy lumps) may appear, usually just below the elbows, but may also occur on hands and feet. A lack of red blood cells (anemia) is very common. Inflammation of blood vessels can also sometimes lead to damage to the nerve, skin and other organs. Many people with RA have a decrease in bone density. There may be muscle weakness around the inflamed and painful joints.

Symptoms of RA

In most people RA affects joints symmetrically (the same joints on both sides of the body). Usually it starts quite slowly. A few joints of the fingers, wrists or the balls of the feet become uncomfortable and may swell, often intermittently. You may feel stiff when you wake up in the morning. For some people the disease develops very rapidly. There may be a sudden onset of pain and swelling in a lot of joints, with severe morning stiffness and you may experience great difficulty doing everyday tasks.

> "Symptoms for RA tend to come and go with no particular pattern. You may have periods when the joints become more inflamed and painful (flare-ups). Sometimes this has an obvious cause – either physical or emotional but usually there is no obvious cause."

Along with pain and swelling in the joints you may feel tired, depressed or irritable. Fatigue can be one of the most difficult aspects of RA for people to deal with.

Symptoms for RA tend to come and go with no particular pattern. You may have periods when the joints become more inflamed and painful (flare-ups). Sometimes this has an obvious cause – either physical or emotional but usually there is no obvious cause.

States of Rheumatoid Arthritis (RA)

Courtesy of Google images

How will it progress?

RA affects people differently. For some people, it lasts only a year or two and goes away without causing any noticeable damage.

Other people may have periods of worsening symptoms (flare-ups) and periods in which they feel better (remissions). If left untreated, RA can cause permanent joint damage and joint deformities such as swan-neck deformity, boutonniere's deformity, ulnar deviation etc.

Approximately 1 in 20 people will have RA which becomes progressively worse, often quickly. These people tend to develop inflammation in other parts of the body besides their joints.

Blood test and x-ray will help your doctor assess how fast your arthritis is developing and what the potential outlook for your future is. This will also help your doctor to decide which form of treatment to recommend.

People with RA have a slightly greater chance of having a heart attack or stroke. The risk can be reduced by controlling the disease with drug treatments. High cholesterol and smoking increase the risk, so it's recommended for a balanced diet and giving up smoking.

How do doctors diagnose RA?

A doctor with specialized training in treating arthritis (called a rheumatologist) is the best person to make a correct diagnosis, using medical history, a physical examination and lab tests. After taking a detailed history of your symptoms and a complete physical examination including your joints, your doctor may suggest any of the following tests:

Blood tests: Erythrocyte sedimentation rate (ESR) or C-reactive protein (CRP) can be high when inflammation is present.

Complete blood count: It can show if you are anemic, and Rheumatoid factor (RF) and other antibodies (anti-CCP) can be detected, they are produced by a reaction in the immune system. Testing negative for RF does not prove you do not have RA, only about half of all people with RA have a positive RF when the disease starts.

X-ray changes: They are rare in the early stages of RA, and in later stages they can show damage caused

to the joints by RA. Magnetic resonance imaging (MRI) and ultrasound scanning can be also used. MRI is more sensitive in picking up changes in the early stages of RA.

Regular blood tests and X-rays can help your doctor to assess how quickly your arthritis is developing and whether you need any changes to your medication.

Treatment of RA

It is very important that treatment for RA is started as early as possible for the best results. With the recent advancements in treatments for the disease, many people with RA keep it under control and have a good quality of life. The main goal of rheumatoid arthritis (RA) treatment is to control symptoms, prevent joint damage, and maximize your quality of life with ability to function.

The best medical care combines medication and non-drug approaches.

Treatment with drugs

Each person responds differently to arthritis medicines, your rheumatologist will tailor your treatment to the symptoms and the severity of your condition.

Medications commonly prescribed for RA include:

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) reduce inflammatory symptoms, especially pain and stiffness. NSAIDs are usually taken as tablets or capsules. You should take them with a glass of water, with or shortly after food. You can also get NSAID creams and gels that can be applied directly to the painful area. Always talk to your doctor or pharmacist before taking NSAIDs if you have high blood pressure, stomach, kidney or heart problems as they can sometimes have side-effects.

Glucocorticoids such as prednisone have a very powerful effect in reducing inflammation and although they don't cure the condition they can suppress it. They are given as injections into a joint or a muscle, or as tablets. The side-effects of steroid tablets can include: weight gain, thinning of the bones, a rise in blood sugar or blood pressure. Doses of steroid tablets are kept as low as possible to keep the risk of side-effects to a minimum. Your doctor may also advise you to take calcium and vitamin D supplements or drugs called bisphosphonates alongside the steroids to help protect your bones against osteoporosis. You shouldn't stop taking your steroid tablets or alter the dose unless your doctor recommends it. It can be dangerous to stop steroids suddenly.

Disease Modifying Drugs (DMARDs) such as methotrexate, hydroxychloroquine, sulfasalazine, leflunomide, and azathioprine reduce pain, swelling and stiffness over a period of weeks or months by slowing down the disease progression and its effects on your joints. A number of DMARDs affect the immune system so you may be more likely to pick up infections. Because of this your doctor may suggest a flu injection. DMARDs can sometimes affect the blood or the liver, and because of this you'll need regular medical supervision when you're taking them. This may include regular blood and/or urine tests, which are important for your safety. However, with careful supervision, these drugs are well-tolerated and very effective.

Biological therapies (biologics) target individual molecules involved in the processes of inflammation and joint damage. Some biological therapies called anti-TNF drugs, target a protein called tumor necrosis factor, which increases inflammation when excess amounts are present in your blood or joints. Anti-TNF drugs include: adalimumab, etanercept and infliximab. Other biological therapies target different proteins. You'll only be given biological therapies if you haven't responded to conventional DMARDs or if you have had side-effects from them. They're often given in combination with a conventional DMARD such as methotrexate.

Some of the medications used to treat rheumatoid arthritis (RA) are not safe during pregnancy. You should discuss with your rheumatologist regarding pregnancy and RA in detail.

