

Cure of Osteoporosis and Osteoarthritis Diseases in Natural Way without Medicine

Dr. Pijush Kanti Bhattacharjee

Professor & Dean, Department of Electronics and Communication Engineering,
Guru Nanak Institute of Technology, Kolkata, West Bengal, India
Metropolitan Homoeopathic Medical College and Hospital, Kolkata, West Bengal, India

ABSTRACT

Human body skeleton is manufactured by different type of bones and joints. There is cartilage in joints to act the bone flexible and properly. The bone is mainly composed by calcium phosphate named hydroxyapatite and Type I collagen protein substances. The cartilage consists of Type II collagen protein and it is stimulated by calcium salts. Throughout the life of a human being, the bone has undergone by the process of bone formation, called osteoblastic function and bone resorption, called osteoclastic function. If the blood contains less amount of protein (amino acids) and acids, bone formation or growth takes place, i.e., calcium in the blood deposited on the bone; otherwise bone resorption or destruction will happen, i.e., calcium from the bone goes to blood. Two common bone diseases appearing after middle age (35-40 years) of a person are osteoporosis occurring due to decay of calcium from the bone, and osteoarthritis due to non-function and decompose of cartilage in the bone joints.

Human body cells are continuously growing (multiplying) and dying. The main constituent of a cell is protein substance. After crossing middle age (35-40 years) of a person, the destruction rate of the cells is increased than the growth rate of the cells. As a result more protein is produced by the dead cells and the blood becomes enriched of protein when extra protein containing foods are taken from outside. If the blood contains more protein and acids, calcium is released by the bone and cartilage; the person will suffer from osteoporosis or osteoarthritis. The allopathic physician prescribes calcium, vitamin D₃ and physical exercise for these diseases, but these cannot afford recovery. In this paper, the complete cure of osteoporosis and osteoarthritis is enlightened by restricting intake protein and acid substances (preferring alkaline foods) from outside, since the protein available from the dead cells and other less protein containing foods is sufficient for body function and supplying energy.

I. INTRODUCTION

Plenty of calcium is present in our blood and water, hence special calcium rich diets are usually unnecessary. Green vegetables also contain plenty of calcium. About 300 to 500 mg of calcium require daily for an adult. The need is more in growing children, in pregnancy and in lactating mother. Calcium is used in membrane excitability, bone and teeth formation, cartilage stimulation, nerve conduction, neuromuscular and synaptic transmission, muscle contraction, blood coagulation, activation of enzymes etc. [1]-[5].

Bone gives support to the body and protects the organs. It helps us to move, to work and to maintain the structure and shape of the body. Blood cells are produced in the bone marrow. Bone is a special form of connective tissue with Type I collagen (protein) frame work impregnated with calcium (Ca²⁺) and phosphate (PO₄³⁻) salts [1]-[5]. Collagen contributes to the mechanical properties of the bone, and it is necessary for calcification of the tissue. It contains cell and intercellular substance.

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KEYWORDS: Bone, Cartilage, Calcium, Hydroxyapatite, Osteoblasts, Osteoclasts, Cholecalciferol, Osteoporosis, Osteoarthritis, Less protein containing food

Collagen is active and shows continuous remodeling. Cartilage is made of Type II collagen (protein) fiber, called chondrocytes. Cartilage is stimulated (function properly) by calcium phosphate and calcium pyrophosphate dihydrate salts [6].

The intercellular substance in bone is a rigid matrix formed of collagen and mineral salts. The main salt is called hydroxyapatite, a compound formed mainly of calcium and phosphate. The calcium in bone is in dynamic equilibrium with the calcium in extra cellular fluid (ECF), i.e., there is continuous deposition and removal at the same time of this calcium in health. Apart from calcium, some other salts like sodium, potassium, magnesium and carbonate are also present in the bone. The salts of the bone give strength the bone matrix [1]-[6].

The cells responsible for bone formation are osteoblasts, and the cells responsible for bone resorption (break down or destruction) are osteoclasts. Osteoblasts are rich in enzyme alkaline phosphatase which is necessary for deposition of calcium in the bone matrix, called calcification. The active transport (absorption) of calcium and phosphate from the intestine is increased by a metabolite of vitamin D (D_3). Vitamin D_3 is called cholecalciferol which is produced in the skin of human body from 7-dehydrocholesterol by the action of sunlight. The blood carries calcium and phosphate to bone and cartilage for calcification. In blood plasma, calcium is 9-11 mg/dL. All proteins are chain of amino acids. Calcification to bone and stimulating cartilage action occurs when the blood is alkaline, otherwise destruction of bone and cartilage occurs, i.e., in case when the blood carries more protein and acids. Resorption is the process by which osteoclasts break down the tissue in bones and release the minerals, resulting in a transfer of calcium from bone tissue to the blood. The acidic pH ($pH < 7$) dissolves hydroxyapatite, and acid proteases secreted by the cell break down collagen, forming a shallow depression in the bone. pH value of neutral substance is 7 [$pH = 7$, for neutral substance or food].

