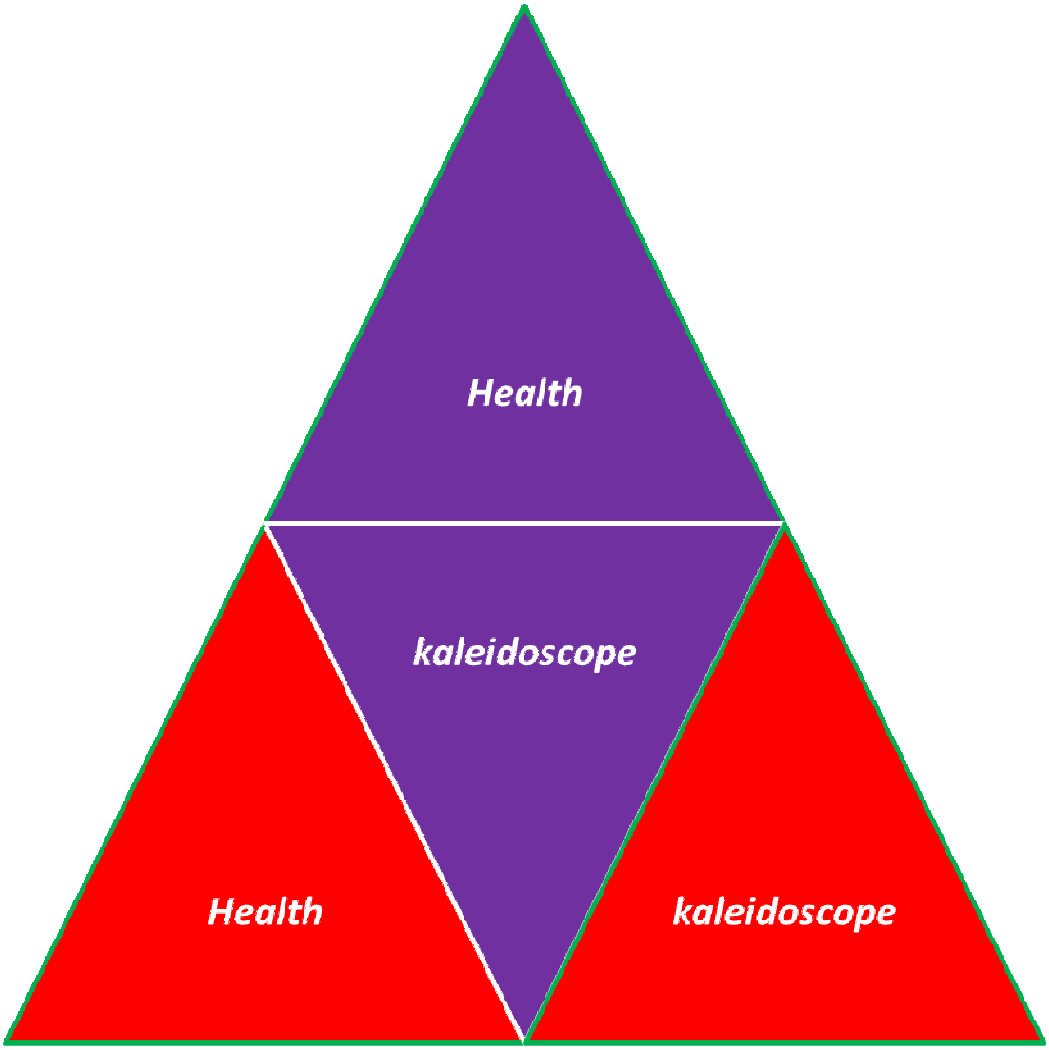
Hospital Newsletter



IIT Guwahati Hospital

24x7 emergency medical services available

FOREWORD

The perception of the entire world towards health has changed after the arrival of COVID, which almost shocked humanity to its core. Every single breath that an individual had and every second of his survival was more precious than plucking a pearl from the oyster. One lesson that COVID has taught us is that there is no alternative to good health. Good health comes from a good lifestyle. Informed minds are more conscious about their well-being and about their society. In order to generate more health consciousness, we need more information on health and so relevant information on health topics should be spread more. We felt that a newsletter could be a small yet significant step in this regard. Keeping this in mind, the Medical Section, has come up with the 7th edition of the hospital newsletter, viz., Health Kaleidoscope. Do share your valued feedback with us.

Please do take good care of yourself and your loved ones.

Regards,

Team, Medical Section

Contents

Dr. Anuj Kr. Baruah, MD, DFID
CMO (SAG) & HOS, Medical section

Exercise: How, what and how much?