Non-drug approaches include the following:

Exercise helps to reduce pain and fatigue, and it increases a range of joint motion and strength, and keeps you feeling better overall. Talk to your physiotherapist about an exercise regime that is the most appropriate for you.

Hydrotherapy involves exercising and relaxing in warm water. Being in water reduces the weight on your joints. The warmth relaxes your muscles and helps relieve pain.

Occupational therapists will help you with useful strategies for overcoming everyday challenges that you might be experiencing.

Wearing comfortable shoes that act as shock absorbers for the feet, knees, hips and back. For women it is also important to have flat heels, as high heels put additional strain on these joints.

Both heat and cold treatments can relieve pain and reduce inflammation. Some people's pain responds better to heat and other's to cold.

Fish oil, containing anti-inflammatory omega-3 fatty acids, is beneficial in decreasing pain in people with RA.

Psychological support: Counselling and Cognitive Behavioral therapy can be useful in dealing with pain. Family and friends' support is also very essential.

Support groups: Social events, meeting people with similar problems may help to deal with day-to-day activities and provide emotional support.

Surgery

Surgery may occasionally be needed. They vary from quite minor ones such as the release of a nerve or a tendon to major surgery such as joint replacement.

ABOUT THE WRITER

Dr. Rajbhandary is a specialist in Rheumatology and practices at Texas Health Huguley Hospital Fort Worth South and has a clinic in Burleson, Texas. She is double board certified in Internal Medicine and Rheumatology.

Dr Rajbhandary completed her internship and residency in Internal Medicine at Saint Barnabas Medical Center in Livingston, New Jersey, where she earned the Barbara Sloan Patient Comfort Award for most compassionate care and was voted the best teaching resident. She did a fellowship in rheumatology at Los Angeles County + University of Southern California Medical Center in California, which is ranked one of the top rheumatology programs in the nation. She specializes in treating both common as well as rare rheumatic conditions, including osteoarthritis, rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, lupus, gout, fibromyalgia, sarcoidosis, vasculitis, Bechet's disease, and osteoporosis. She does steroid and visco supplementation injections, trigger point injections, injections for treatment of carpal tunnel syndrome, trigger finger and bursitis.

She has been voted as Top Doc Fort Worth consecutively in 2017, 2018, 2019 and 2020. She is recognized as a Texas Monthly Rising Stars Top Doctors 2020. She has been voted Top Doc 2020 by 360 West Magazine. She was the Medical Honoree for the Arthritis Foundation in 2016 and was recognized as the Top Fundraiser for raising funds to find a cure for lupus. She has participated in the Lupus Run 2016, 2017, 2018 and 2019.

Dr. Rajbhandary has authored several articles published in major rheumatology journals such as the Arthritis and Rheumatology, Journal of Rheumatology, Rheumatic Disease Clinics of North America. She has written responses in the Q and A section of Arthritis Self-Management Magazine. She has also participated in many clinical research trials. She has presented posters and abstracts on various medical topics and spoken about arthritis on several conferences. She was a panelist/ physician speaker in the health care forum at the 1st Nepali Women Entrepreneurship and Leadership Summit 2019.

She is a member of several professional organizations, including the American College of Rheumatology (ACR), American Medical Association (AMA), Texas Medical Association (TMA), and International Society for Clinical Densitometry (ISCD)

Dr Rajbhandary is very actively involved in her community. She is a founding member, Executive Board member, chair of fund raising committee and past-treasurer of Texas Nepalese Medical Association (TNMA). She volunteers at the free health camps held at the Nepalese Society of Texas.

Dr. Rajbhandary is a member of the Board of Trustees of the Nepali cultural and spiritual center (NCSC). She is founding member of Association of Nepali Physicians in America (ANPA). She is a life time member of Friends of Nepal-New Jersey (FONNJ). She is also a life time member of America-Nepal Friendship Society (ANFS). She was on the Executive Board of Members. She has volunteered as the medical physician in health camps organized by Adhikaar, NY.

Dr. Rajbhandary mentions that her interest in rheumatology is both professional and personal. She grew up seeing her mother suffer from severe, crippling and disabling rheumatoid arthritis, so her exposure to rheumatology began in early childhood. Dr. Rajbhandary now dedicates her life helping people in such pain.

When she isn't seeing her patients or volunteering at health camps, Dr. Rajbhandary enjoys travelling and spending time with her family.

AN OVERVIEW OF LEUKEMIA

Rashmi Khanal
MD

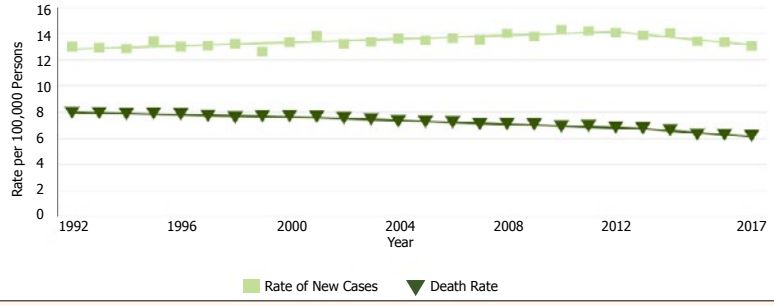
Blood cancer is broadly associated with leukemia, lymphoma and multiple myeloma. It accounts for almost 10% of new cancer cases in the U.S. each year. Based on 2017 SEER data analysis, more than 1.2 million people in the U.S. are either living with or in remission today from a blood cancer.

Given that there are no effective screening tests to detect these cancers, focus is shifted to early identification of the symptoms and institution of treatment.

At a Glance

Estimated New Cases in 2020	60,530
% of All New Cancer Cases	3.4%
Estimated Deaths in 2020	23,100
% of All Cancer Deaths	3.8%

5-Year Relative Survival
63.7%
2010-2016



Picture: Cancer stats - SEER database

LEUKEMIA

Bone marrow produces three types of precursor blood cells known as stem cells; once mature, they are released into the peripheral blood. Each cell has specific function as listed below:

WBC: Responsible for conferring immunity against various bacterial, viral, fungal as well as parasitic infection.

RBC: Hemoglobin formation and oxygen delivery in our body.