Presently osteoporosis and osteoarthritis diseases regarding bone and cartilage cannot be cured by allopathic treatment; only calcium and vitamin D_3 tablets are prescribed by the allopathic doctors with some physical exercises for these diseases which give no permanent rectification or improvement. In this paper, the proper way of treatment as well as permanent cure for osteoporosis and osteoarthritis disease is enlightened.

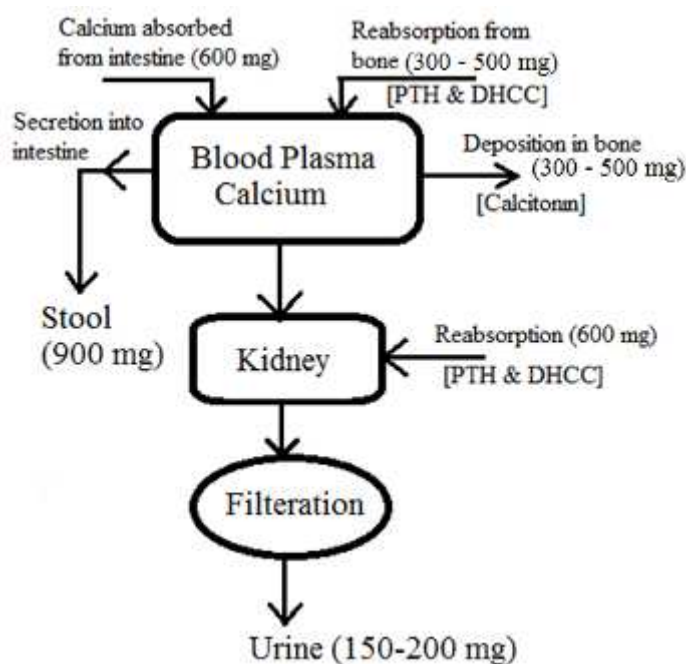


Fig 1 Schematic diagram showing calcium metabolism. Values belong to adults for a day

Hormones: Calcitonin secreted from thyroid gland;
PTH- parathormone secreted from parathyroid gland;
DHCC- Dihydroxycholecalciferol (Calcitriol), synthesized in kidney.

II. Osteoporosis and Osteoarthritis Diseases

Osteoporosis is caused by a relative excess of osteoclastic function, i.e., loss of bone matrix. It is typically occurs in old age and in woman after menopause. Due to loss of bone matrix (calcium in bone), the bones look porous in X-Ray. The bone becomes weak and susceptible to fracture. Commonly affected bones are vertebrae, knee joint and hip. It also occurs due to prolonged immobilization, e.g., when a patient remains in bed rest for a long time or long duration air journey performed.

Osteoarthritis is a complex disease that causes joint pain and reduces joint mobility and function. It is a degeneration of a joint due to a breakdown of cartilage and bone. Osteoarthritis causes changes in the bone and deterioration of the connective tissues that hold the joint together and attach muscles to the bone. Osteoarthritis affects the entire joint, while osteoporosis affects the bones. Osteoarthritis and osteoporosis may lead to negative effects such as increased risk of pain, reduced quality of life and changes in social life. This risk is increased with age.

Attacking by osteoporosis, the following signs and symptoms are appeared:

1. Back pain, caused by fractured or collapsed vertebra.
2. Loss of height over time.

3. A stooped posture.
4. A bone that brakes much more easily than expected.

Generally there is no cure for osteoarthritis and osteoporosis. Allopathic physician prescribes calcium tablet, vitamin D₃ tablet with some weight bearing exercises for these diseases. Preventing fractures is especially important as they may not heal properly in people having the diseases. For females in perimenopause or menopause, the physician usually suggests medications that affect estrogen level to prevent from these diseases.

III. Human Body Cell Mechanism

Human body cell is composed of a small mass surrounded by a membrane called cell membrane or plasma membrane. This intracellular mass contains the cell nucleus and cytoplasm. The cytoplasm contains different cell organelles like mitochondrion, golgi complex, centrosome etc. The proteins are present on the outer surface, membrane and inner surface of the cell. In the average young adult male, 18% of the body weight is protein, 7% is mineral, 15% is fat and remaining 60% is water. The cells in a human or mammalian body are simultaneously growing (replicated) and destructed (dying). In a person, the cells are programmed to divide (mitosis-equally two parts), multiply and perform basic biological functions [1]-[9]. When the more cells divide, in turn cells eventually lose their ability to function properly and ultimately die. The growth and replication of cells is often described as a cyclic process with two main phases like Interphase – when the cell grows and replicates DNA (Deoxyribonucleic acid) in preparation for cell division; Mitosis – during which the actual division of the cell into two daughter cells occur.