Exercise should be regarded as a tribute to the heart.
……Gene Tunney

The role of exercise in health is undisputed, but how, when and how much is very important; especially in heart disease. Exercise paired with a healthy diet and avoiding smoking is a simple measure of heart health. In some cases, exercise can be as powerful as medicine. Regular exercise is an integral part of lifestyle disease management.

Exercise helps heart health in the following ways:

- Reduces blood pressure
- Ensures healthy body weight
- Strengthens muscles
- Improves body fitness and balance
- Reduces risk of osteoporosis,
- Improves circulation of blood in the body, reducing the load on the heart
- Stops or delays the development of diabetes
- Decreases risk of stroke, blood clots
- Lowers bad cholesterol and increases good cholesterol
- Reduces stress, making you feel good
- Decreases inflammation which affects several body systems

However, pushing too hard is a bad idea. Research shows that exercising more than the recommended guidelines can lead to major health issues.[3] Besides, the exercise regimen should be carefully chosen based on your health and physical conditions. Therefore, consult a doctor/physical trainer before you start an exercise routine.

Exercise, how?

Starting small and getting support from others can help you to achieve your exercise or other health-related goals. Make an exercise plan that will stick. First thing is to make a start and get more active. Choose an activity that you enjoy. Ensure you wear comfortable clothes and footwear. Schedule exercise in your daily timetable. Exercise with your friends and family members. Maintain an exercise log and track progress. Do not exercise when you are sick or for a few days following sickness – give time for your body to recover.[2]

Before beginning an exercise program, you should undergo a detailed medical evaluation with appropriate diagnostic studies. A careful medical history and physical examination should focus on the symptoms and signs of disease affecting the heart and blood vessels, eyes, kidneys, and, nervous system specially in diabetic population.

Exercise, what?

Anything that makes you move and burn calories is exercise. It could be as simple as doing household work or climbing stairs. However, aerobic (or "cardio") activity puts your heart and lungs at work and improves their fitness. The following table (Table: 1) gives you a list of different types of aerobic exercises one can do (again, you need to talk to your doctor before starting any).[4] Apart from exercise, you

should try to remain active all throughout the day, as much as possible or your health allows.

Types of exercises:

1. **Strengthening exercises:** also called resistance activities. In these exercises you use muscular strength to move a weight or work against a resistive load. You can do these exercises 2 or 3 days in a week and should not go for exercising the same muscle groups on any 2 days in a row. Examples, weight lifting, exercise with resistance bands.
2. **Aerobic exercises:** consist of rhythmic, repeated, and continuous movements of the large muscle groups. It is also known as endurance activities. A total time of about 30 to 45 minutes a day for at least 5 days a week is mostly recommended.

Table: 1 – Types of aerobic exercises.

Moderate-intensity aerobic activities:	**Vigorous-intensity aerobic activities:**
• Brisk walking (at least 2.5 miles/hour) • Water aerobics • Dancing • Gardening • Tennis (doubles) • Cycling slower than 10 miles per hour	• Hiking uphill or with a heavy backpack • Running • Swimming laps • Aerobic dancing • Digging or hoeing • Tennis (singles) • Cycling 10 miles per hour or faster • Jumping rope

3. **Flexibility exercises:** also known as stretching exercises, are aimed at increasing or maintaining range of motion at joints,

improve muscle tone, and keep it supple. Examples, standing quad, side or hamstring stretch, etc.

4. **Balance exercises:** these exercises help prevent falls. Many lower-body strength exercises also will improve your balance. Examples are, the heel to toe walk, standing on one foot, the balance walk, etc.

Exercise, how much?

About 150 minutes per week of moderate exercise or 75 minutes per week of vigorous exercise are recommended for healthy living. Moderate exercise for 30 min a day for 5 days a week is often sufficient to achieve optimal health benefits. Vigorous exercise can be limited to just 3 days a week as there are chances of injury.[2]

Exercise slowly for the first five minutes; it helps the heart rate to increase gradually, the body to loosen and increases blood flow to the muscles. Then perform your exercise routine, and at the end, cool down for 5 min to allow your heart rate to come back to resting levels and temperature to normal. Ensure you are well hydrated.

During the initial days, start with low-intensity exercise and then gradually increase the intensity as your body starts accepting and adjusting to the exercise. Also, increase the duration of exercise gradually.

Red flags:

Stop exercising when you have chest pain, heaviness in the chest, fatigue, neck, upper back and jaw pain; and light-headedness or dizziness. If necessary, ask for help. Also, ensure your surroundings are safe. Avoid outdoor exercises during adverse weather conditions.

