

Title of Article (English): Physical Exercise is Key in Facing Osteoporosis
Title of Article (Bahasa Indonesia): Latihan Fisik Kunci Menghadapi Osteoporosis

In 1997 Kardinah Soepardjo Roestam (73) took a bone density test (densitometer) at Cipto Mangunkusumo General Hospital. Results declared that her knee bone suffered a loss in bone density to minus 3. Kardinah suffered severe osteoporosis.

“The doctor treating me suggested I do osteoporosis rehabilitation exercise regularly,” she said to Media, Monday (17/10) at her home in Kuningan, Jakarta.

Since then, the patron to Indonesia Community of Citizens of Healthy Bones (Perwatusi) did the special osteoporosis exercise three times a week. “The exercise strengthens the muscles, making them more pliant, limbers up the joints and improving blood flow. Thanks to this exercise, I am much more comfortable and my bones have improved in health,” she said.

Kardinah also follows a strict calcium regime, maintains nutrition intake, and keeps active. These things have improved her bone quality to level minus 1. At this level, she has entered the green zone, which is controllable osteoporosis. She also admits to routinely drinking calcium rich milk every morning and night, as well as a diet of green vegetables rich in calcium.

“Also, from 6-9 o’clock I make it a habit to sun bathe because the morning sun helps the bone absorb calcium,” added the wife of the late Soepardjo Roestam, who is also active at the Indonesian Stroke Foundation, Family Welfare Program and Baitul Ihsan Foundation.

Physical exercise is indeed useful to prevent and overcome osteoporosis. But it turns out that over-exercise can injure the bones, as former Irish shooting athlete Nicholas Flood experienced. His osteoporosis was caused by overtraining, while his nutrition intake, particularly calcium, was low. In 2002, Flood, which was one of the best air rifle athletes in the world, was returning from a shooting tournament in Australia. Similar to Kardinah, he initially felt sharp pain. While Kardinah’s pain was in her knee, Flood’s was in his lower back.

“She suggested I take a bone test, which confirmed I suffered osteoporosis,” said Flood, as written in a bulletin distributed during an osteoporosis seminar in Bangkok, Thailand, last September.

The news of course shocked Flood. He felt he did a lot of physical exercise. It was in fact his routine of standing in the same position shouldering his 4 kg rifle that caused the disease. According to O’Brien, Flood’s 3 – times - a day training did not give his bones enough time to rest and recover its stamina. In addition, the type of training stressed his muscles.

Thus, O’Brien recommended Flood to do aerobic and stretching exercises at the National Training Centre. Furthermore, Flood was also advised to reduce his coffee drinking, because caffeine can decrease the body’s calcium levels.

After doing these exercises, Flood was finally able to return to competition. In 2004, he even became European champion and broke the record in air rifle competition.

Flood now knows why people experience back pains. “If you feel pain, I suggest you see a doctor. Your body has given you a sign that you should heed. Osteoporosis can attack anyone, not just women. I advise men to also watch out for this, don’t wait until you fracture a bone. Recovery would not be easy,” he said.

Exercise

Physical exercise is indeed essential to increase the peak bone density level in women as well as men. Exercise also reduces the rate of bone deterioration in old age. That is why exercise should begin as

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early as possible in order to build up bone density to keep the bones strong and reduce the osteoporosis occurrence in old age.

According to Dr. Tanya TM Rotikan physical exercise is very effective in increasing bone density. And this is proven by the evidence of higher bone density among athletes due to mechanical load endured by their bones during physical exercises. “Research results indicate that children who have normal high physical activities 40 minutes each day have higher bone density compared to less active children. This is true for both boys and girls,” said the sport specialist doctor of UI Sports Medical School.

Ms Rotikan herself, together with her colleague Rachman IA in 1995 undertook a research (jointly implemented by UI Sports Medical School and UI Medical School Nursing Division) on females of reproductive age range of 20-35 who never routinely undertook physical exercises. After participating for three months in routine aerobic exercises their bone density increased. A research abroad by Dalsky GP on women of post-menopause came out with the same result. These postmenopause women who never exercised routinely were asked to participate in various physical exercises for nine months.

“The result, as reported by Dalsky, increase in backbone density by as much as 5.2 % on postmenopause women of average age of 62. They exercised using weights for between 50-60 minutes per session. After 22 months their bone density increased by 6.1%”. The research conducted by Nursing and Sports Medical School, UI, she continued, also reached the conclusion that menopausal women who exercise their bodies regularly have higher density bones compared to those who do not. In China, similar research was conducted on participants to Tai Chi exercises of over 70 years of age after they exercised for six months. The results showed a reduction in the risk of falling by as much as 70%. Rotikan said the physical exercises must be correctly apportioned because too light they would be of less beneficial, while if it's too heavy it might bring on injury even broken bones as suffered by Flood. On women it might disturb menstrual cycle. So, she said, the physical exercises recommended for osteoporosis prevention would be weight bearing exercises.

