

How Fragile Is Her Future?

By Japan Osteoporosis Foundation

The awareness survey in Japan included in this report has been conducted by Social Survey Research Information Co., Ltd., an independent research firm, from May to July, 2002.

The research questionnaire is based on the awareness survey regarding osteoporosis conducted in 2000 by the International Osteoporosis Foundation (IOF) and has been drafted under agreement/approval between Japan Osteoporosis Foundation (JOF) and Eli Lilly Japan K.K.

Social Survey Research Information Co., Ltd. has confirmed that all the research results in this report are true to data interpretations.

The overseas data cited in this report (as a comparison with Japan) is employed from IOF's research results of 2000.

This survey is sponsored by Eli Lilly Japan K.K.

How Fragile Is Her Future?

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1 .Now is the Time to Think about Our Bone Health

Hajime Orimo, Chairman of Japan Osteoporosis Foundation (incorporated foundation)

The aging of society in our country is proceeding at a speed unique in the world. It is expected that a super-aging society in which one out of four citizens is 65 years old or above will arrive in the year 2020. Osteoporosis, too, is on the increase as the aging society progresses; its number at the present moment is speculated to be 10 million (reference). Osteoporosis is a disease notably evident among postmenopausal women. However, there is also a data pointing out that one in two women overseas above 50 years of age have been diagnosed with osteoporosis (reference: IOF booklet).

Osteoporosis makes the bones lose density, thus the spine and the femoral neck become prone to fractures. As a result, this condition limits the elderly people's movements and turns into the cause of being bedridden. Thus, this disease is very crucial when thinking about the health of the senior citizens. Especially, spine fracture caused by osteoporosis easily leads to two or more fractures after the first one. For this reason, diagnosis at the earliest stage possible is very important as well as receiving an appropriate treatment in order to prevent the first fracture.

Opportunities (to be diagnosed) have recently increased, thanks to government-run osteoporosis examinations and the spread of bone density measuring apparatuses provided by private sector. Nevertheless, it is also true that only 20% of the 10 million patients thought to have osteoporosis are receiving treatment. Therefore, we still have not attained a situation in which this disease is promptly diagnosed and treated.

The same circumstance exists overseas. In the year 2000, IOF (International Osteoporosis Foundation) has conducted an awareness survey in 11 countries across Europe and the U.S. regarding the awareness towards osteoporosis among postmenopausal women and its treatment as well as prevention/treatment of osteoporosis by primary care doctors. The research has revealed the following results:

- 80% of postmenopausal women do not comprehend that osteoporosis is a risk to themselves.
- Among postmenopausal women who may have osteoporosis, the disease is not diagnosed at an early stage. Thus, it cannot be considered that they are receiving enough benefits of prevention and treatment.
- Although considering osteoporosis prevention to be important, doctors do not begin drug treatment until bone fractures are evident.

Thereat, we have conducted the same type of awareness survey in Japan for the following goals: to confirm the awareness towards osteoporosis and its treatment among Japanese postmenopausal women and doctors as well as to propose suggestions in every way possible to prevent QOL deterioration caused by osteoporosis. Based on the research results, we believe that the activities laying emphasis on the following points must be developed:

- Educational activities must be continued for postmenopausal women (who have especially high osteoporosis risks) so that they can gain correct knowledge concerning osteoporosis and its treatment.
- Educational activities must also be continued for active doctors so that osteoporosis is promptly diagnoses and given the appropriate treatment.

Japan has become a country of longevity. The women's average life expectancy has exceeded 80 years of age, placing them in a situation where they are likely to live 30 or more years after menopause. For the women to pass enriched lives in these 30 years with good health is now a great issue to their families and the Japanese society as well as they themselves. Aiming to actualize the golden years "without breaking bones", we continue to pray that these research results prove to be beneficial.

(signature)

2 .Introduction

What is Osteoporosis?

Osteoporosis is a systemic skeletal disease that reduces bone mass, making the bones brittle and prone to fractures due to the breakdown of the bone tissue's microstructures. It is evident mostly among women, especially high in frequency among postmenopausal women. The osteoporosis risk becomes high due to the drastic decrease of estrogen (a female hormone that sustains bone mass) after menopause.

Osteoporosis is referred to as the "silent disease" since the bones gradually get destroyed without any subjective symptom. As this disease progresses, chances of the bones fracturing become higher. Especially, compressed fracture of the spine often occurs even without any external pressure (such as falls). Since fractures on this part of the body are difficult to be recognized (even though subjective symptoms such as pains in the lower back are evident), careful attention must be paid.

Epidemiological Information Regarding Osteoporosis

The prevalence rate of vertebral fracture in Japan is high for women and further rises among those who are 60 years old or above. Upon reaching the 70s age group, this number goes sky-high. Moreover, the percentage of people with vertebral fractures in two or more parts increase for those who are 70 years old or above³⁾.

In the 1987 national survey, approximately 45,000 people have been reported to have femoral neck fractures within that year. The same survey in 1992 has revealed that an annual total of approximately 77,000 patients to be suffering from this condition. Within the last 5 years, this figure has increased by 1.5 times. By gender, the new incidence rate for women has proven to be approximately 3 times higher than men⁴⁾.

Incidences of femoral neck fractures often result from external pressures (such as falls). It does not only occur from low bone mass; rather, risk factors related to falls act as major causes of this condition. On the other hand, vertebral fractures happen without any strong external pressure and are considered to be very closely related to low bone mass. If the bone density is 1SD (standard deviation) lower, the risk of a fracture is said to be 1.5-2.5 times more likely to happen⁵⁾.

A woman who already has had her first vertebral fracture, when compared to someone who does not, has a 5 times higher risk to experience further osteoporosis fractures such as femoral neck fracture⁶⁾.