The Best exercise:

The best exercise is the one that you will stick to. Walking is considered as one of the best exercises. Walking as exercise is easy, safe and cheap. Walking is an aerobic as well as weight bearing exercise and it's good for the heart and helps prevent osteoporosis.

Disclaimer: This article is for educational purposes only. Please consult a qualified healthcare professional before taking any decisions regarding recommendations in the article or for more information.

Exercise is a celebration of what your body can do, not a punishment for something you ate!

Reference:

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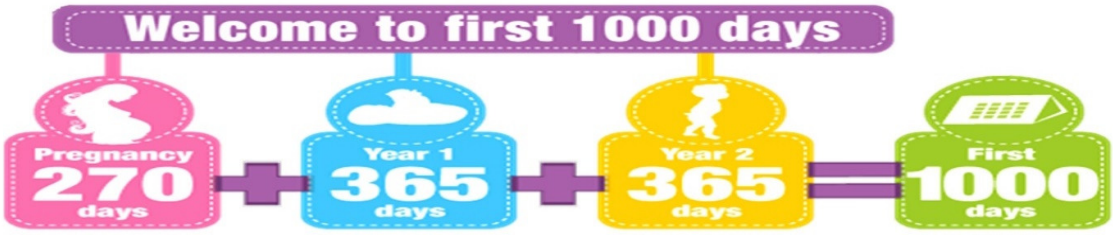
Dr. Surojit Majumdar, MBBS, DCH

Sr. Medical Officer, Medical Section

First 1000 Days of Life



There is an ever-continuing debate over which factor Genes or environment is more influential on the overall brain growth of a child. But now we know that it's nature with nurture that interacts constantly with each other and brings out the overall brain development of a child. At birth, 60% of the genes are dedicated to brain development. Genes thus provide the blueprint for the brain development but it is the environment which shapes it. The experiences of the child help to trigger electrical activity which enable the brain to develop connections in the brain called synapses.

The child's brain develops fastest in the first 2 to 3 years of life. It doubles it's size in the first year, attains 80% of adult size by age 3 and 90% (nearly full grown) by 5 years of age. In gestation and infancy, the brain is an 'energy hog ',consuming between 50 to 75 percent of all the energy absorbed by the body from food, including fats, proteins, minerals and vitamins .Nutrition feeds the brain, stimulation sparks the neural connections and positive healthy interactions and adequate protection reduce the negative impact of illness and stress. Inadequate nutrition during that period alters the structure and functions of the brain in ways that are difficult to offset

later. Interventions based on the knowledge of these critical windows have the potential to exert a profound global impact, as correction of nutritional deficits alone has been estimated to have the power to increase the world's intelligence quotient by 10 points.

The first 1,000 days of life - the time spanning roughly between conception and one's second birthday - is a unique period of opportunity when the foundations of optimum health, growth, and neurodevelopment across the lifespan are established. If a child is living in a stimulating, secure and loving environment, the brain cells which are about 100 billion at birth increase to 500 trillion by eight months of age and become around 1000 trillion connections by age of two. Connections continue to form throughout life but they reach their highest density at this age. These connections help the infant to hear, smell, learn and reason in a more developed way.

At least 200 million children living in developing countries fail to meet their developmental potential. Along with undernutrition, concomitant influences of infectious disease, environmental hazards, and societal and household violence, all contribute to this loss of potential. Unlike many other influences that are immutable or tremendously difficult to change, nutrition is something we can control.

Nutrients that particularly affect early brain development are Protein, Specific fast (LC-PUFAs), Glucose, Micronutrients, Zinc, Copper, Iodine, Iron, Selenium, Vitamins and cofactors, Vitamins-B6, B12, Vitamin A, VitaminK, Folate, Choline. These nutrients help in neuronal division, migration, myelination, neurotransmitter concentration and receptor reuptake.

Iron deficiency is the most common nutritional deficiency in the world. Globally, an estimated 42% (293 million) of all preschool children and 42% (56 million) of all pregnant women are anemic, with half attributable to iron deficiency. Periods of highest brain iron requirement are in fetal /neonatal period and infancy/toddlerhood.