Platelets: Helps in clotting.

> "Leukemia is mostly common in childhood but is also prevalent in older people. It occurs when there is mutation in the stem cells leading to excessive/ uncontrolled production of immature WBC cells. As a result, they occupy most of the space in the bone marrow causing anemia (low Hb) and low platelet count."

> Leukemia can be life threatening but unfortunately does not have any effective screening tool for early detection of disease yet. Hence, careful monitoring of any new symptoms, seeking medical guidance for unusual symptoms is the key to the diagnosis and early treatment.

These WBC cells are further divided into myeloid and lymphoid cells. Leukemia is the cancer of myeloid cells and lymphoma is the cancer of lymph node/lymphoid cells.

Leukemia is mostly common in childhood but is also prevalent in older people. It occurs when there is mutation in the stem cells leading to excessive/uncontrolled production of immature WBC cells. As a result, they occupy most of the space in the bone marrow causing anemia (low Hb) and low platelet count.

Leukemia is divided into acute and chronic leukemia, and they have different presentation, prognosis and treatment.

Acute leukemia, as name suggests, is rapid onset and progresses at faster rate. Chronic has more indolent course.

ACUTE LEUKEMIA

Considered major oncologic emergency, it is treated as soon as possible given high death rate if left untreated.

Causes:

- Exact mechanism is not known but results from insult that cause damage to the DNA in the stem cells and cause abnormal cell production.
- Prevalent in patients who have received chemotherapy, radiation therapy for a different cancer in the past.
- Patients on chronic immunosuppressants such as after kidney/liver transplant.
- Rare genetic/familial conditions, down's syndrome.
- HIV patients.
- History of benzene exposure

Symptoms:

Rapid onset of symptoms; patients are sicker.

Anemia: Fatigue, lightheadedness, shortness of breath, fainting, confusion.

Lymph node swelling neck, arm pit, groin.

Gum bleeding, easy bruising, rash.

Blood in stool or urine, increased menstrual flow in females

Pain in the abdomen due to enlarged liver or spleen.

Weight loss, night sweats.

Bone pain.

Frequent infections.

Kidney failure, liver failure.

Seizure, blurring of vision.

Treatment:

- Highly effective and with high remission rate but with lots of side effects and treatment complications. It is directed towards cancer control and aggressive supportive measures.
- Patients receive intensive initial chemotherapy (induction) in a tertiary care cancer centers.
- This will likely be followed by either maintenance/consolidation chemotherapy vs bone marrow transplant based on treatment response, age, general clinical condition.
- CAR-T therapy, which is a groundbreaking immunologic therapy, is approved for refractory leukemia. Extensive research is ongoing regarding various other forms of immunotherapy as well.
- Supportive treatment: blood transfusion, infection prophylaxis, nutrition, psychosocial support, physical therapy.

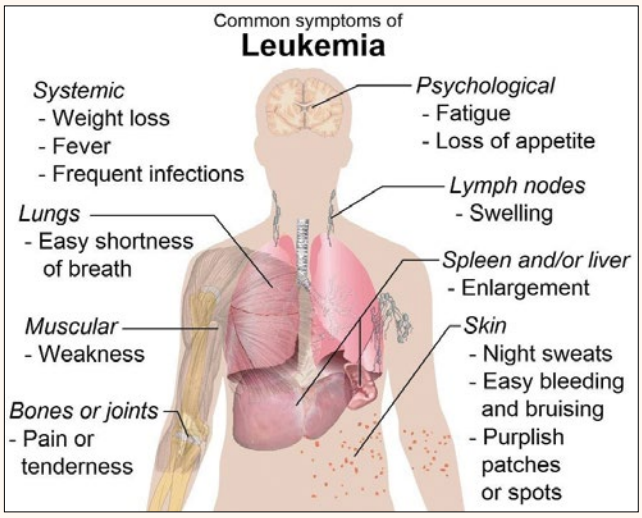
CHRONIC LEUKEMIA

It is common in the elderly, mostly milder than acute leukemia. It is mostly diagnosed by simple blood

work (CBC) as an incidental finding during routine blood work. It can take months to years for patients to get symptoms and may remain undiagnosed for long period of time. It is mostly incurable, and treatment is reserved for symptomatic patients and case by case basis. Though incurable disease, it has high overall survival and is numbered in years.

Symptoms:

- Elevated WBC count.
- Anemia, general weakness, fatigue.
- Lymph node swelling causing difficulty in swallowing, leg swelling.
- Abdominal pain due to enlarged liver or spleen.
- Abdominal bloating, early satiety.
- Low platelets.



Treatment:

- For low grade disease, watchful waiting and expectant surveillance are the usual care. p This can create anxiety in patients. Given incurable and less aggressive disease, treatment is reserved for symptomatic patients only. We use several parameters and guidelines (iWCLL, NCCN) for risk stratification and institution of treatment.
- Several newer chemotherapy pills are now available for treatment.
- Immunotherapy (monoclonal antibodies).
- Cytotoxic chemotherapy for severely symptomatic and aggressive disease.
- Bone marrow transplant and CAR-T cells in refractory disease.

CONCLUSION

Leukemia can be life threatening but unfortunately does not have any effective screening tool for early detection of disease yet. Hence, careful monitoring of any new symptoms, seeking medical guidance for unusual symptoms is the key to the diagnosis and early treatment. Hence, it is essential to see primary care physician for routine physical examination and basic blood work as indicated by age/risk and other health factors. Also, having leukemia in today's oncologic world is no longer a death sentence. We have made several advances in the treatment of leukemia and currently have many new exciting therapeutic modalities in the pipeline.

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ABOUT THE WRITER

Dr. Rashmi Khanal is a specialist in the field of leukemia, lymphoma and bone marrow transplant at Temple University - Fox Chase Cancer Center, Philadelphia.

She is interested in research and development of newer therapeutic approaches in hematologic malignancies.

Yubaraja Bhattarai
MD, MBBS, FRCS

VERTIGO
WHAT IS IT?

DISCLAIMER: This article is a basic introduction about a medical condition. The content of this article is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition.