3 .Awareness Survey

This awareness survey has been conducted based on the osteoporosis-related awareness survey (targeted for doctors, postmenopausal women diagnosed to have osteoporosis and postmenopausal women not carrying this disease) by IOF (International Osteoporosis Foundation) in the year 2000. The IOF survey has been conducted to 1,071 doctors (primary care doctors), 139 postmenopausal women diagnosed to have osteoporosis and 420 postmenopausal women not carrying this disease in 11 countries overseas*.

*Australia, Brazil, Canada, France, Germany, Italy, Jordan, Lebanon, Mexico, Spain, England

Social Survey Research Information Co., Ltd. has conducted the Japanese survey during the period between May to July 2002. The subjects: 320 postmenopausal women between the ages of 50 – 65 (160 who were diagnosed to have osteoporosis and 160 who were not) and 100 physicians (50 doctors working at hospitals with over 20 beds for hospital stays and 50 medical practitioners with less than 20 beds) in the Tokyo metropolitan, Kyoto-Osaka-Kobe, Chukyo, Sendai and Hiroshima areas. The doctors have been interviewed under the condition that they have been providing medical care to more than 20 osteoporosis patients in one month. The women have been given an over-the-phone survey while the doctors have been interviewed privately.

The average ages of the female respondents are 58.7 years old for osteoporosis patients and 58.2 years old for those who are not. The average menopausal ages are 49.1 years old for osteoporosis patients and 49.5 years old for those who are not.

**The percentages in this report are all indicated in whole numbers; the first decimal number of the total has been rounded off.

4 .Findings from the Awareness Survey Results

•Although postmenopausal women possess deep knowledge/understanding of osteoporosis, they do not recognize this disease to be their own risks. Only about half of the osteoporosis patients consider this disease to be serious.

•Postmenopausal women think that they are still fine, thus the percentage of those who periodically consult doctors to receive osteoporosis examinations is low.

•Postmenopausal women think that osteoporosis can be prevented/treated by lifestyle improvements such as appropriate diet and exercise.

•Physicians consider early diagnosis and prevention of osteoporosis to be important. However, this disease is rarely brought up during actual medical examinations.

•Physicians begin suspecting osteoporosis passively in most cases such as when patients complain about symptoms (e.g., pain) and/or ask to be examined.

•Among postmenopausal women diagnosed to have osteoporosis, only 40% of them continue drug treatments; the remainder do not take any medicine due to such reasons as not liking the drugs or side effects.

“The average age of women who have participated in this awareness survey is about 60 years old, belonging in the age group in which vertebral fractures are likely to happen. Compressed fracture of the spine is caused by osteoporosis at the earliest stage. This condition affects the quality of life (QOL) including height shrinkage, rounded backs, etc. Unlike femoral neck and wrist fractures, the above kind of fracture does not usually come with subjective realization that “the bone might be broken”. After the first vertebral fracture, the risk gets higher for the second or the third to happen. Therefore, it is important to find the reduction in bone mass as early as possible to receive appropriate treatment in order to prevent the first vertebral compressed fracture.”

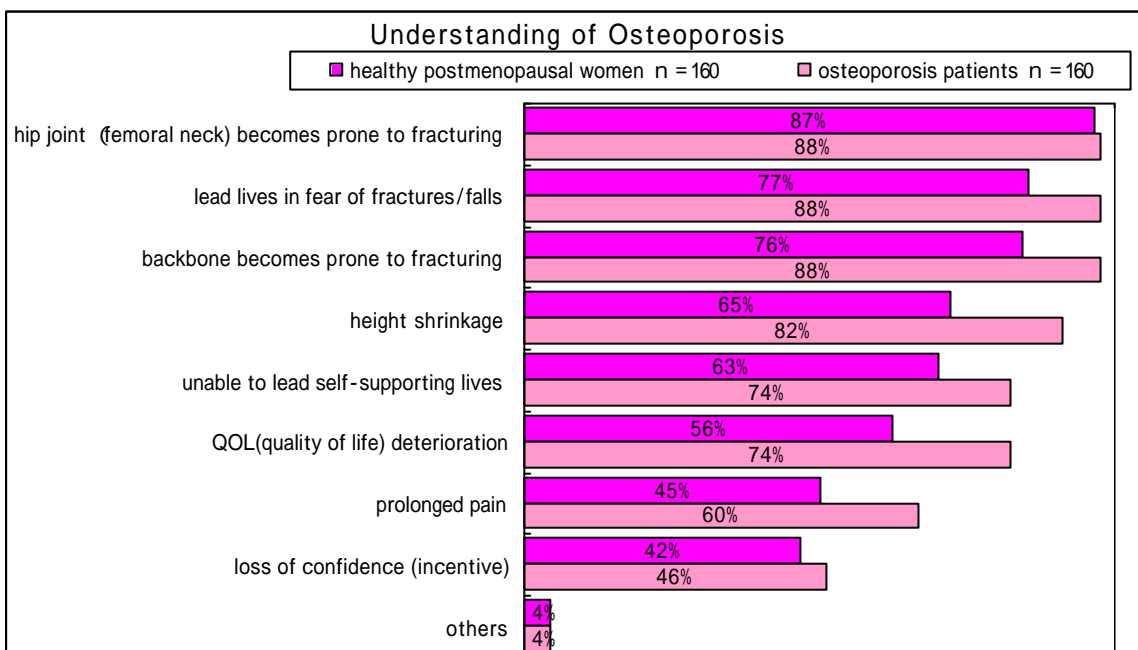
Dr. Takayuki Hosoi

5 .Opinions of Postmenopausal Women

“Good understanding of osteoporosis yet weak perception of this disease being their own risks”