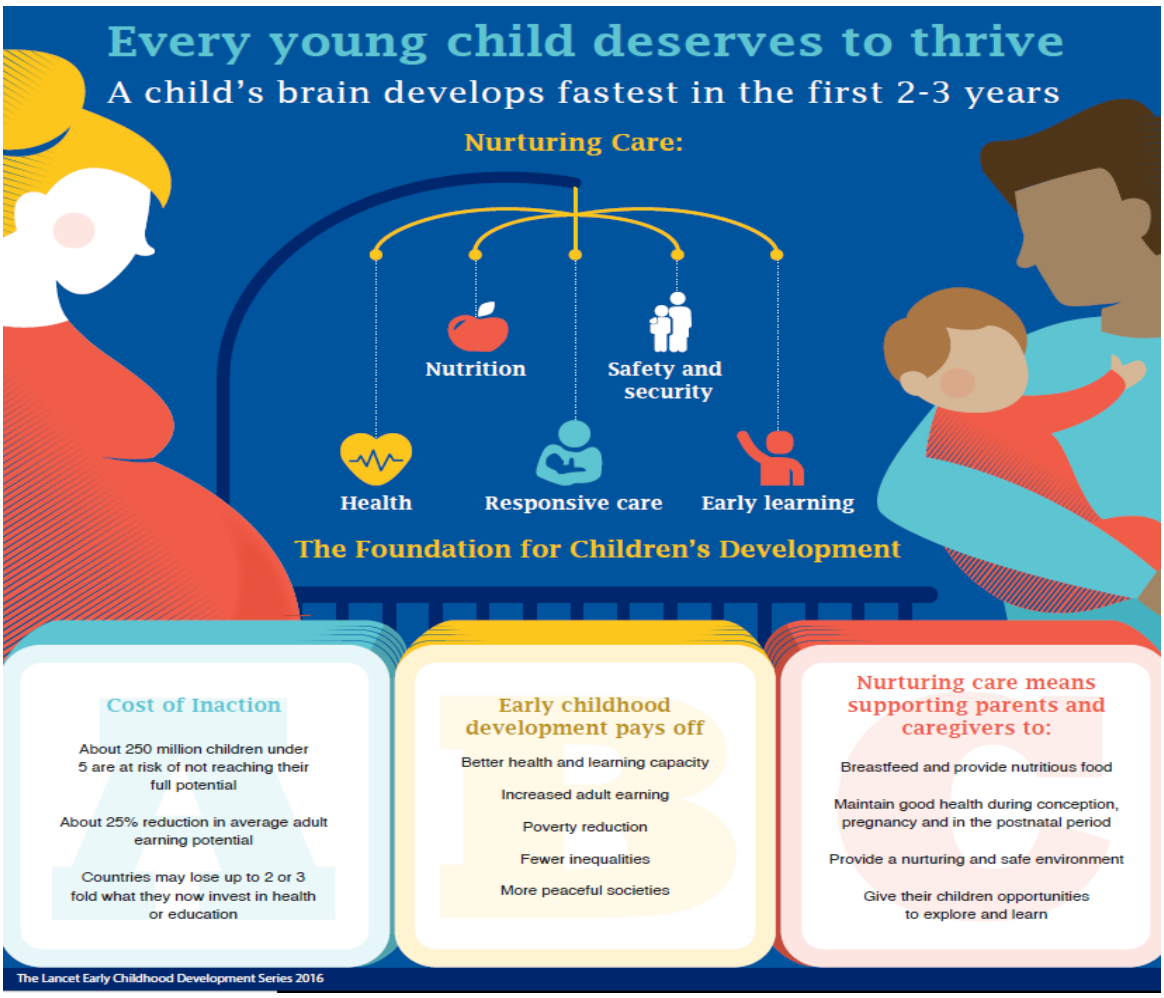
Breast milk contains all the vital nutrients required for the physical and mental development of the child. Breast milk also contains LCPUFA (DHA & ARA) which has immune boosting properties. Breast milk gives protection from respiratory infections, diarrheal diseases, obesity and non-communicable diseases. A neonate is born with an immature immune system, a state that is often termed as 'physiological immunodeficiency'. The neonate is almost wholly dependent on the passively acquired maternal IgG and IgA antibodies. Maternal IgG is transported actively across the placenta to the fetus particularly in the last trimester, and IgA is passed on to the baby via breast milk.

Exclusive breast feeding till 6 completed months and continued breast feeding along with introducing age appropriate complementary feeding up to 2 years of age or longer is recommended. Lactating mothers requires 600 calories more than non-pregnant and non-lactating mothers in the first six months when she is practicing exclusive breastfeeding and about 500 additional calories after six months till the time she continues to breastfeed. An anemic mother will give birth to a preterm or low birth weight baby and this vicious cycle may continue if it is not corrected.

The Barker hypothesis of "fetal origins" or "fetal programming" advocates that the origins of chronic diseases of adult life lie in fetal responses to the intrauterine environment. Specifically,

it suggests that the genesis of adult-onset chronic diseases like obesity, diabetes, insulin insensitivity, hypertension, and hyperlipidemia originate through fetal adaptations to undernourishment.

Thus, it is far better policy to build the brain right in the first place through nutritional deficit prevention programs in this critical period than to depend on replacement therapy once a deficit has occurred.



