

ECO-CLUB MANUAL

(FOR ECO-CLUB INCHARGES)

2012



स्वाध्यायान्मा प्रमदः

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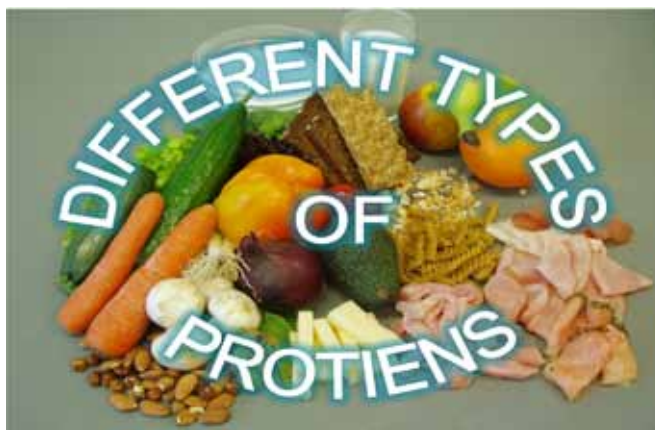
CHAPTER

3

HEALTHY FOOD HABITS AND DEFICIENCY DISEASES



Proteins are needed for building the structure in the cells and in the formation of tissues and organs. They are needed for the growth of the body to repair damaged parts such as cuts on the skin and to replace tissues that are constantly being worn away such as the lining of the mouth.

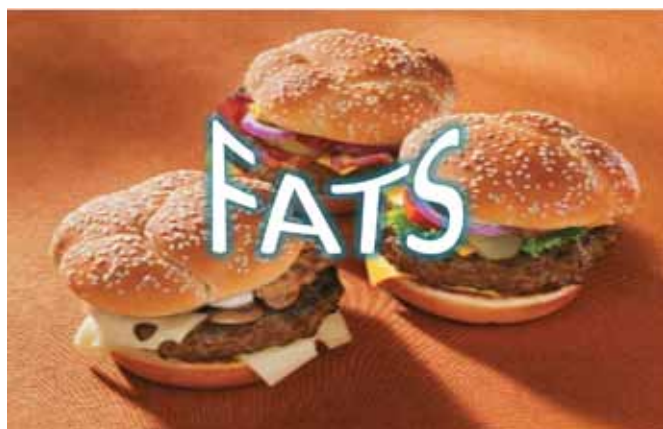


WHEY PROTEIN

Whey protein is a quickly digested protein. During the day there is a great need for amino acids to begin muscle repair and Whey protein is excellent for this. Whey is highly available, and boasts the highest value of any protein source.

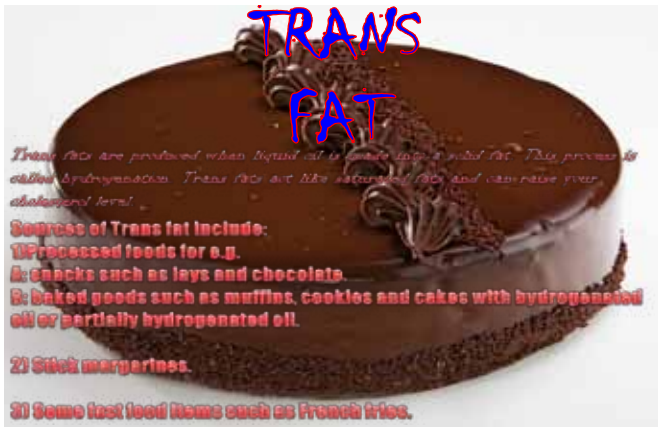
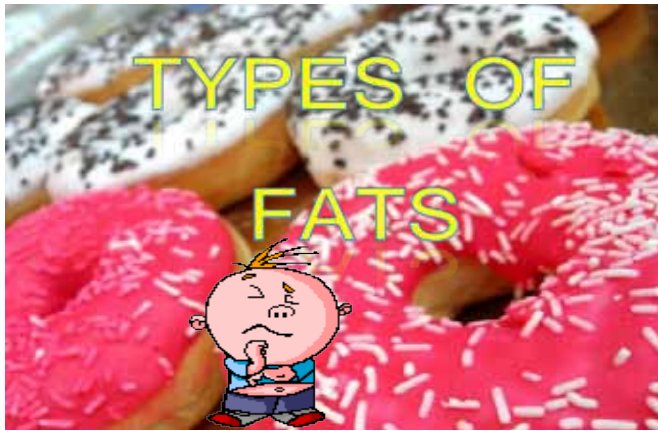
CASEIN PROTEIN