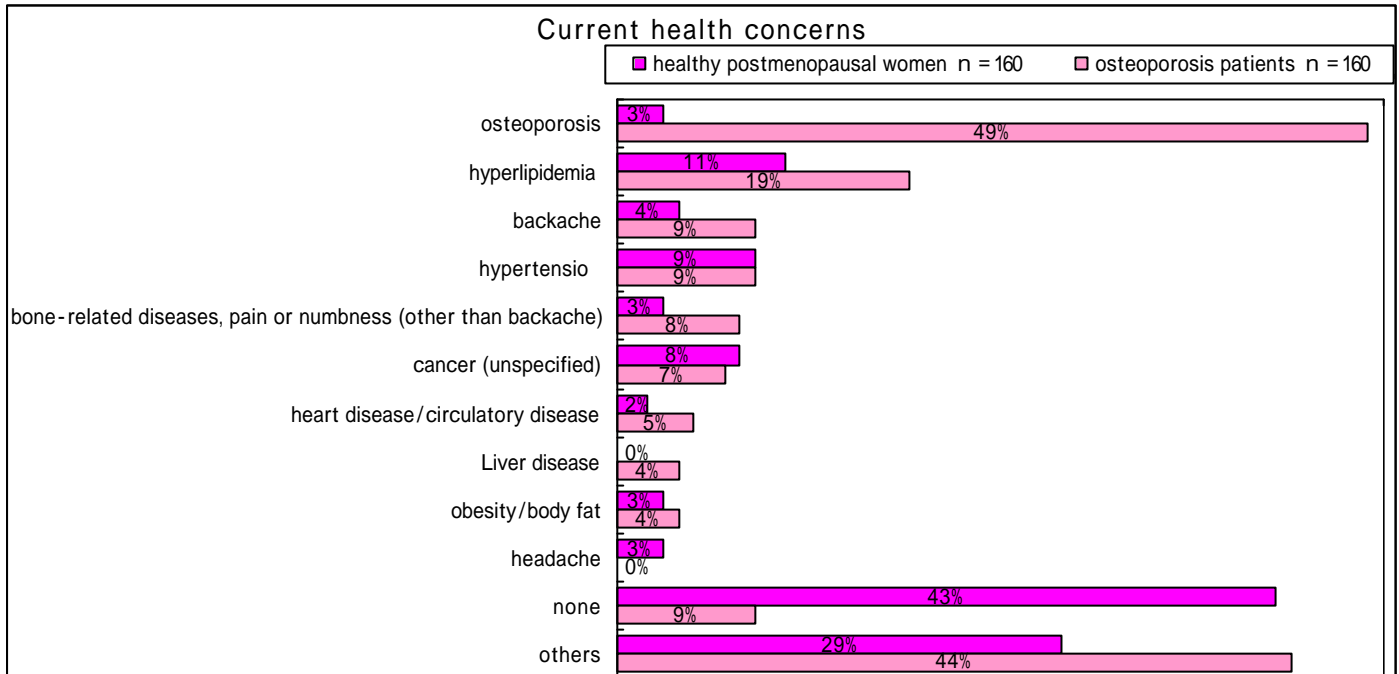
Postmenopausal women have a deep understanding of how osteoporosis affects the patient. Fractures caused by osteoporosis above all are very well perceived.

Both groups (women who do/do not have osteoporosis) have mentioned the relationship between osteoporosis and femoral neck fractures the most. Femoral neck fractures can easily result from external pressures (such as falls) as well as from osteoporosis. Vertebral (backbone) fractures (easily caused by osteoporosis) have been mentioned more by women diagnosed to have osteoporosis. Regarding “unable to lead self-supporting lives”, “prolonged pain” and “QOL deterioration”, those who have actually experienced osteoporosis exhibit a stronger perception towards these items.



When inquired about their current health concerns, 43% of the women who do not have osteoporosis responded that they did not have any; “osteoporosis” has been pointed out by only 3%. Even among the women diagnosed to have osteoporosis, only about half (49%) indicated “osteoporosis” while 9% replied that they do not have any health concern. Therefore, the above results prove that the seriousness of osteoporosis is not acknowledged to the fullest extent.

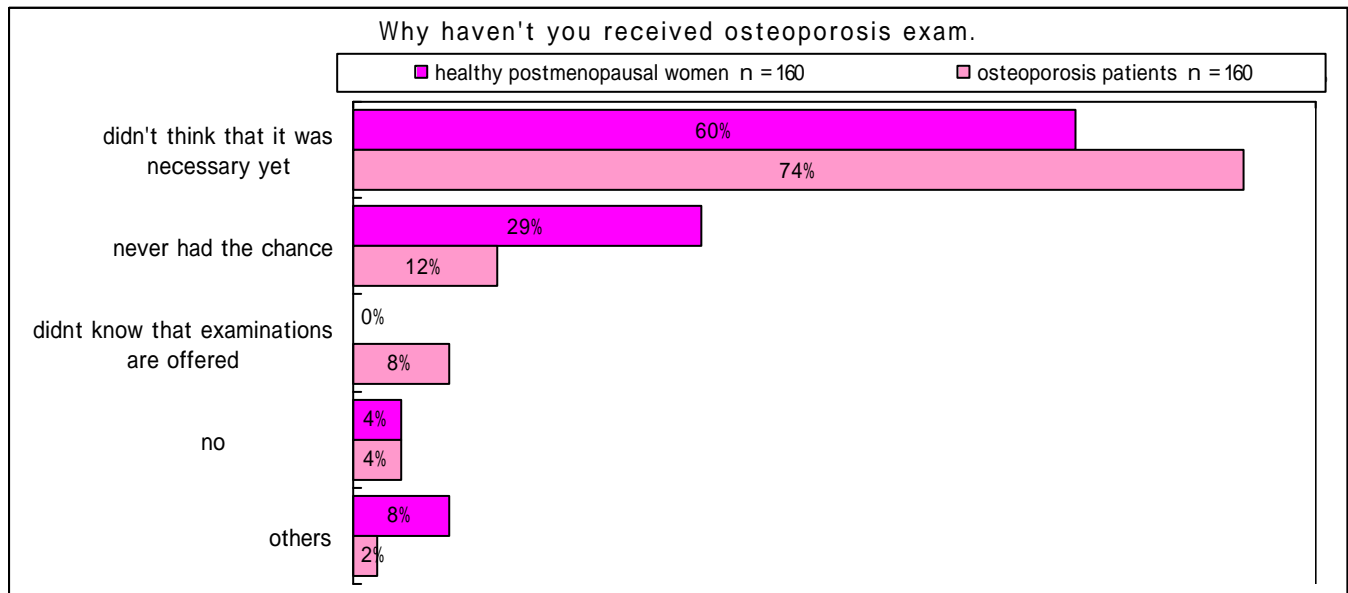
Nevertheless, approximately 80% of the women have perceived osteoporosis to be serious (25% “felt that it was very serious”; 58% “felt that it was a little serious”) upon the diagnosis of this disease. Thus, there is an evident need for the correct understanding regarding osteoporosis to be promoted.