Vertigo is an unpleasant sensation of dizziness you feel even when your head is still. What is dizziness and what is vertigo?

Dizziness is a feeling that is sometimes hard to describe. It often makes you feel light-headed or have a tendency to fall. You may have difficulty walking straight. It is described as light-headedness and floating feeling.

Vertigo, on the other hand, is a type of dizziness that makes you feel your head or body is spinning, swaying, or tilting. You may feel as though the room is moving around you. These feelings come and go, and may last seconds, hours, or even days. Patients are very frustrated when they have vertigo. They might feel worse when they move their head, change positions, cough, or sneeze. Vertigo may be positional or not related to position. Some people who have vertigo have trouble walking. For some, vertigo is associated with nausea and some may even vomit.

"Vertigo may be positional or not related to position. Some people who have vertigo have trouble walking. For some, vertigo is associated with nausea and some may even vomit."

What Causes Vertigo?

Vertigo can be peripheral or central vertigo. In central vertigo, the origin is the brain itself. In peripheral vertigo, the origin is from the periphery, such as the ear.

Inner Ear Problems

Inside the inner ear, there is a system called vestibular system, which is related to balance. Deep inside the ear there is a small network of tubules that are filled with fluid. Floating inside the fluid are special calcium deposits. Together these tubes and calcium deposits make up the vestibular system. Vestibular system tells the brain what position that body is in. Vestibular part of the vestibulocochlear nerve is

related to the transmission of that information to the brain. It also helps to keep us in balance. The problems of inner ear which can lead to vertigo include positional vertigo (also known as Benign Paroxysmal Positional Vertigo, BPPV). The name itself describes the problem. Benign means it is not life-threatening. Paroxysmal means it is not continuous. Positional means it is related to certain positions. BPPV is a type of peripheral vertigo where the room appears to be spinning. Patients are usually frustrated and afraid but a medical provider, after certain physical tests, can diagnose it. The diagnosis can help reduce patient's anxiety. A test known as Dix-Hallpike Maneuver can reproduce the symptoms on an examination table and help with the diagnosis.

Meniere's Disease (MD)

Meniere's Disease is defined as a condition in which fluid builds up in the inside ear eventually causing vertigo and hearing loss. It also causes ringing in the ear (tinnitus) either in one ear or in both ears. MD has hearing loss, but BPPV does not.

Vestibular Neuritis

As explained earlier, vestibular system is in the inner ear, and vestibular neuritis involves the vestibular system. This is sometimes caused by a virus which can affect the inner ear or nerve in the inner ear (vestibulocochlear nerve). It is also called labyrinthitis, which can be caused by inflammation due to the virus. Patients with this type of vertigo can have an episode that comes quickly and can last several days. Patients feel sick and off balance.

Head Injury

Even a minor head injury can cause dizziness and vertigo. This usually lasts temporarily. Sometimes, a head injury may be forgotten by especially by older patients. If detailed history is taken, then patient might remember the injury.

Vestibular Migraine

People with migraines can sometimes have episodes of vertigo. If patients have had previous episodes of migraine, they can diagnose it by themselves. But if the symptoms are new or worsening, the healthcare provider needs to do thorough evaluation to differentiate and rule out other diagnoses.

Other Causes

Other problems that can cause vertigo can be medications that have side effects and adverse effects, problems that affect the brain, such as stroke or multiple sclerosis.

How is vertigo diagnosed?

You need a good physical examination. During the physical examination, the medical provider checks your hearing, vision, how you walk and keep your balance, how your eyes work when you watch a moving object or when your head is turning from side to side. Your physician looks for a condition called nystagmus. Depending on the findings of your physical examination, the physician may prescribe more tests to better understand the hearing or balance problems. In some cases, an MRI is recommended for the especially posterior portion of the brain.

How is vertigo treated?

If your physician knows what is causing your vertigo, they will probably try to treat the problem directly. If there are calcium deposits in your inner ear, they may try to get them out by moving your head in a specific

> "If you have trouble standing or walking because of vertigo, you are at risk of falling. You have to take fall precautions and seek help if possible. You have to secure all lose electrical cords, clutter, and slippery rugs, which can be dangerous."

way. They may also give you medication to help you improve your vertigo, especially if you have nausea or vomiting tendency. If your vertigo is severe, they may provide you with balance rehabilitation. Balance rehabilitation is a treatment that teaches you exercises that will help you cope with your vertigo.

What can you do to deal with your vertigo?

If you have trouble standing or walking because of vertigo, you are at risk of falling. You have to take fall precautions and seek help if possible. You have to secure all lose electrical cords, clutter, and slippery rugs, which can be dangerous. You will also have to wear sturdy, non-slip shoes, and make sure your walkway is clear and there is sufficient light.

Emergency Warning Signs

Vertigo can be simple or complicated. If complicated causes are overlooked the situation can be risky or sometimes even fatal. One should know when to contact a doctor. The main question is: should you see a doctor or not? You should see a doctor right away if you have a new or severe headache, or if a headache is different from before or worsening. If you have a fever greater than 100.4 degree F or if you start having double vision (diplopia) or blurred vision, or if you are having difficulty seeing objects, contact your medical provider immediately.

If you have trouble speaking or trouble hearing, it is urgent to visit a doctor.

If you have weakness in your arm, leg, or on your face, or if your face is drooping to one side. If you cannot walk on your own and you have a loss of balance. If you pass out. If you have a vertigo with numbness or tingling, or vertigo with chest pain, or if you cannot stop vomiting, you must seek medical attention immediately. If there are symptoms such as stroke, then you should call 911. The term is FAST.

"F" stands for Facial drooping

"A" stands for Arm weakness

"S" stands for Slurred speech

"T" stands for Time to call 911.

In a stroke, time is the most important, because it means the brain is not receiving adequate blood supply. Therefore, if you see signs of a stroke, call 911 immediately.

Conclusion

Vertigo is the most common cause of dizziness. It has multiple causes and has a broad range of treatment options depending on conditions.

ABOUT THE WRITER

Dr. Yubaraja Bhattarai began his career as a board-certified family physician more than 20 years ago. He received his MBBS in Dhaka, Bangladesh; surgical training at the Institute of Medicine, Nepal, and Fellowship through the Royal College of Surgeons, Edinburgh.

