

e ISSN-0976-8351 🔳 Visit us: www.researchjournal.co.in

Research Paper

Awareness about rural women regarding health benefit of calcium and risk of osteoporosis

HEMANGI D. MEHTA AND RINA RENSIYA

Received: 28.10.2016; Revised: 19.11.2016; Accepted: 25.11.2016

■ ABSTRACT : The natural aging process can cause calcium deficiency disease. Most of the calcium in your body is stored in your bones. Women need to increase their calcium intake earlier in life than men, starting in middle age. Meeting the necessary calcium requirement is particularly important as a woman approaches menopause. Women in menopause should also increase their calcium intake to reduce the risk of osteoporosis and calcium deficiency disease. The decline in the hormone estrogen during menopause causes a woman's bones to thin faster. The hormone disorder hyperparathyroidism may also cause calcium deficiency disease. Many women living in rural communities with high osteoporosis prevalence underestimate their risk of osteoporosis, lack basic knowledge about osteoporosis prevention, and exercise less than recommended. Sometimes diet changes and aware to women for calcium sources.

Author for Correspondence : **HEMANGI D. MEHTA** Polytechnic in Home Science, Junagadh Agricultural University, AMRELI (GUJARAT) INDIA Email : hemangidmeht@gmail.com

KEY WORDS: Bones, Osteoporosis, Calcium, Dairy products, Dietary habits

■ HOW TO CITE THIS PAPER : Mehta, Hemangi D. and Rensiya, Rina (2016). Awareness about rural women regarding health benefit of calcium and risk of osteoporosis. *Asian J. Home Sci.*, **11** (2) : 446-449, **DOI: 10.15740/HAS/AJHS/11.2/446-449.**

alcium is a key nutrient for your body to stay strong and healthy. Almost every cell in the body uses calcium in some way, including the nervous system, muscles, and heart. It is an essential building block for lifelong bone health in both men and women, while not getting enough calcium in your diet can contribute to anxiety, depression, and sleep difficulties. Whatever your age or gender, everyone can benefit from eating calcium-rich foods, limiting those that deplete calcium, and getting enough magnesium and vitamins D and K to help calcium do its job.

Calcium for mental and physical health and strong bones:

Calcium is the most abundant mineral in the body,

one that plays many vital roles. Your body uses it to build healthy bones and teeth, keep them strong as you age, send messages through the nervous system, help your blood clot, your muscles contract, and regulate the heart's rhythm, among other things.

If you don't get enough calcium in your diet, your body will take calcium from your bones to ensure normal cell function, which can lead to weakened bones or osteoporosis. Calcium deficiency can also lead to, or exacerbate, mood problems such as irritability, anxiety, depression, and difficulty sleeping.

Despite these vital functions, many of us are confused about calcium and how to best protect our bones and overall health. How much calcium should you get? Where should you get it? And what's the deal with vitamin D, magnesium, vitamin K and other nutrients that help calcium do its job?

This confusion means that many of us are not getting the recommended daily amount of calcium—while others are, in fact, getting too much which could also have health implications. Approximately one in two women (and about one in four men) over the age of 50 will break a bone due to osteoporosis. But osteoporosis is not an inevitable part of getting older. Whatever your age, it's important to take care of your bones and get the right amount of calcium from the food that you eat.

How your body gets calcium :

Your body gets the calcium it needs in different ways. The first and best way is through the foods you eat. If you're unable to get enough calcium from food, then use supplements to make up the shortfall (but don't take too high a dose). If you're not consuming enough calcium from food and supplements, your body will get it in a different way, pulling it from your bones where it's stored. That's why diet is key.

Getting enough calcium in your diet is not just important for older people. It's vital for children, teens, and young adults under the age of 30 to get enough calcium to build bone mass. Making smart choices now will help you avoid serious bone loss later in life. But no matter your age, you can take steps to protect your bones and put the brakes on osteoporosis.

The calcium and osteoporosis connection :

Osteoporosis is a "silent" disease characterized by loss of bone mass. Due to weakened bones, fractures become commonplace, which leads to serious health risks such as the inability to walk. People with osteoporosis often don't recover after a fall and it is the second most common cause of death in women, mostly those aged 60 and older. Men are also at risk of developing osteoporosis, but typically 5 to 10 years later than women. Fortunately, osteoporosis is preventable for most people, and getting enough calcium in your diet is the first place to start.

Objectives of the study:

To knowledge about rural women regarding health benefit of calcium and risk of osteoporosis.

Daily recommended dietary allowance (RDA)	
Group	
Women, 71 years	Up 1200 milligrams / day
Women, 51-70 years	1200 milligrams / day
Women, 31-50 years	1,000 milligrams / day
Women, 19-30 years	1,000 milligrams / day
50+ years	1,200 milligrams / day

How much calcium do you need?

Calcium and preventing osteoporosis: The bottom line

Try to hit your daily targets for the following foods, nutrients, and activities:

Daily target	What you need to know
Calcium Aged 19-50: 1,000mg Over 50: 1,200mg	Food is the best source of calcium. Use a supplement only to make up any short fall in your diet
Vitamin D Aged 18-70: 600 IU Over 70: 800 IU	If you live north of San Francisco, Denver, Boston, Rome, and Beijing, or south of Wellington you may need an extra vitamin D boost during winter
Protein Aged 18-70: 0.4g of protein per lb. of body weight Over 70: 0.5 to 0.7g per lb. of body weight	This translates to at least 65 grams of protein for a 180lb adult, or 68 to 102g of protein for an older person weighing 150 lbs
Fruits and fegetables At least 5 one-cup servings	The best way to neutralize excess acid.
Exercise (weight-bearing) 30 minutes or more	Choose walking, dancing, jogging, weightlifting, stair climbing, racquet sports, or hiking

■ RESEARCH METHODS

The 100 respondents. all respondents are women and rural areas of amreli district. or A questionnaire method use for this research work.