“I Am Still Okay” ?

Among the postmenopausal women diagnosed to have osteoporosis, 19% have received examinations before being diagnosed with this disease. 60% of the above-mentioned have taken tests more than 5 years ago; only a small fraction of them periodically visit doctors for check-ups. This low consultation rate confirms that approximately 70% of postmenopausal women diagnosed to have osteoporosis never imagined that they would suffer from this disease until they were actually diagnosed. Thus, the above indicates the fact that osteoporosis has not been perceived as a risk to each individual.

As for postmenopausal women without osteoporosis, 48% of them have received osteoporosis examinations in the past. The majority (60%) have stated the reason for not getting checked up because they “didn’t think that it was necessary yet”. The second most common reason is that they are “concerned but never had the chance”. Therefore, it can be stated that the approach towards an enhanced popularization of osteoporosis examination (in order for this disease to be promptly diagnosed) is necessary.

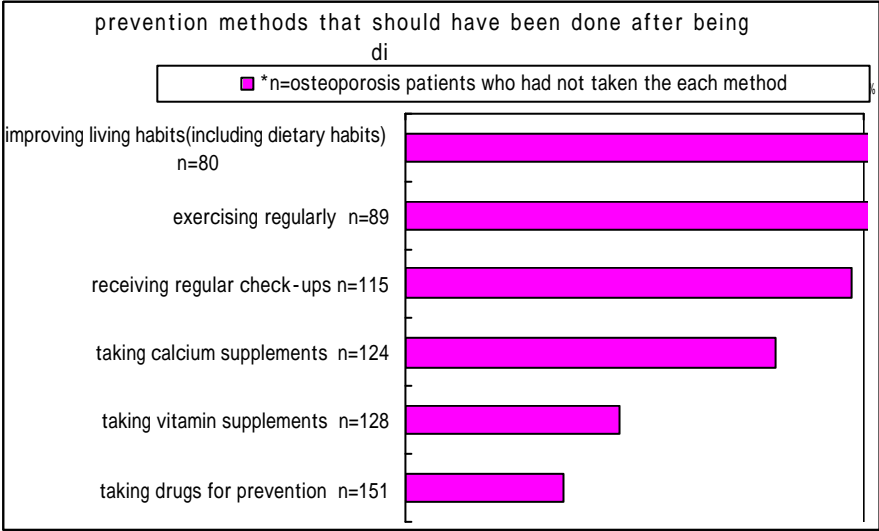
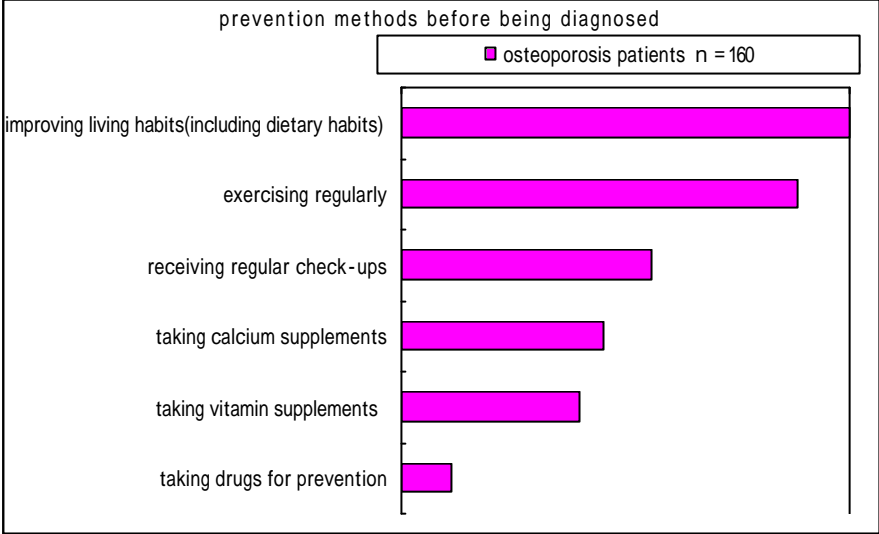


“Menopause causes rapid deterioration of the bone mass, thus it is important for women to periodically be examined. To start with, it is necessary to understand your own bone mass before reaching menopause. In addition, receiving osteoporosis examination annually to determine the condition of your own bones and making sincere efforts to maintain the bone mass as much as possible (through dietary habits and exercises) after menopause is important. Nevertheless, these efforts are not enough in high-risk cases such as the significant decrease in bone mass, evident signs of osteoporosis in the family’s medical history and experience in receiving steroid therapy. Therefore, receiving doctor check-ups/drug treatment are advised.”
Dr. Tetsuo Inoue

“Osteoporosis can be prevented from the right diet and exercise” ?