In 2010, he completed his residency from E.A. Conway Medical Center, Monroe, Louisiana (part of Louisiana State University, Shreveport). He has worked in various capacities; inpatient hospitals, outpatient care, urgent care, and family care practices. Most recently, he is the Medical Director of Adult Medicine at the North Texas Area Community Health Centers in Fort Worth, Texas.

He practices patient-oriented evidence-based medicine and treats patients in a way that he expects to be treated by a doctor. He is passionate about preventative medicine and works with patients to promote a healthy lifestyle and care.

He has worked in a refugee camp to treat underserved patients in East Africa. In his free time, Dr. Bhattarai likes to play sports, chess, and listen to music.

EXPERIENCE OF VOLUNTEERING IN NEPAL POST-EARTHQUAKE CRISIS 2015

Raj Kumar Shrestha
Director
Himalaya Health Clinic

April 25, 2015! A day that is hard to forget for all Nepalease. I was sleeping when my phone started ringing. It was all from my family in Nepal. A magnitude of 7.8 earthquake had struck Nepal, and everyone was panicking. This earthquake ended up killing nearly 9,000 people and more than 22000 suffered injuries and was one of the worst tragedies in the history of Nepal. This nightmare still wakes me up at night.

However, the past events remind me again and again of how important it is to be a volunteer and how your small contribution to victims during or post crisis gives happiness to them. Following this tragedy, I did more than two-month volunteering in Nepal as a Nepali Society of Texas's (NST) Volunteer to help earthquake victims and participate in search, rescue, treat, recovery and relief package distribution efforts. I left the US with NST's Volunteer First Team for Nepal just four days after a massive earthquake hit Nepal. Then I worked with the second and third NST team in Nepal. The main places I was personally able to serve the earthquake victims were to different places of Gorkha, Dhading, Nuwakot, Kavre, Sindhupalchwok, Dolakha, Kathmandu, Bhaktapur and Lalitpur.

NST was involved in distribution of relief materials; and running health camps in different parts of Nepal. Almost all of our health camps were led by NST, and it was jointly organized by different health care partners of Nepal including many big hospitals. It may not be possible to include all the work we did, all stories that we learned, and all the areas we served. However, I would like to briefly mention some of the popular relief distribution missions as well as memorable health camps below.

> "I learned that even a small contribution from a volunteer could make a difference in the victim's life. Volunteering should come from your heart. It is a collective effort, and good team work makes a huge difference. My effort as a volunteer may be small but I got to know very incredible people and got a chance to learn so many things during that mission."

Relief Mission

Arughat Gorkha:

Over 95 percent of the houses in my hometown, Arughat, were destroyed including my two houses (close by the epicenter Barpak). On May 4, 2015, our NST Volunteers team led by Gauri dai distributed 2 tons of relief materials (rice, blanket and other food items) to about 600 households.

Samari Bhanjyang Nuwakot:

About 2 tons of relief materials were distributed in Samari bhanjyang and Bharyang bhurung areas of Nuwakot.

Some other places were Gorkha: Namjung, Muchhok; Dhading: Dhola Khari, Anginchwok; Sindhupalchwok: Ramche 3 and 4, Kunchwok; Rasuwa: Nagdhunga, Golujung; Dolakha: Bhirkot, Bhimeshwor; Kavre: Metse, Bhakundebesi and different orphanages in Nepal.

Health Camp Mission

Borlang, Gorkha health camp:

On June 20, 2015, Free Health Camp was led by Dr. Sanjeeb Shrestha and jointly organized by Nepali Society of Texas and Om Hospital. It was supported by National Dental, Gangalal and other hospitals as well with 14 doctors, 3 dentists, 4 nurses, 3 pharmacists and many volunteers who treated about 860 patients (the highest number in NST medical camp history). We had to stay overnight at Gorkha to do a health camp in Borlang next day.

Harisiddhi Lalitpur Health Camp:

Our Doctors led by Dr Sanjeeb Shrestha saw 315 patients. He treated a boy with a fishhook in his hand and a man with crush injuries.

Bungmati, Lalitpur:

Treated more than 250 patients.

Kakani Nuwakot Health Camp:

Suryodaya Bhaktapur Health Camp:

This camp was done in collaboration with Dallas based United Newah USA.

Majhigaun Sindhupalchwok Health Camp:

Melamchi Sindhupalchwok Health Camp:

Sankhu Kathmandu Health Camp:

This camp was done in collaboration with Dallas based United Newah USA.

Tupche Nuwakot Health Camp:

Namjung Gorkha Health Camp:

Raniban Kathmandu Health Camp:

Nagarkot Bhaktapur Health Camp:

Story of a brave woman who fell from Dharahara

I met with this brave woman at Bir hospital who saved her two-year-old daughter after both of them had fallen down from 50.5-meter-high Dharahara. She told me that she was taking pictures with her daughter outside of the 8th floor when the earthquake hit Nepal. She did not let her daughter fall from her lap while Dharahara collapsed. Dharahara itself killed 155 people. While her right leg was buried in the rubble, she requested a rescuer to take care of her daughter first. She lost her sister and a friend on the same spot. Her daughter was found safe in a different hospital two days later.

Near epicenter during second biggest earthquake hit Nepal

On May 12, 2015, we went to Ramche 8, above Barhabise, Sindhupalchwok to distribute relief package (Zinc plate) to villagers. We started to settle down and were hosting a meeting to set up distribution, when we started to feel a rumble and the ground started shaking. We could see a landslide on the other side of the hill where we just passed by 15 minutes ago. People were screaming and at that moment, I felt like it was probably the last day of my life. If that incident had happened about 15 minutes before on the road it could have killed us. Later, we found out that it was the 7.3 magnitude earthquake and we were very close to the epicenter. Our team had to stay there overnight due to the landslide and road blockade on the Araniko highway. Due to so many aftershocks after that, it was one of the scariest and worst nights I ever experienced. However, even with limited medication and resources, our volunteer doctor was still able to treat patients affected by the recent earthquake.