Dr. Pallabi Sarmah, MBBS, PGDCN

Sr. Medical Officer

Headache-Primary Headache, Migraine

PAIN SENSITIVE STRUCTURE IN HEAD

- Extra-cranial pain sensitive structures:
  - Sinuses
  - Eyes/orbits
  - Ears
  - Teeth
  - TMJ
  - Blood vessels
  - 5,7,9,10 cranial nerves carry pain from this structure
- Intra-cranial pain sensitive structures:
  - Arteries of circle of willis and proximal dural arteries,
  - Dural Venous sinuses, veins
  - Meninges
  - Dura

CLASSIFICATION OF HEADACHE

- PRIMARY - NO structural or metabolic abnormality:
  - Tension
  - Migraine
  - Cluster
- SECONDARY – structural or metabolic abnormality:
  - Extracranial: sinusitis, otitis media, glaucoma, TMJ ds
  - Inracranial: SAH, vasculitis, dissection, central vein thrombosis, tumor, abscess, meningitis
  - Metabolic disorders: CO_2 retention, CO poisoning

TABLE 14-2 Headache Symptoms That Suggest a Serious Underlying Disorder

"Worst" headache ever
First severe headache
Subacute worsening over days or weeks
Abnormal neurologic examination
Fever or unexplained systemic signs
Vomiting that precedes headache
Pain induced by bending, lifting, cough
Pain that disturbs sleep or presents immediately upon awakening
Known systemic illness
Onset after age 55
Pain associated with local tenderness, e.g., region of temporal artery

CLASSIFICATION OF PRIMARY HEADACHE

- 1. Migraine
- 2. Tension-type headache
- 3. Trigeminal autonomic cephalalgias
- 4. Other primary headache disorders

TABLE 14-1 Common Causes of Headache

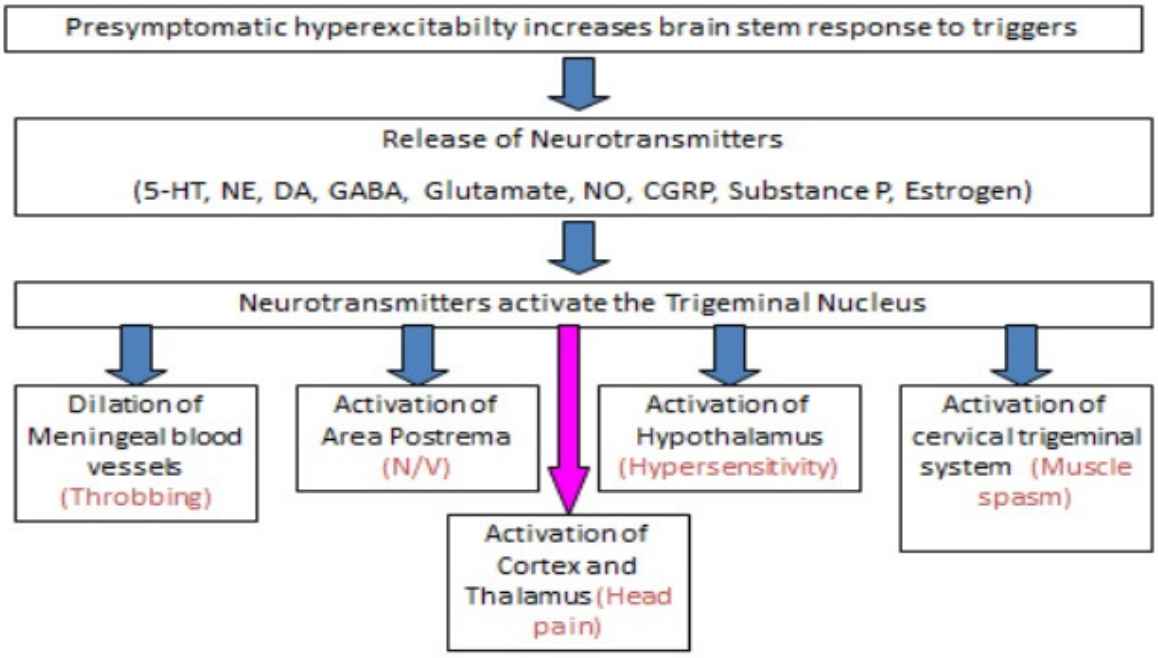
Primary Headache		Secondary Headache	
Type	%	Type	%
Tension-type	69	Systemic infection	63
Migraine	16	Head injury	4
Idiopathic stabbing	2	Vascular disorders	1
Exertional	1	Subarachnoid hemorrhage	<1
Cluster	0.1	Brain tumor	0.1