Nothing could be better than to begin osteoporosis prevention at the earliest stage possible. Thus, it is ideal to ensure the maximum bone mass by your 20s and strive for its subsequent maintenance. In this awareness survey, 80% of the women who do not have osteoporosis think that this disease can be prevented and have mentioned such practices as the right diet and exercise as the best prevention strategies.

On the other hand, prevention methods conducted by postmenopausal women with osteoporosis, prior to being diagnosed with this disease, are “improving living habits (including dietary habits)” (50%) and “exercising regularly” (44%). For the items in the top ranks regarding what they thought should have been done (after being diagnosed) remain to be “improving living habits” and “exercising regularly”. Other frequently mentioned items are “receiving regular check-ups”, “taking calcium supplements” and “taking drugs for prevention”. These results may perhaps be caused from the rising awareness towards this disease after being diagnosed to have osteoporosis.



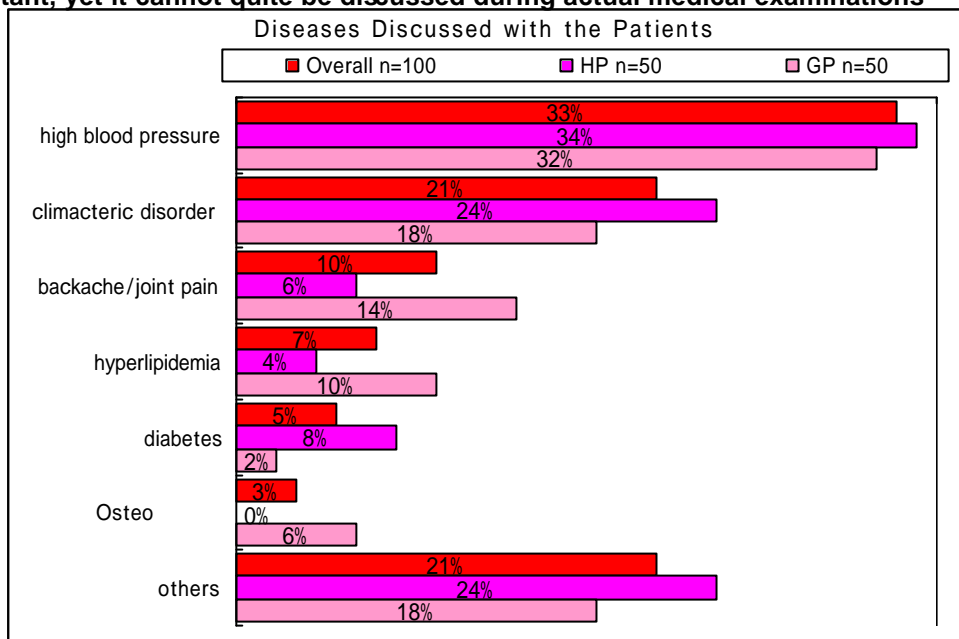
<Prevention methods that should have been done after being diagnosed>

6. Opinions of Physicians

“Osteoporosis Prevention is important, yet it cannot quite be discussed during actual medical examinations”

Referred to as the “Silent Disease”, clinical symptoms are almost non-existent in osteoporosis; when they actually appear, the disease is already in an advanced condition. Thus, medical care approaches including proactive inquiries by doctors serve as the key roles for patients to be diagnosed at an early stage.

The physicians (i.e., the subjects of this survey) have stated that the lifestyle-related diseases often brought up when consulting postmenopausal women are “high blood pressure”, “hyperlipidemia” and “diabetes”. In addition, many doctors have stated that they do discuss about “climacteric disorder”. However, when it comes to “osteoporosis”, only 3% have replied that they talk about this disease with their patients. The above facts reveal that in the present status, the examinations/discussions tend to be focused on the diseases pertaining to the purposes of the patients’ hospital visits and/or symptoms that they describe.

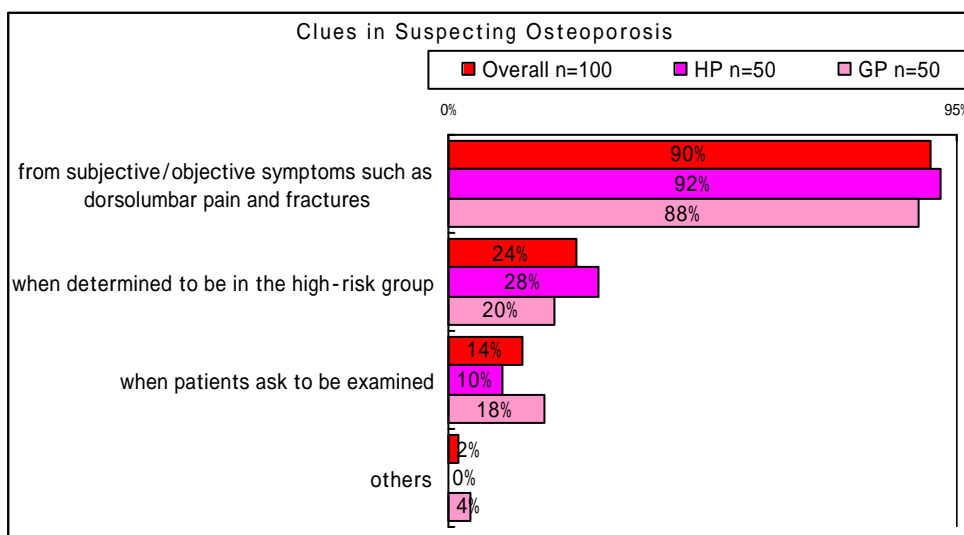


The majority of the doctors consider osteoporosis prevention to be important, i.e., 95% of them admit its significance: “very important”(53%) and “sort of important”(42%). However, it is unfortunate that “osteoporosis” not often brought up during everyday medical examinations.