Casein protein is slower absorbing from the stomach and small intestine so the blood amino acid levels don't rise quite as rapidly as the Whey protein. Casein is extracted from the milk without the use of chemicals. Casein is the only protein you should be taking before going to sleep. The reason is because your body needs to be sustained for six to eight Hours during your sleep without food.



Fats are concentrated source of food energy. They are also the source of linoleum acid, an essential nutrient, and the fat-soluble vitamins A, D, E and K.





<u>Vitamins</u>	<u>Symptoms of deficiency</u>	<u>Sources</u>
vitamin A	Easy to infection; poor vision in twilight. Retarded growth.	Milk, butter, eggs, liver, margarine, tomatoes, carrots, fish liver oils.
vitamin B1 (Thiamine)	Loss of appetite; nerve disorders; fatigue; poor digestion. Retarded growth.	Meat, especially pork, wholemeal bread and cereals, milk, vegetables.
vitamin B2 (Riboflavin)	Sores at corners of the mouth; other skin and membrane disorders	Meat, milk, green vegetables, eggs, poultry.
vitamin C	Slow healing; tendency to bruise and bleed easily; sore gums. Scurvy.	Many raw fruits, especially the citrus group, and vegetables, tomatoes, melon.
vitamin D	Poor bone and tooth development; dental decay; Rickets.	Fish liver oils, liver, fortified milk and baby cereals, irradiated margarine, etc., sunshine.
vitamin E	Infertility.	Seed germs, green vegetables.
vitamin K	Faulty clotting of the blood. Bleeding.	Meat, poultry, fish, potatoes, peanuts; whole grain cereals.

- 1) The body needs to use these vitamins. Vitamins A, D, E, and K are fat-soluble vitamins which means that the fat in foods helps the intestines absorb these vitamins into the body.
- 2) **Brains development:** Fats provide the structural components not only of cell membranes in the brain, but also of myelin, the fatty insulating sheath that surrounds each nerve fiber, enabling it to carry messages faster.
- 3) **Healthier skin:** The layer of fat just beneath the skin acts as the body's own insulation to help regulate body temperature.
- 4) **Healthy cells:** Fats are a vital part of the membrane that surrounds each cell of the body. Without a healthy cell membrane, the rest of the cell couldn't function.
- 5) **Making hormones:** Fats are structural components of some of the most important substances in the body, including hormone-like substances that regulate many of the body's functions.
- 6) **Protective cushion for our organs:** Many of the vital organs, especially the kidneys, heart, and intestines are cushioned by fat that helps protect them from injury and hold them in place.
- 7) **Pleasure:** Besides being a nutritious energy source, fat adds to the appealing taste, texture and appearance of food. Fats carry flavour.



Dietary fibre

Fibre helps prevent constipation problems. Good sources of fibre are baked beans, kidney beans, high-fibre breakfast cereals, wholemeal bread, fruit and vegetables.



If we don't have sufficient water, we will become dehydrated.

Dehydration is the deficiency disease.

DEFICIENCY DISEASES

DEFICIENCY DISEASES

Any illness associated with an insufficient supply of one or more essential dietary constituents.

Single or multiple deficiencies

Excess of one nutrient may also lead to deficiency of other nutrient.

BALANCED DIET

Food Guide Pyramid

The Five Food Groups are the building blocks of the Food Guide Pyramid.

DEFICIENCY DISEASES

Obesity	Tetany
Night blindness	Osteoporosis
Beriberi	Goitre
Pellegra	Anaemia
Scurvy	Kwashiorkor
Rickets	Marasmus

OBESITY

Excessive accumulation of major nutrients in the form of fat.