Cellular senescence is part of the normal aging of a diploid cell where it loses its ability to divide or multiply. Old cells are often two or three times larger than young cells. The cells have an internal limit of divisions and then stop (die). Most of the cells divide 50–70 times before they stop. Morphologically, cell death can be classified into four different forms like apoptosis, autophagy, necrosis and entosis. Apoptosis is the fastest form of cell death. Human body replaces billions (about 30 billions) of cells everyday [7]-[9].

In younger age the growth rate of the cell is higher than the destruction rate and after middle age (35-40 years) the destruction rate of the cell is gradually increased than the growth rate of the cell. After 40 years of age, since the death of cells in a human body increases, the amount of protein due to the dead cells in blood also increases. Therefore, no extra protein

containing food is required for a person after 40 years. Dead cell protein can be used for further tissue work (energy supply) and cell growth. If protein containing foods are taken, then the amount of protein (amino acids) in blood increases plenty, calcium from the bones and cartilages will be released to the blood, as a result osteoporosis and osteoarthritis occur.

IV. Permanent Cure of Osteoporosis and Osteoarthritis Diseases

Generally osteoporosis and osteoarthritis appear after middle age (35-40 years) of a person, because of excess protein and acids causing destruction of bones and joints. Calcification to the bone cannot be done and the bone becomes porous. At the same time, the cartilage cannot do normal function due to lack of calcium in the tissue.

The way of permanent cure to the above diseases and bone growth is possible, when calcification to the bone and cartilage will be done smoothly by natural way. Therefore, the decay of bone and cartilage are prevented by the following process for osteoporosis and osteoarthritis diseases without any medication:

1. A person after middle age (35-40 years) should not take any protein and acid containing food (pH < 7) like fish, mutton, chicken, egg, milk and dairy products, grams (dal), seeds, nuts, tomato, orange, lemon, beans, spinach, asparagus etc.
2. The person has to take alkaline containing foods and green vegetables (pH > 7) mostly such as cauliflower, broccoli, beet, radish, carrot, seaweed, watermelon, onion, garlic, ginger, apple etc.
3. The person has to limit his daily intake food by taking more carbohydrate and less fat containing foods having alkaline nature.
4. The body has to be exposed on the sunlight for vitamin D₃.

By maintaining daily food of a person without any extra protein intake, osteoporosis and osteoarthritis diseases (malfunction of bone and joint) will be cured automatically. Protein available in the dead cells and in the carbohydrate and fat containing foods after middle age can afford sufficient energy for one's daily work. No extra calcium and vitamin D₃ from outside has to be taken. Calcium and vitamin D (D₃) available in the foods can safely take part for the bone and joint repair. After strictly following the above process, within short time (3-4 months) the patient will be cured of osteoporosis and osteoarthritis diseases automatically with natural calcium supplement. If the diseases are chronic in nature, i.e., damages to the bone and joint having more intensity, it can take little longer time for complete cure.

V. Conclusion

It is observed that if blood contains more protein and acid substances, calcium from the bone and joint comes to blood causing osteoporosis and osteoarthritis diseases. In this case the blood becomes heavy and the heart has to do more work (pressurized) for pumping blood and the kidney has to filter out more calcium which results the heart and the kidney deterioration in early. Allopathic doctor prescribes calcium supplement from outside which is worsening the patient's health more. This allopathic treatment cannot recover the diseases, at the same time it creates several complications to the heart, the kidney and the gastrointestinal (G.I.) tract of the patient. When the blood carries minimum quantity of protein and acid substances, calcium from the blood will be deposited on the bone and stimulate cartilage, i.e., repair the bone and cartilage, thus this process will recover osteoporosis and osteoarthritis diseases within short time. The protein available from the dead cells and other less protein containing foods in the patient is sufficient to supply the energy for maintenance of life. Therefore, continuing the life taking minimum quantity of protein and acidic foods after middle age will afford smooth and stable bones with joints.

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Dr. Pijush Kanti Bhattacharjee

is associated with the study in Engineering, management, Law, Indo-Allopathy, Herbal, Homeopathic & Yogic medicines. He is having qualifications Ph.D. [Engg.], M.E., LL.M., MBA,

MDCTech, A.M.I.E. (B.E or B.Tech), B.Sc(D), B.H.M.S. [Pursuing], BIASM, CMS, PET, EDT, FWT, DATHRY, B.A, LLB, KOVID, DH, ACE, FDCI etc. He has started service in Government of India, Department of Telecommunications (DoT) since 1981 as a Telecom Engineer, where he has worked upto January, 2007, lastly holding Assistant Director post at Telecom Engineering Centre, DoT, Kolkata, India. Then he worked in different Engineering Colleges, India, and Assam University [Central University], Silchar, India, as an Assistant, Associate and Professor from 2007 to 2023. He has written ten books and more than a hundred research papers. He is a Member of IACSIT, Singapore; CSTA, UACEE, USA; IAENG, IETI, Hongkong; and IE, ISTE, IAPQR, IIM, India. His research interests are in Telecommunications including Mobile Communications, Image Processing, VLSI, Nanotechnology, Electrical Power System, Power Electronics Circuit, Management, Medicine and Environmental Pollution.