“Osteoporosis diagnosis is urged by patient claims”

The majority of the physicians (90%) have pointed out “subjective/objective symptoms such as dorsolumbar pain and fractures” to be clues in suspecting if their patients have osteoporosis. Since it has become quite frequent lately for this disease to be covered by the media, there have been many cases (14%) in which patients themselves consult doctors to see if they have osteoporosis or not.

In order for osteoporosis to be promptly diagnosed, doctors are expected to assertively detect high risks in patients. However, those who consider “menopause to be a high risk of osteoporosis” remain at a mere 24%. This proves the doctor’s passive attitudes towards providing further examinations/diagnosis for this disease only when patients claim about their symptoms.

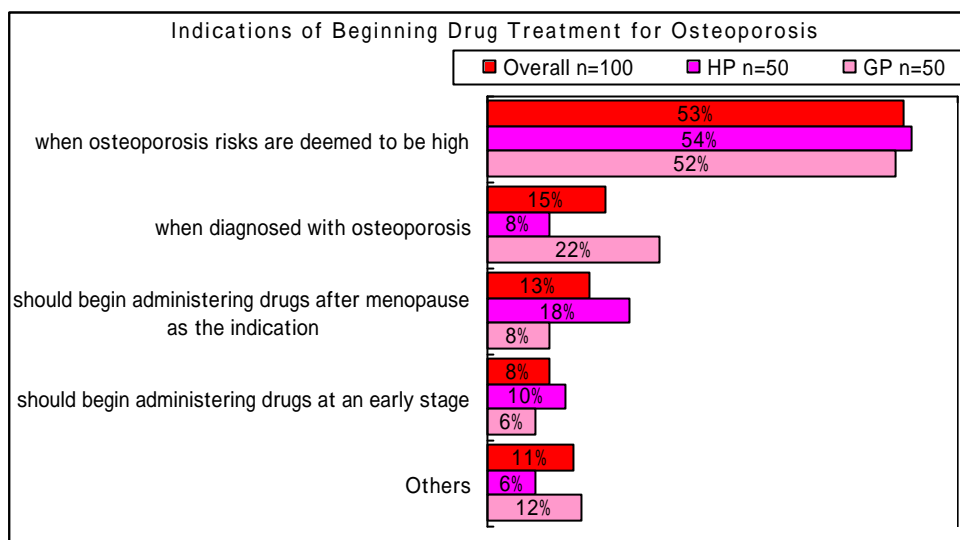


7 .Opinions Regarding Drug Treatments

“Doctors who start some kind of drug treatment at the point when osteoporosis has been deemed to be high in risk”

Most of the physicians (i.e., the subjects of this survey) have claimed to begin some kind of drug treatment when osteoporosis risks are deemed to be high for their patients (i.e., laboratory data such as bone density, steroid use, patients' claims of dorsolumbar pain). 13% state that they should begin administering drugs after menopause as the indication; 8% admitted that they should do so at an early stage.

Among the replies of starting drug treatment upon diagnosing the patients to have osteoporosis, 4% included cases in which fractures have been evident.

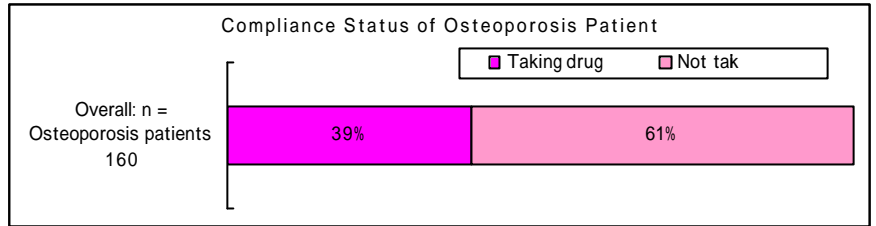


“Osteoporosis treatment does not immediately show visible signs of improvements. Therefore, motivating the patients in continuing to be treated is extremely important. Even though imminent symptoms are not particularly evident, osteoporosis may silently be advancing. In order to avoid fractures caused by falls or by slight pressures, educational activities for patients to fully understand what osteoporosis is and its adverse effects are necessary. At the same time, in order for patients to be able to continue taking drugs, developing remedies that do not have complicated dosage instructions and are also low in side effects are hoped for.”

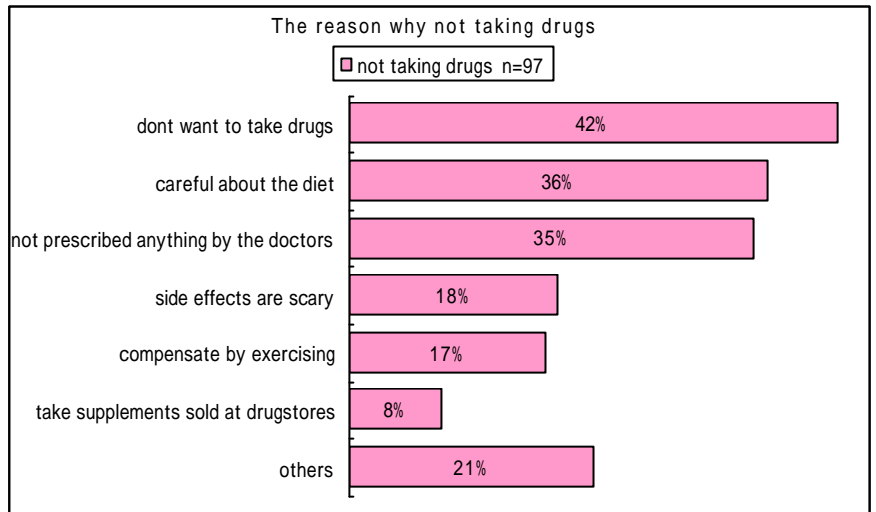
Dr. Takayuki Hosoi

“40% continue drug intakes”

Only 40% of the postmenopausal women with osteoporosis currently take drugs to treat this disease. Among those who do not, 35% have replied that they never have taken any drug after being diagnosed with osteoporosis.