■ RESEARCH FINDINGS AND DISCUSSION

All 100 participants of this survey knowledge about rural women regarding health benefit of calcium and risk of osteoporosis result is given in Table 1.

This study was very important for women health and selected of sample is 100 rural areas women of amreli district, 30 women awareness level of health benefit of calcium and risk of osteoporosis is 42 per cent, 22 women awareness level of health benefit of calcium and risk of osteoporosis is 32 per cent, 17 women awareness level of health benefit of calcium and risk of

Table 1 : Health benefit of calcium and risk of osteoporosis among rural women	
Rural women (Amreli District)	Knowledge about rural women regarding health benefit of calcium and risk of osteoporosis
30	42%
22	32%
17	12%
12	08%
08	04%
06	02%
05	00%
Total -100	Total- 100 %

osteoporosis is 12 per cent, 12 women awareness level of health benefit of calcium and risk of osteoporosis is 08 per cent, 08 women awareness level of health benefit of calcium and risk of osteoporosis is 04 per cent, 06 women awareness level of health benefit of calcium and risk of osteoporosis is 02 per cent, 05 women awareness level of health benefit of calcium and risk of osteoporosis is 00 per cent.

So it can be said very lo level knowledge of Awareness of health benefit of calcium and risk of osteoporosis.

Conclusion:

Many women living in rural communities with high osteoporosis prevalence underestimate their risk of osteoporosis, lack basic knowledge about osteoporosis prevention, and exercise less than recommended. They want more education from health care providers about osteoporosis. Health care providers, especially those located in or near rural communities, should assess patient risk and address basic prevention strategies before menopause. Opportunities for rural health education activities aimed at recognition, prevention, and treatment of osteoporosis are great, but health care providers are scarce.

Acknowledgement :

I have duly acknowledged all the sources used by me in the preparation of this research paper.

Authors' affiliations:

RINA RENSIYA, Department of Home Science, Saurashtra University, RAJKOT (GUJARAT) INDIA

REFERENCES

Avenell, A., Mak, J.C. and O'Connell, D. (2014). Vitamin D

and vitamin D analogues for preventing fractures in postmenopausal women and older men. *Cochrane Database Syst. Rev.*, **14** (4):CD000227.

Becker, C. (2011). Diseases of calcium metabolism and metabolic bone disease. In EG Nabel, ed., ACP Medicine, section 5, chap. 4. Hamilton, ON: BC Decker.

Bell, K.J.L., Hayen, Andrew, Macaskill, Petra, Irwig, Les, Craig, Jonathan C., Ensrud, Kristine and Bauer, Douglas C. (2009). Value of routine monitoring of bone mineral density after starting bisphosphonate treatment: Secondary analysis of trial data. *BMJ*, **338** : b2266.

Crandall, Carolyn J., Newberry, S.J., Diamant, Allison, Lim, Yee-Wei, Gellad, Walid F., Suttorp, Marika J., Motala, Aneesa, Ewing, Brett, Roth, Beth, Shanman, Roberta, Timmer, Martha and Shekelle, Paul G. (2012). Treatment to prevent fractures in men and women with low bone density or osteoporosis: Update of a 2007 Report. Comparative Effectiveness Review No. 53.

Heiss, G., Wallace, R., Anderson, G.L., Aragaki, A., Beresford, S.A., Brzyski, R., Chlebowski, R.T., Gass, M., LaCroix, A., Manson, J.E., Prentice, R.L., Rossouw, J., Stefanick, M.L. and WHI Investigators (2008). Health risks and benefits 3 years after stopping randomized treatment with estrogen and progestin. JAMA, 299(9):1036-1045.

Howe, T.E., Shea, B., Dawson, L.J., Downie, F., Murray, A., Ross, C., Harbour, R.T., Caldwell, L.M. and Creed, G. (2011). Exercise for preventing and treating osteoporosis in postmenopausal women. *Cochrane Database of Syst. Rev.*, 6 (7): CD000333.

Liu, H., Paige, N.M., Goldzweig, C.L., Wong, E., Zhou, A., Suttorp, M.J., Munjas, B., Orwoll, E. and Shekelle, P. (2008). Screening for osteoporosis in men: A systematic review for an American College of Physicians guideline. *Ann. Intern. Med.*, 148(9):685-701

Nelson, H.D., Haney, E.M., Dana, Tracy, Bougatsos, Christina, and Chou, Roger (2010). Screening for osteoporosis: An update for the U.S. Preventive Services Task Force. *Ann. Intern. Med.*, **153** (1): 1-13.

Qaseem, A., Snow, V., Shekelle, P., Hopkins, R. Jr, Forciea, M.A. and Owens, D.K. (2008). Pharmacologic treatment of low bone density or osteoporosis to prevent fractures: A clinical practice guideline from the American College of Physicians. *Ann. Intern. Med.*, **149**(6):404-15

■ WEBLIOGRAPHY

http://www.acponline.org/clinical_information/guidelines/guidelines.

National Osteoporosis Foundation (accessed November 2012). Exercise for strong bones. Available online: http://www.nof.org/articles/238.

National Osteoporosis Foundation (2014). Clinician's guide to prevention and treatment of osteoporosis. National Osteoporosis Foundation. *http://nof.org/hcp/clinicians*-

guide. Accessed October 22, 2014.

North American Menopause Society (2010). Management of osteoporosis in postmenopausal women: 2010 position statement of the North American Menopause Society. Menopause, **17**(1): 23–54. Also available online: http://www.menopause.org/aboutmeno/consensus.aspx.

11 th Year ***** of Excellence *****