Taking excess food .

Doing less exercise .

Cardiovascular disorders .

Breathlessness

NIGHT BLINDNESS

Deficiency of Vitamin- A (Retinol) in food
Rhodopsin formation requires retinol
Rod cells of retina do not perceive dim light
Can not see in dim light except bright light
Hyperkeratosis (darkness of skin)
Thickness and roughness of skin

XEROPHTHALMIA

Deficiency of Vitamin- A in the food
Eye lesions in the beginning
Dryness of conjunctiva
Cornea ulcerated then its deep destruction
Keratomalacia leads to permanent blindness
Carrot
Green leafy vegetables
Papaya
Onion

XEROPHTHALMIA



BERI-BERI

Deficiency of Vitamin B₁ (Thiamin)
Energy production , Nerve conduction
Leg cramps muscle weakness
heart failure high pulse rate
limb swelling memory loss
Legume yeast
seed coat of cereals

RIBOFLAVINOSIS

Deficiency of Vitamin B₂ (Riboflavin)



PELLEGRA

Deficiency of Vitamin B₃ (Niacin)
Pellegra means " rough skin "
Dementia = mental weakness
Dermatitis = skin sores and scars
Diarrhea = loose motion
Cereal grains
proteins (no corn)

PELLEGRA



SCURVY

Deficiency of Vitamin C (Ascorbic acid)
Bleeding gums (Gingivitis)
Skin break & Impaired wound healing
Anaemia and shortness of breadth / faint
Joint pain and irritability
Citrus fruits tomato
Amia Lemon

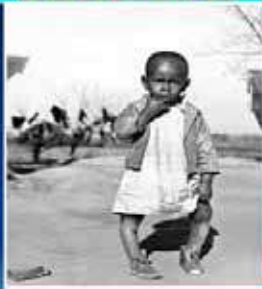
SCURVY



RICKETS

Deficiency of Vitamin D (Calciferol)
Rickets word from " twist " or " wrick " .
Vit. D interacts with Ca^{++} & P to form bone .
Poor calcification results deformed bones .
Delayed dentition , teeth decay , soft skull .
In adults - Osteomalacia
Milk , cheese , fish /meat , oils , sunshine
Only vitamin to be self prepared by body

RICKETS



OSTEOPOROSIS

Deficiency of Calcium (Ca^{++}) in the food
Decrease in mass of bone causing pores
Low osteoblast more osteoclast cells
 Ca^{++} , P and parathormone are responsible
Leg cramps muscle weakness
heart failure High pulse rate
Limb swelling

Persons with age 40+ are more prone
Females after menopause prone to fracture

Hump in the back of females
Repeated fractures in hip,wrist & vertebrae

Leg cramps muscle weakness
heart failure High pulse rate
Limb swelling

SIMPLE GOITRE

Deficiency of Iodine in the food
Less secretion of Thyroxin hormone .
Enlargement of Thyroid gland of neck .
Metabolic disorders in the body .

Source of Iodine is common salt (Iodized)
Sea food
Iodine tablets in water

GOITRE



Goitre

ANAEMIA

Deficiency of Iron (Fe^{++}) in the food
Deficiency of Vit. B_{12} & folic acid in food
Low RBC formation , No RBC maturation
Low haemoglobin amount in RBC
Low O_2 absorption ,less energy production

Chronic diarrhea malaria
Hookworm infection
Excessive menstruation thalasemia


KWASHIORKOR
 Deficiency of Proteins and Carbohydrate .
 It is a nutritional disorder of PEM .
 It means "The disease of displaced child" .
 Small children are mostly affected .
 Stunted growth , weight loss , edema ,
 swollen abdomen , diarrhea, skin peeling ,
 white spots on skin , reddish hairs ,
 muscle loss , anaemia , coma , death
 Supplements of proteins and carbohydrate

KWASHIORKOR



MARASMUS
 Deficiency of Protein and Carbohydrate .
 Severe form of PEM disorder .
 Small children of 1 to 5 years affected
 Results acute infection , T B & HIV
 Lethargy , slow growth , weight loss , thin
 body, dark skin, muscle loss, coma , death
 Rehydration , immunization for infection
 carbohydrate & protein supplements