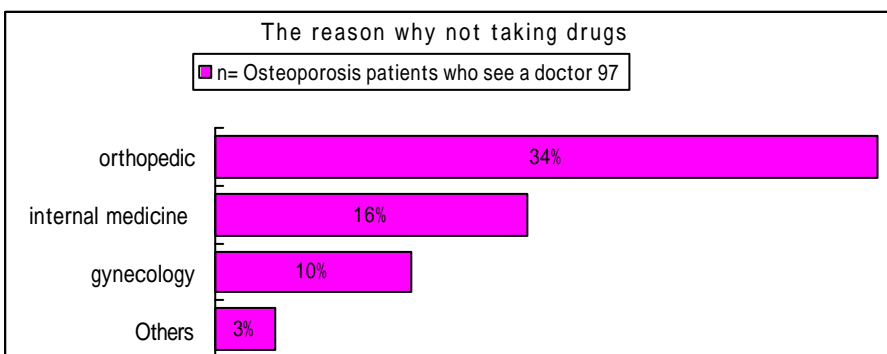
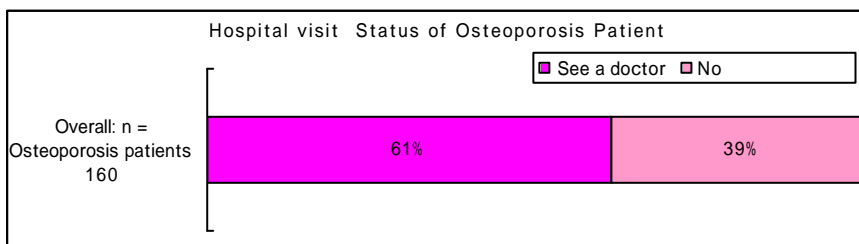


For the reasons of not taking any drug, 42% have stated that they “do not want to take drugs” and 36% have responded that they are “careful about their diet”. In addition, doctors’ medical care approaches and remedies seem to persist being problematic with such replies as “the doctor has not prescribed anything”(35%) and “side effects are scary”(18%).



(*consider inserting this part or not: The above tendency has also been indicated in the overseas research conducted by the IOF. 33% of the osteoporosis patients in the IOF survey are not receiving any drug treatment, the major reason being problems regarding side effects.)

40% of the women diagnosed to have osteoporosis are currently not receiving any medical care from doctors; the clinics that they are presently visiting vary from orthopedics, to obstetrics/gynecology. The awareness of the doctors at these clinics do not necessarily match with the ones of the physicians interviewed in this survey and accurate comparison cannot be made. However, there seems to be a gap between the awareness of physicians who wish to promptly begin treatment and the actual treatment conditions of osteoporosis patients.

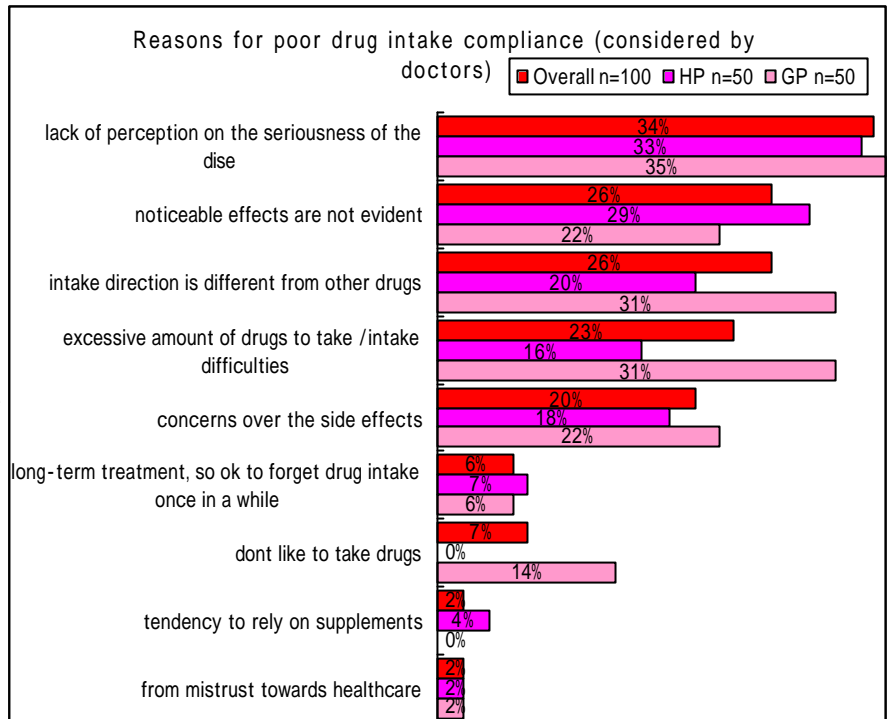


“Reasons why drug intake compliance is poor (considered by doctors)”

The majority of the doctors interviewed in this survey think that continuing to take drugs is important in bringing out the maximum effects of the remedy for osteoporosis. However, it has been revealed that 57% of them have experienced drug intake rejections from the patients during their actual medical practices.