Appreciation:

I heard so many stories from the earthquake victims. Almost every story was different, and however, everyone had the same types of pain. Only the extent of pain might be different. I learned that even a small contribution from a volunteer could make a difference in the victim's life. Volunteering should come from your heart. It is a collective effort, and good team work makes a huge difference. My effort as a volunteer may be small but I got to know very incredible people and got a chance to learn so many things during that mission. I would like to take this opportunity to remember and thank them, including the following individuals and organizations:

Special thanks to the DFW Nepali community for raising funds and making this mission possible.
To entire members of NST Committee including (Bhuwan Acharya, Bijaya Bhattarai and others) for giving me this opportunity to serve and for your support.

NST First Team to Nepal: Gauri Joshi, Anjan Shrestha, Dr Jharana Shrestha, Roshana Mishra, Taylor White, Kamal Satyal, Bhanu Kharel, Robin Bhandari, Prajwol Chhetri, Gaurav Sing Bhattarai, Krishna Dhwoj Thapa, Bibek Sedhain, Ishwor Ghimire, Gyanendra Bhattarai and Raj Shrestha (myself).

NST Second Team to Nepal: Krishna Lamichhane, Bal Joshi, Sashwat Ojha and others

NST Third team to Nepal: Dr Sanjeeb Shrestha, Dr Puja Sainju, Manish Saiju and Others

NST Nepal Team who was in Nepal: Madhusudan Adhikari, Biju Shrestha, Nirajan KC, Ram Pokherel, Narayan Joshi, Ananta Joshi, Ajit Pokhrel, Sankhu Joshi, Ashish Pant, Deepak Sharma, Deepak Bhandari, and many others (Note: Mudhu dai and Biju bhai are real backbone of NST in Nepal.)

Other Doctors: Dr Mustafa, Dr Ishan Adhikari, Dr Lokendra, Dr Tung Nguyen, Dr Seejana, Dr Pramod, Dr Dawa, Dr Pramod, Dr Chauhan, Dr Birendra and Priyamshu

Other Nurses: Rusha Shretha, Tina Escobar, Ly Nguyen, Dhana Kashi, Asmi, Samana, Reshmi

National Dental Hospital: Dr Anarkali and Former IGP Shailendra Shrestha, Doctors: Sapana Malla, Bhupesh, Prapti, Pinky, Ashtha, Nurses and entire team

Gangalal Hospital team: Doctors and Nurses who helped us

Om Hospital team: Doctors: Lava, Dipak, Miraj, Rajesh, Pashupati, Sandhya, Cherina, Dhiraj, Rajiv, Sailendra and Nurses and entire team

Drs and Nurses from Bir Hospital, Kathmandu Medical College, Maternity Hospital, TU Teaching hospital etc.

US Ambassador to Nepal and my former US Embassy colleagues specially the Consular section family

Others: International and National organizations in Nepal, Paramedics, Pharmacist, Police, Army, Politicians, Journalist, Drivers, Locals and Volunteers who helped us to make it happen

I might not have everyone's name included but I want to say that all of you are in our thoughts and prayers.

Currently our Texas Nepalese Medical Association (TNMA) team has been working hard to open up Himalaya Health Clinic, which will be a free clinic in Euless, TX. The Nepali temple project will give us about 1200 sq ft room to run this clinic. Our mission is to improve the health of the uninsured and working poor people by providing access to health care and prevention education. I want to encourage everyone to support our future Free Clinic in any way you can and possibly volunteer for this noble cause.

ABOUT THE WRITER

Raj Kumar Shrestha, a resident of Dallas, TX, is originally from Arughat, Gorkha, Nepal. Before immigrating to the U.S., Raj was serving in the Consular Section of the U.S. Embassy, Nepal.

Raj did more than two months volunteer in Nepal for Nepalese Society of Texas's (NST) to help 2015 earthquake victims and participated in search, rescue, treat, recovery; and relief package distribution efforts.

Raj has comprehensive knowledge on managerial, planning, administrative, customer service, U.S Immigration laws and crisis management experience.

Raj lives with his wife, a daughter (Medical Doctor), a son (Computer Science Graduate), a sister (Nurse) and other family members. He can be reached at Rajashrestha555@gmail.com

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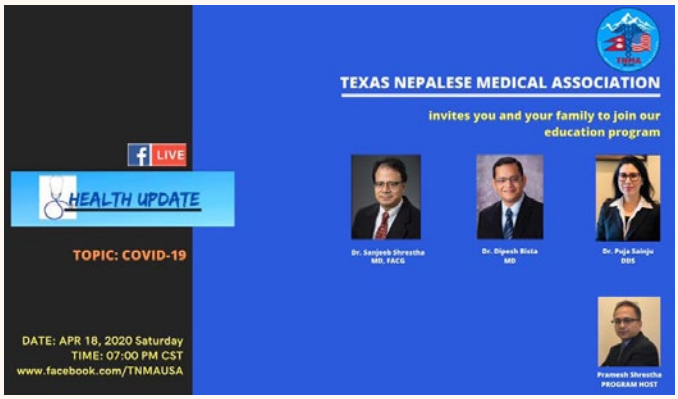