MIGRAINE

ICHD 3 CLASSIFICATION

1.1 Migraine without aura
1.2 Migraine with aura
1.2.1 Migraine with typical aura
1.2.1.1 Typical aura with headache
1.2.1.2 Typical aura without headache
1.2.2 Migraine with brainstem aura
1.2.3 Hemiplegic migraine
1.2.3.1 Familial hemiplegic migraine (FHM)
1.2.3.1.1 Familial hemiplegic migraine type 1
1.2.3.1.2 Familial hemiplegic migraine type 2
1.2.3.1.3 Familial hemiplegic migraine type 3
1.2.3.1.4 Familial hemiplegic migraine, other loci
1.2.3.2 Sporadic hemiplegic migraine
1.2.4 Retinal migraine
1.3 Chronic migraine

- 1.4 Complications of migraine
  - 1.4.1 Status migrainosus
  - 1.4.2 Persistent aura without infarction
  - 1.4.3 Migrainous infarction
  - 1.4.4 Migraine aura-triggered seizure
- 1.5 Probable migraine
  - 1.5.1 Probable migraine without aura
  - 1.5.2 Probable migraine with aura
- 1.6 Episodic syndromes that may be associated with migraine
  - 1.6.1 Recurrent gastrointestinal disturbance
    - 1.6.1.1 Cyclical vomiting syndrome
    - 1.6.1.2 Abdominal migraine
  - 1.6.2 Benign paroxysmal vertigo
  - 1.6.3 Benign paroxysmal torticollis



EPIDEMOLOGY

- Migraine affects 10-15% of general population, F>M
- Migraine accounts for 10-20% of all headaches in adults
- 1% chronic migraine (>15 days/months)
- Mean frequency 1.2/month
- Mean duration 24 h (untreated)
- 10% always with aura, >30% sometimes with aura
- Usual age at onset is 15-35 years
- Family History:

-70% of patients have relatives with Headache

MIGRAINE TRIGGERS

- **Stress**
- Emotion-(anger, anticipation, anxiety, depression, emotional letdown, exhilaration/excitement, frustration, stress)
- Sex
- Glare-flickering lights/light glare
- Hypoglycemia
- Altered Sleep Pattern- fatigue/sleep deprivation or excessive sleep
- **Menses**
- **Physical exertion**
- Alcohol
- Smoking
- Excess caffeine /**withdrawal**
- **Odors** (perfume, exhaust fumes, paint, solvents)
- **Foods** containing
  - tyramine
  - nitrates
  - phenyl ethylamine
  - Aspartame
  - chocolate
- **Drugs**
  - Estrogen (e.g.. OCP)
  - Nitroglycerin
  - Excess analgesic use or withdrawal
  - (cocaine, cimetidine, estrogens, theophylline)

- Migraine is a highly prevalent and largely familial disorder
- characterised by periodic, commonly unilateral often pulsatile
- headaches that begin in childhood, adolescence, or early adult life and
- recur with diminishing frequency during advancing years.
- In more than 80 % of cases, the onset is before 30 years of age.

MIGRAINE WITHOUT AURA

Previously used terms:

- Common migraine; hemicrania simplex.

Description:

- Recurrent headache disorder manifesting in attacks
- Lasting 4-72 hours.
- Typical characteristics of the headache are unilateral location, pulsating quality, moderate or severe intensity, aggravation by routine physical activity and association with nausea and/or photophobia and phonophobia

DIAGNOSTIC CRITERIA

- A. At least five attacks fulfilling criteria B–D
- B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
- C. Headache has at least two of the following four characteristics:
    1. unilateral location
    2. pulsating quality
    3. moderate or severe pain intensity
    4. aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)
- D. During headache at least one of the following:
    1. nausea and/or vomiting
    2. photophobia and phonophobia
- E. Not better accounted for by another ICHD-3 diagnosis.

MIGRAINE WITH AURA

Previously used terms:

- Classic or classical migraine; complicated migraine.

Description:

- Recurrent attacks, lasting minutes, of unilateral fully reversible visual, sensory or other central nervous system symptoms that usually develop gradually and are usually followed by headache and associated migraine symptoms.

DIAGNOSTIC CRITERIA

- A. At least two attacks fulfilling criteria B and C
- B. One or more of the following fully reversible aura symptoms:
    1. visual
    2. sensory
    3. speech and/or language
    4. motor
    5. brainstem
    6. retinal
- C. At least two of the following four characteristics:
    1. at least one aura symptom spreads gradually over 5 minutes, and/or two or more symptoms occur in succession
    2. each individual aura symptom lasts 5-60minutes
    3. at least one aura symptom is unilateral
    4. aura is accompanied, or followed within 60 minutes, by headache
- D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack has been excluded.