35% of the of physicians (i.e., the subjects for this survey) have stated that the first reason that came to their minds regarding why drug intake compliance is low (among osteoporosis patients) is the patients' lack of perception on how serious osteoporosis is. Another reason pointed out by 26% of them is the nature of the disease including “noticeable effects are not evident”.

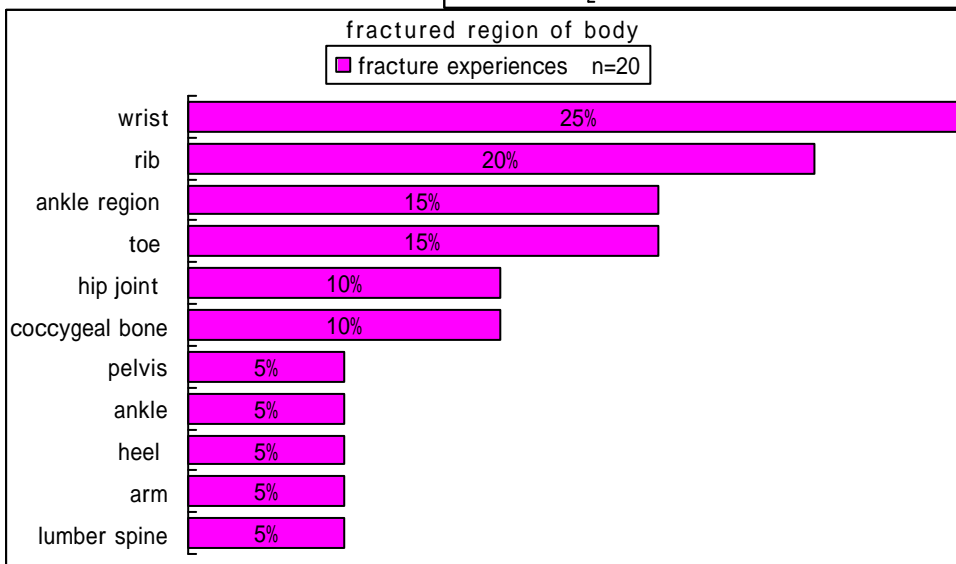
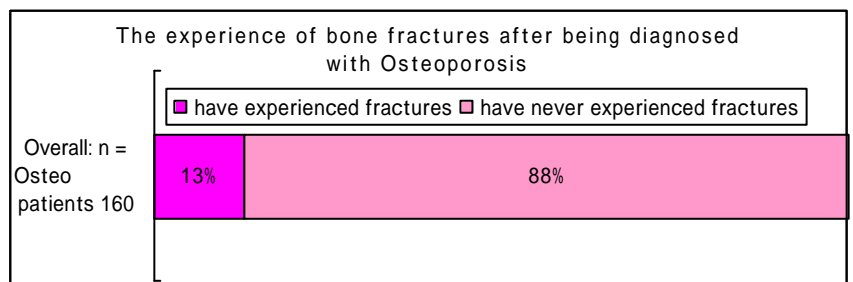
Furthermore, other matters in question such as “excessive amount of drugs to take/intake difficulties”(23%), “intake direction is different from other drugs”(26%) and “concerns over the side effects”(20%) also are considered to be the reasons that impede the rise of drug intake compliance.



“The problems regarding side effects are especially serious for drugs such as the osteoporosis remedy that need to be taken for a long period before any sign of the effect is evident. Therefore, doctors must exert their efforts to improve drug intake compliance by providing sufficient explanation on the effects caused by osteoporosis to patients who are about to start receiving drug treatments as well as leading them to understand the balance between the benefits of the drugs necessary for treatment and the expected side effects.”

Dr. Tetsuo Inoue

In addition, 13% of those having osteoporosis have experienced bone fractures after being diagnosed with this disease. The postmenopausal women with osteoporosis interviewed in this awareness survey are averagely aged at 58.7 years old and in their 9.5th year since menopause.



8. Summary

Osteoporosis is a disease that imposes a heavy burden on both the patients themselves as well as their families providing nursing care. In the aging society, this disease greatly affects the finance of healthcare with such problems as medical/nursing care costs. Thus, diagnosing osteoporosis at the earliest stage possible and beginning prompt treatment are becoming more and more important to prevent fractures caused by osteoporosis.

Postmenopausal women are especially high at risk in developing osteoporosis. Since there is a tendency of not perceiving this disease to be their own problems (regardless of the high interests surrounding osteoporosis), promoting educational/informational activities are necessary in order for patients to understand the significance of osteoporosis. By doing so, we believe that rises in the osteoporosis consultation rate and its treatment continuation rate can be anticipated.

In order for osteoporosis to be diagnosed before the onset of the patients' subjective/objective symptoms, we are aiming for the dissemination of osteoporosis diagnostic criteria among doctors. In addition, it is important for them to initiate as many discussions on osteoporosis as possible when examining postmenopausal women so that prompt diagnosis of osteoporosis may further be propelled.

Moreover, there is a necessity for the government to provide physical examination services for postmenopausal women deeply concerned with osteoporosis to receive plenty of osteoporosis examination opportunities.

In all, this awareness survey titled "How Fragile Is Her Future?" indicates the various problems and potential future improvements regarding the actual conditions of current osteoporosis preventions, diagnosis and treatments. Osteoporosis is a disease that advances silently. However, this is not a problem that can be shrugged off for women who still have 30 years or more left in their lives after menopause. Therefore, we continue hoping that the research results prove to be beneficial for the healthy golden years of the women.

Finally, we would like to extend our deepest gratitude to the active physicians and postmenopausal women who have provided their cooperation to this awareness survey.

9 .Reference Materials

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