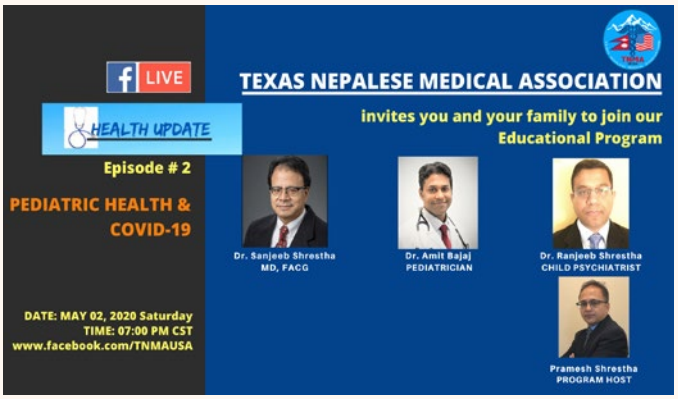

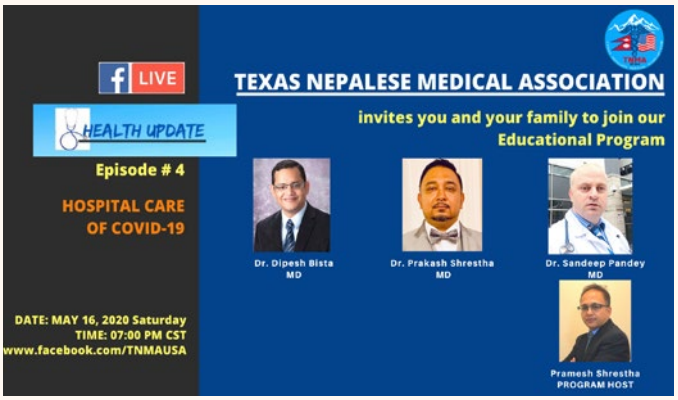

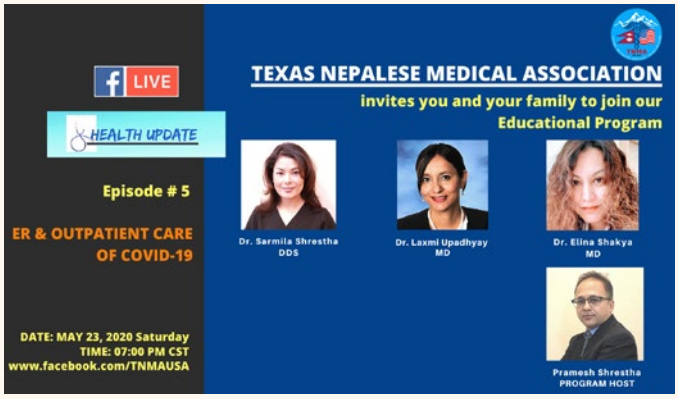

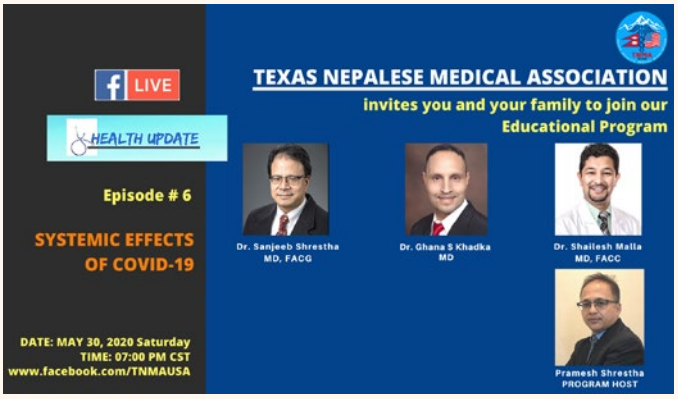

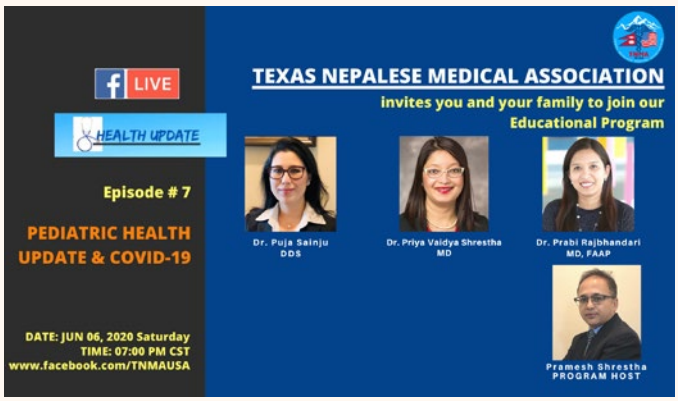

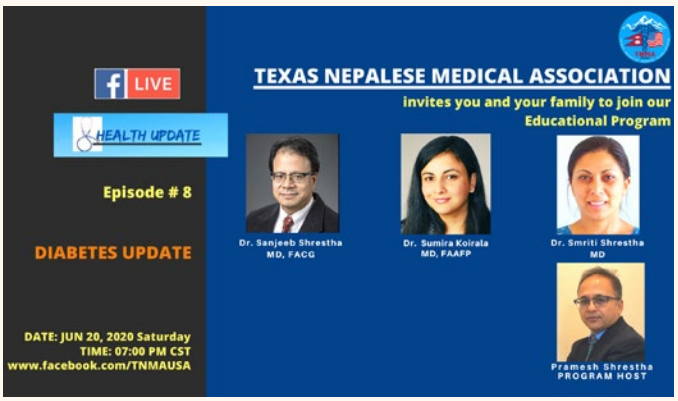

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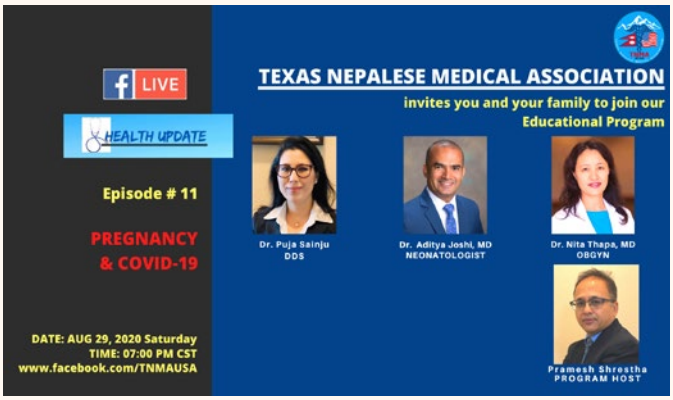