This exercise take the form of physical activities performed in an upright position, so the body frame props up the body weight against the pull of earth's gravity. Examples of this exercise are aerobics, walking, jogging, running, and gymnastics. Exercise should begin with light intensity according to ability, and then followed by weight bearing exercise. This can increase both the muscle strength and the bone density in parts of the body exercised.

Title of Article (English) : It started with frequent sharp pain in the spine Title of Article (Indonesian) : Awalnya Sering Alami Nyeri di Tulang Belakang

Shinta, 27, was feeling very happy. After two months of marriage the doctor told her she was two week pregnant. In eight months Shinta would be cuddling her much awaited first born.

But, as her pregnancy reached the third months, Shinta often felt sharp pain in her joints and teeth. At first, Shinta didn't pay much attention to it, but as her pregnancy entered the fifth month, the sharp pain persisted. During a routine pregnancy check Shinta complained of the sharp and smarting pain she often suffered. Her doctor recommended Shinta to get bone density scan and bone ex-ray. The doctor's prognosis was confirmed. The results indicated Shinta had brittle bones or commonly known as osteoporosis.

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In a totally different recount by Mrs. Kardinah Soupardjo Roestam, patron to Indonesia Community of Citizens of Healthy Bones (Perwatusi), her 60-year-old colleague suffered broken bone in her foot just because she slipped and fell. “My friend was seeing her husband off to his car parked in front of their house. As the car pulled away she turned toward the house, waving goodbye to her husband. She suddenly fell and then could not bring herself up to a standing position,” said Mrs. Kardinah. Osteoporosis is a hidden disease stealthily stealing the density of the bones, according to her.

Kardinah who also suffers from bone brittleness disease admits that initially she did not have any specific symptoms of the disease. She then often felt sharp pain but could not tell in which part. “I thought at the time it was because I didn’t do enough exercise,” said the lady in her seventies. She also noticed all of a sudden that her clothes were too long for her body.

Shinta and Mrs. Kardinah are just two examples of women with osteoporosis. There are many more Indonesian women experiencing similar complaints. And this is reaffirmed by Indonesian Ministry of Health R&D on Nutrients 2002 that stated 1 in 3 women in Indonesia are more prone to have osteoporosis. In males it’s 1 in 7. Among males, broken bones usually the result of trauma. According to Dr. Tanya TM Rotikan of the University Indonesia’s Medical School, males generally contract secondary osteoporosis, i.e. bone disease due to other illnesses; e.g. Congenital, severe illnesses or due to long term consumption of corticosteroid medicines

Still Rotikan talking, prevention of osteoporosis could be achieved through bone density maximizing at all ages

Bone saving

One of the factors why women have the risk of osteoporosis is because they give birth to babies and they breastfeed, as experienced by Shinta. When pregnant and when breastfeeding, their need for calcium increases as the unborn and the suckling babies require calcium intakes which they take from their mothers. And mothers to be and breastfeeding mothers who fail to pay close attention to their calcium intakes will have the tendency to have osteoporosis. Similarly for those women who are experiencing hormonal change during menstruation and menopause.

Prof. Dr. Ichramsyah A. Rachman, at a seminar “Early Awareness in Preventing Osteoporosis toward a Healthy Bone Community” recently, said, osteoporosis could not be avoided and could attack anyone. He referred to osteoporosis as almost without any indications. “Only revealed when a bone breaks, then it’s fatal,” said born-in-1945 gynecologist. Among women, he continued, osteoporosis was always linked to menopause indications. “For instance frequent spine, knees and muscle pain; and the mere act of putting on a dress could exhaust,” he said.

The only way to prevent osteoporosis, added Chairman of Central Board of Management of Indonesian Osteoporosis Association, would be by postponing bone brittleness. How? Save up on calcium from as early as possible. “Calcium saving could be done by consuming nutrients and calcium from daily foods, getting sunrays for at least 15 minutes a day, and sufficient physical exercise.” said Ichramsyah. He further said “It would mean changing to a better way life”.

Calcium resources vary widely: cheese, milk, spinach, broccoli, fish and many others. But, if inappropriately prepared these calcium resources could fall short from satisfying body calcium daily need of around 800 – 1000 mg.

According to Prof Dr. H Muhilal those who have difficulties in satisfy the calcium need via daily food intakes could make it up by taking supplements. At present, there is a calcium product with vitamin D content, for example, Marine Organic Calcium, made of marine coral of scleractinia type from the

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island of Okinawa, Japan. Such natural calcium product, he said, contain 74 minerals, such as calcium, magnesium, natrium, boron, phosphor, chromium, sulphur, selenium, and others.

Research in 2004 by Japan Ryuku University, Medical School, revealed that coral calcium proved effective in increasing bone metabolism and bone strength recovery.