- Aura is complex of neurological symptoms that occurs usually before the headache of but it may begin after the pain phase has commenced, or continue into the headache phase.
- Visual aura is the most common type of aura, occurring in over 90% of patients.
- It often presents as fortification spectrum
- Is risk factor for ischemic stroke
- Patent foramen ovale in patients with migraine with aura
- 4 Phases:
  - Prodrome, Aura, Headache and Resolution/postdrome

Migraine with brainstem aura

Diagnostic criteria:

- A. At least two attacks fulfilling criteria B-D
- B. Aura consisting of visual, sensory and/or speech/ language symptoms, each fully reversible, but no motor or retinal symptoms
- C. At least two of the following brainstem symptoms:
  1. dysarthria
  2. vertigo
  3. tinnitus
  4. hypacusis
  5. diplopia
  6. ataxia
  7. decreased level of consciousness

Hemiplegic migraine

Diagnostic criteria:

- A. At least two attacks fulfilling criteria B and C
- B. Aura consisting of both of the following:
  1. fully reversible motor weakness
  2. fully reversible visual, sensory and/or speech/ language symptoms
- C. At least two of the following four characteristics:
  1. at least one aura symptom spreads gradually over 5 minutes, and/or two or more symptoms occur in succession
  2. each individual non-motor aura symptom lasts 5–60 minutes, and motor symptoms last <72 hours
  3. at least one aura symptom is unilateral
  4. the aura is accompanied, or followed within 60 minutes, by headache
- D. Not better accounted for by another ICHD-3 diagnosis, and transient ischaemic attack and stroke have been excluded.

MIGRAINE IN WOMEN

- Migraine 2-3x more common than in men
  - Possibly some hormonal association
- 14% of women experience migraine associated with periods
  - Usually during first 3 days
- Risk of migraine increased 10x in women on OCP
  - OCP increase frequency of migraines
  - Almost half women experience improvement in migraine during pregnancy.
  - Migraine frequency decreases in 2/3 women after menopause

CHILDHOOD MIGRAINE

- Prevalence 5%
- Sex ratio 1:1
- Abdominal symptoms often predominant
- Semiology of attacks as in adulthood except shorter duration of attacks
- Children often respond to conservative management
- Short sleep very effective

MANAGEMENT

1. Assess extent of a patient's disease and disability- Migraine Disability Assessment Score (MIDAS)

2. NONPHARMACOLOGIC MANAGEMENT-

- Identification and avoidance of specific headache triggers.
- Healthful diet, regular exercise, regular sleep patterns, avoidance of excess caffeine and alcohol, and avoidance of acute changes in stress levels.

***MIDAS Questionnaire**

INSTRUCTIONS: Please answer the following questions about ALL headaches you have had over the last 3 months. Write zero if you did not do the activity in the last 3 months.

1. On how many days in the last 3 months did you miss work or school because of your headaches? ..... ____days
2. How many days in the last 3 months was your productivity at work or school reduced by half or more because of your headaches *(do not include days you counted in question 1 where you missed work or school)*? ..... ____days
3. On how many days in the last 3 months did you **not** do household work because of your headaches? ..... ____days
4. How many days in the last 3 months was your productivity in household work reduced by half or more because of your headaches *(do not include days you counted in question 3 where you did not do household work)*? ..... ____days
5. On how many days in the last 3 months did you miss family, social, or leisure activities because of your headaches? ..... ____days

A. On how many days in the last 3 months did you have a headache? *(If a headache lasted more than one day, count each day.)* ..... ____days

B. On a scale of 0–10, on average how painful were these headaches? *(Where 0 = no pain at all, and 10 = pain as bad as it can be.)* ..... ____

*Migraine Disability Assessment Score
(Questions 1–5 are used to calculate the MIDAS score.)
Grade I—Minimal or Infrequent Disability: 0–5
Grade II—Mild or Infrequent Disability: 6–10
Grade III—Moderate Disability: 11–20
Grade IV—Severe Disability: > 20

- Medical Management with Medications.
- Self-medication is not advisable.
- To avoid frequent use of analgesics.
- Compliance with prophylactic medications is very important to get relief from Migraine attack.