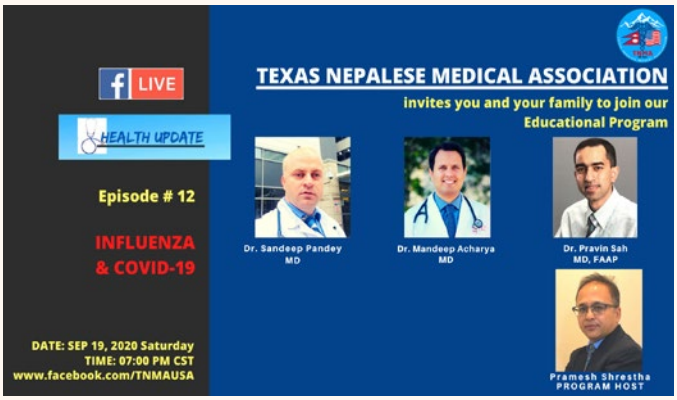

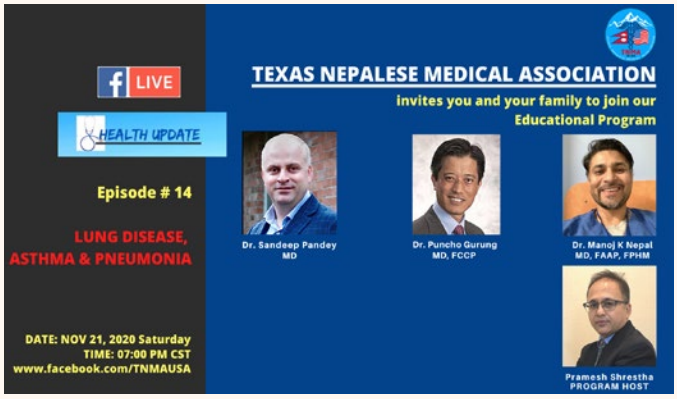

KNOW OUR TEAM MEMBERS

Prince Shrestha
Director
Information Technology of TNMA

Prince Shrestha has been serving as a Director of IT of the TNMA since September 2018.

He strongly believes that with the use of technology, we can take TNMA to the next level, help more people and provide better service.

Mr. Shrestha can be reached at prasitshrestha@gmail.com

KNOW OUR TEAM MEMBERS

Lila Shrestha

Director

Executive Office of TNMA

Lila Shrestha has been serving as a Director of Executive Office of the TNMA since September 2018. He strongly believes that TNMA is one of the best platforms that one can work proudly for the society. TNMA is greatly moving forward at its pilot project Free Health Clinic for the DFW Nepalese community. He respects to the slogan of TNMA "Working Together for a Healthy Community."

Professionally, Mr. Shrestha is a Public Adjuster. He has worked in the mortgage and Hazard claims for the past 16 years in USA and is currently working as a Public Adjuster at Hazard Claims Industry.

He has been serving the Dallas - Fort Worth Nepali community since 2004. He has served as an Executive Member and Office-In-Charge of the Nepalese Society of Texas (NST) in 2009 – 2011, General Secretary of Blood Donors of America (BDA), Texas in 2014-16. Mr. Shrestha is currently serving as a Coordinator of Publication Committee at BDA and Director at Irving Everest Centennial Lions Club (IECLC).

He has been heavily involved in social activities within DFW Nepali community. He walks the talk with honesty and integrity.

Mr. Shrestha grew up in Dhankuta, Nepal. He has been residing in Dallas since 2004. He has been living with his wife Chanda, son Prince, daughter Pratistha and daughter-in-law Sajani. He enjoys time with his family and friends. In addition, he enjoys travelling, reading, challenge of solving complex problems, listening to music and working out. Mr. Shrestha can be reached at plickstha@yahoo.com.

Raj Kumar Shrestha

Director

Himalaya Health Clinic (HHC)

Raj Kumar Shrestha, a resident of Dallas, TX, is originally from Arughat-10, Gorkha, Nepal.

Before immigrating to the U.S. in 2010, Raj was working in the Consular Section of the U.S. Embassy, Nepal. He served in the Embassy for 17 years. Raj was the recipient of many awards including the "Best Foreign Service National Employee of the Year award" in 2007 in the US Mission in Nepal.

Raj did more than two months volunteer in Nepal for Nepalese Society of Texas (NST) to help 2015 earthquake victims and participated in search, rescue, treat, recovery; and relief package distribution efforts.

Raj has comprehensive knowledge on managerial, planning, administrative, customer service, U.S Immigration laws and crisis management experience.

Raj lives with his wife Muna, a daughter Dr. Rajani and a son Muraj. He can be reached at Rajashrestha555@gmail.com

Bikash Jung Thapa

Director

Health Camp of TNMA

Bikash Jung Thapa has been serving as a Director of Health Camp at TNMA since 2019. He strongly believes that TNMA is a monumental organization in the Nepali community that comes together to drive change.

Mr. Thapa is in healthcare service as a Marketing Manager and office Manager at Home Health agencies. He poses a good knowledge about Medicare, Medicaid, and Private insurance to deliver healthcare services in community settings with six years of experience in the USA. He has more than a decade experience at Pharmaceuticals Marketing in Nepal.

In addition, Mr. Thapa has been serving in Dallas-Fort Worth Nepali community since 2012. He was volunteering as a Health Camp Coordinator at Nepalese Society of Texas (NST). He is also a life member of NST, NRNA USA Health Insurance and Social Security Benefit Awareness Committee (2019-2021).

Mr. Thapa is originally from Gorkha, Nepal. Currently lives in Dallas with his beautiful family Sunita Basnet Thapa (wife) and Surabi Thapa (daughter). He is actively helping Nepalese community here in Texas and Nepal. His contribution to help visitors and parents fill their prescription during pandemic was extraordinarily appreciated. Mail to thapa_bikash@yahoo.com

Kamala Adhikari

Director

Nursing of TNMA

Kamala Adhikari has been serving as a Director of Nursing at TNMA since 2019. She strongly believes that TNMA is a great platform to serve Nepalese community in DFW.

Ms. Adhikari is a veteran registered nurse, who has an experience of 25 years plus combining both in Nepal and in the United States.

Previously, she has served as a nursing professor at Yeti Health Science Academy and various nursing schools in Nepal. She has focused her energy in pediatric nursing and has a great passion working with children.

In addition, Ms. Adhikari has been serving in Dallas/Fort Worth Nepali community; she has been fully dedicated in Health Camps; and educating Nepalese community on health and safety.

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