MARASMUS



The Importance of Physical Activities, Exercise, Yoga and Meditation

The regular **physical activity**, fitness and exercise, are critical for the health and well being of people of all ages. Researches show that everyone, young or old can benefit from regular exercise, either vigorous or moderate. Even very old adults can improve mobility and function through physical activity. It should be a priority for everyone. Millions of people suffer from chronic illnesses that can significantly improve through activity. Exercise reduces the risk of heart disease, diabetes, colon cancer, and high blood pressure. People who are active outlive those who are inactive.

Despite the well known benefits, most adults and children lead relatively sedentary lifestyles. They are not active enough. A sedentary lifestyle is defined as engaging in no leisure-time physical activity, like exercises, sports, physically active hobbies, in a two-week period. Typically a lot of older people lead sedentary lifestyles. More than one-third of young children of 9-12 standards do not exercise regularly. They tend to watch too much television.

The cost to the medical establishment is in crores for treatments of diseases, which could be minimized with exercise. Regular exercise should be of 30 minutes, 5 days a week, or 20 minutes of vigorous exercise 3 times a week. Physical activity maintains muscle strength, joint structure, joint functioning and bone health. Exercise has an effect on mental health as well, especially among young people. It increases the capacity for learning, increases self esteem and reduces anxiety and stress. Sports can introduce skills such as teamwork, self-discipline, sportsmanship, leadership and socialization. Lack of recreational activity may contribute to making young people susceptible to gangs, drugs or violence and other unethical activities.

The problem of obesity has become a nationwide epidemic. Regular activity, along with a nutritious diet, that incorporates quantity control is the key to maintaining a healthy weight. Public and private sectors need to band together to encourage more activity. Walking programs for schools, worksites and

the local community are some examples. The most important change has to come from the individual and families. Every person must realize the benefits of physical activity for the development of mind and body.

Regular physical activity is one of the most important things we can do for our health. It can help:

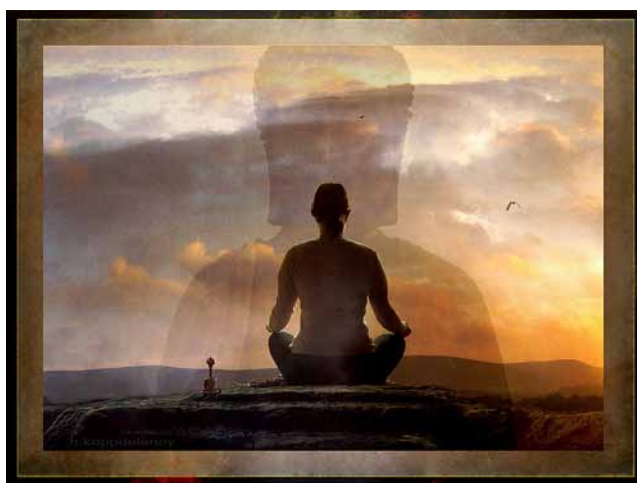
- Control our weight
- Reduce the risk of diabetes and metabolic diseases
- Minimize the risk of cardiovascular diseases
- Strengthen the bones and muscles
- Improve the mental health and mood
- Reduce the risk of some cancers
- Increase the chances of long life

Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, inculcating athletic skills, weight loss or maintenance, building and maintaining healthy bone density as well as for the purpose of enjoyment. Frequent and regular physical exercise boosts the immune system, and helps prevent us from so many diseases. It also improves mental health, helps prevent depression and helps to promote or maintain positive self esteem. Obesity in children is a growing global concern and physical exercise may help decrease some of the effects of childhood and adult obesity. Studies have shown that exercising in middle age leads to better physical ability later in life.

Yoga is the ancient art, science and philosophy of maintaining a balance between the three most important elements of a human being, the mind, body and soul, by synchronizing them in a single chord. The word 'Yoga' means union with the Supreme power or God. God is the creator of all the living beings in this earth and it is Him whom we merge with at the end of our lives. This practice was started by the Vedic people thousands of years ago.