Dr. (Mrs.) Hitakalpa Baishya, MD (Medicine)

Non-Alcoholic Fatty Liver Disease (NAFLD)

Fatty liver is an accumulation of triglycerides and other fats in the liver cells. The amount of fatty acids in the liver depends upon the balance between the processes of delivery and removal. Metabolic syndrome is the most common association with fatty liver disease. This includes type 2 diabetes mellitus, obesity and hypertriglyceridemia. However, it can also occur in lean individuals and is particularly common in those with a paucity of adipose depots. Alcohol, nutritional status, metabolic abnormalities or other health problems may contribute to fatty liver disease. Ethnicity and racial factors also influence liver fat accumulation.

The overall prevalence of NAFLD worldwide was estimated to be 32.4%, while among the general population of India its prevalence ranges from 9% to 53% as per available data. Therefore, one in three adults or children have NAFLD in India.

NAFLD spectrum includes the most clinically benign hepatic steatosis followed by non-alcoholic steatohepatitis (NASH) and finally leads to the most ominous extreme, cirrhosis and liver cancer. The diagnosis of NAFLD is mostly done during routine workup of patients for other reasons or those presenting with elevated liver enzymes. Few patients present with vague right upper quadrant abdominal pain while others are found to have hepatomegaly in imaging studies. Obesity, diabetes, hypertriglyceridemia, hypertension and cardiovascular disease are well known associations of NAFLD.

Once diagnosed with fatty liver disease, it is important to keep your liver as healthy as possible and avoid anything that can damage your liver. Few important things to be kept in mind are:

- AVOID alcohol completely, because how much alcohol consumption is too much remains controversial.
- AVOID herbs, medications and supplements that are toxic to the liver.
- Get vaccinated to protect against hepatotropic viruses like hepatitis A and B.
- Control other health conditions that might affect your liver or contribute to fatty liver.
- Regular screening for liver cancer if cirrhosis has already occurred.

TREATMENT

Unfortunately, there are no FDA approved drugs for fatty liver. The current approach to management of NAFLD focusses on treatment to improve risk factors for NASH like obesity, Insulin resistance, metabolic syndrome and dyslipidemia. Therefore, the most effective treatment so far is lifestyle changes.

- ✓ LOSE WEIGHT: Approximately 5% weight loss can improve abnormal liver test and decrease the fat in liver. Losing between 7 to 10% of body weight seems to decrease the amount of injury and inflammation to the liver cells and may even reverse some of the damage of fibrosis. A BMI of 18.5 to 22.9 kg/m² is considered to be healthy in Asian population. Therefore, target about 0.5 to 1 kg wt loss per

week as very rapid weight loss may worsen the inflammation and fibrosis.

- ✓ EXERCISE: Aerobic exercise leads to decreased fat in the liver and with vigorous intensity, decreases the inflammation independent of weight loss. Improving cardiorespiratory fitness and musculoskeletal strength through progressive resistance training may be even more effective than aerobic exercise alone.

- ✓ EAT WELL: A Mediterranean diet helps decrease fat in the liver. This comprises of fruits, vegetables, whole grains, legumes, nuts, etc. Switching to olive oil or canola oil is advised. Limiting red meat and consumption of more fish and lean poultry is beneficial. Some studies also showed that drinking 2 cups of coffee per day was associated with a decreased risk of fibrosis.

- ✓ Few antioxidants like vitamin E, vitamin C , omega 3 fatty acids, silymarin and drugs like ursodeoxycholic acid and obeticholic acid has been found to have anti- inflammatory properties, though not extremely effective.

Thus, making lifestyle changes and losing weight seems difficult but the benefit is immense if you have fatty liver. So, give it your best effort as it can improve or resolve your fatty liver and keep your heart healthy as well.

IMAGES- 2021-22

World Mental Health Day 2022 was observed by the IIT Guwahati Hospital on 11th Oct 2022 in the Mini Auditorium of the Institute.

The Chief Guest and Main Speaker on the occasion was Dr.(Mrs.) Nahid Suraiya Islam, MD(Neuropsychiatry). Dr. Islam delivered a talk on the theme of this year for World Mental Health Day for the event.

+

Speakers on the occasion: Dr. Nahid Suraiya Islam and Dr. Bhaskar Sarma Neog.

*The theme for this year is ""***Make mental health & well-being for all a global priority**."

Special vaccination drive for administering Booster Dose for Covid-19 to the employees of the Institute on the occasion of Azadi Ka Amrit Mahotsav-75th Year of India's Independence.

DISCLAIMER: The articles written for this newsletter have been own creations of the writers. Whole or part resemblance of any of them with any other previous written articles by other writers will be treated as mere coincidence. The readers are advised to familiarise with the all medical terms as mentioned in these articles before forming any opinion or a conclusion. The Medical Section will not be anyway responsible for any kind of typo committed in these articles. The copy rights for all the articles contain in this newsletter is reserved entirely with the Medical Section, IIT Guwahati

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