Yoga has various forms such as Raja yoga, Karma yoga, Bhakti yoga, Kriya yoga or Kundalini yoga which aim to connect the Atma or the human soul with the Paramatma or the Supreme soul. It helps to merge the individual identity with the universal identity by creating a union.

Meditation or 'Dhyana' was also a part of ancient yoga practice. Meditation is the way of connecting to the God by developing a deeper level of consciousness. By meditating, an individual can communicate with the Almighty on the intra-personal level. Apart from its spiritual significance, yoga and meditation are also widely practiced for a healthy life. The physical and mental benefits of yoga, make it a boon to the mankind. Yoga helps to prevent as well as cure a number of ailing diseases. It makes the muscles and the muscular joints flexible, improves the musculoskeletal disorders like arthritis, back and knee problems.



The regular practice of yoga promises a stress free life by improving the health condition. Practicing yoga provides strength to the spinal chord, improves digestion. Yoga is also the best solution to all heart related problems like improving the heart condition, maintaining proper blood circulation in the whole body as well as controlling the blood pressure level.

Yoga and meditation are also very much helpful in recovering the breathing disorder. Both help in boosting the immune system, decreasing cholesterol and increasing the stamina. Besides improving the health status, yoga also upholds the spiritual sense within a human being. It becomes much more easier to connect to the divine identity with a pure body and heart free from all illness. There are no greater happiness than to merge with that Omnipotent power. Some benefits of meditation are:

- It decreases respiratory rate.
- It lowers oxygen consumption.
- It increases blood flow and slows the heart rate.
- Increases exercise tolerance in heart patients.
- Leads to a deeper level of relaxation.
- Good for people with high blood pressure as it brings the B.P. to normal.
- Reduces anxiety attacks by lowering the levels of blood lactate.
- Decreases muscle tension (any pain due to tension) and headaches.
- Builds self-confidence.
- It increases serotonin production which influences mood and behaviour. Low levels of serotonin are associated with depression, obesity, insomnia and headaches.
- Helps in chronic diseases like allergies, arthritis etc.
- Reduces pre- menstrual syndrome.
- Helps in post-operative healing.
- Enhances the immune system. Research has revealed that meditation increases activity of ‘natural-killer cells’, which kill bacteria and cancer cells.
- Also reduces activity of viruses.
- Reduces emotional distress.

Word find

There are fifteen names of Indian rivers hiding in this puzzle. See if you can find them. The names can be read upwards, downwards, backwards or diagonally.

B	G	O	O	E	R	Q	C	X	Z	U	K	H	F
N	E	M	A	H	A	N	A	D	I	G	O	G	H
A	R	A	C	C	D	P	U	X	Z	E	S	I	D
A	O	N	C	G	O	N	V	A	C	K	I	U	O
N	B	D	O	O	M	X	E	U	U	R	A	P	A
H	B	V	O	M	A	G	R	T	A	Q	W	R	D
S	R	I	B	T	D	P	Y	V	J	K	C	R	A
I	R	Q	S	I	N	M	A	J	H	E	L	U	M
R	J	T	Y	F	I	D	Y	I	L	G	H	O	R
K	U	O	A	Y	O	T	Q	Z	K	Y	O	W	A
R	L	F	M	g	A	N	G	A	X	W	N	A	N
O	T	T	U	Y	A	T	S	E	E	T	Z	P	E
P	A	H	N	Y	K	R	A	C	K	M	U	H	D
H	S	P	A	R	T	U	P	A	H	M	A	R	B

Word Scramble

There are fifteen scrambled water related words. Unscramble them to get the correct words in space provided.

1. Gawees
2. teiscpide
3. PAIHUROETITCNO
4. TINOVEROSACN
5. FEEFUTNEL
6. EORCLHA
7. RAMILARA
8. ENOPAHEELS
9. REPHNODIOTOTMEAY
10. DOTYIPH

- 11. SARCOSIENSO
- 12. ISPEHATST
- 13. YNCHAHIT
- 14. BCIMIGTONAIFIAON
- 15. OOMNSON

Environment related crossword

Crossword

