

# [The risk of osteoporosis disease](https://assignbuster.com/the-risk-of-osteoporosis-disease/)

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﻿The Risk of Osteoporosis Disease
Introduction
Osteoporosis is a disease of the bones. It refers to a condition that weakens the bones and makes them more vulnerable to fracture, which in turn cause severe pain and may also lead to disability. Many people around the world are at risk of Osteoporosis because of their low bone mass. Loss of bone mass is a silent disease because it often occurs with no signs or symptoms up to the point when a person gets a fracture. There are numerous risk factors that may make a person more likely to suffer from Osteoporosis. Fortunately, the condition can be prevented. This paper explores how diet and exercise reduce the risk of Osteoporosis and further looks at how smoking and alcohol consumption relates to the disease.
Diet
Calcium is a crucial element for effective bone development. Inadequate intake of calcium during one’s early days and adolescence stage can impair the development of bones and lead to low bone mass during adulthood. Low calcium intake in adults can trigger Osteoporosis by hastening loss of bone mass (Smolin & Grosvenor, 2012, 454). One can prevent the risk of Osteoporosis by ensuring regular consumption of fruits and vegetables, which contain minerals like potassium and vitamin C crucial for bone development. One can also consume non-fat milk and yoghurt, calcium supplements such as calcium carbonate to ensure the development of strong bones. Although the role of calcium in bone development is well-recognized, sufficient calcium intake alone is incapable of preventing Osteoporosis. Vitamin D also plays a crucial role for strong bone development. Vitamin D deficiency increases the chances of suffering from Osteoporosis. The metabolism of vitamin D increases the absorption of vitamin C and also reduces the loss of calcium through urine. Vitamin D is abundant from the sunlight and is synthesized when sun’s ultraviolet-B (UVB) radiation strikes the skin (Smolin & Grosvenor, 2012, p. 381-86). However, the ability of the skin to synthesize vitamin D decreases as one gets older. As such, one can supplement Vitamin D intake by eating fatty fish, fortified milk, orange juice and cereals. Inadequate Vitamin D intake would mean inadequate calcium absorption, thus weak bones.
Exercise
Sedentary lifestyle can be a license to osteoporosis. Individuals who spend most of their time sitting are more likely to suffer from osteoporosis than their active counterparts. Bones get tougher when subjected to stress and get weaker when not in use. Weight-bearing exercise such as walking, dancing, climbing stairs, hiking or muscular-strengthening among others, is an effective approach to maintaining good bone mass. Strength training increases the pressure excreted on bones by muscles, improves BMD and prevent falls, thus preventing hip and wrist fractures among others. Exercise that helps people to maintain balance also prevent falls, thus fractures (Smolin & Grosvenor, 2012, p. 526-30).
Smoking and Alcohol Consumption
Alcohol has adverse impact on bone health because excessive alcohol consumption leads to calcium imbalance, thus impairing healthy bone formation and maintenance of bone mass (Smolin & Grosvenor, 2012, p. 207; Slon & Harvard Medical School, 2010, p. 10). Alcohol also increases the secretion of parathyroid hormone (PTH), which is known to reduce calcium reserves in the body. Smoking is also a significant risk factor for osteoporosis. Smoking leads to low bone density. Smoking has been identified to trigger osteoporosis by causing bone fractures. Excessive alcohol consumption and cigarette smoking are risk factors for bone weakening and fracture.
Conclusion
Osteoporosis is a condition that weakens bones and leads to bone fracture, usually common in old people. Many factors have been linked with osteoporosis and several ways of preventing the bone disease suggested too. As such, one can prevent the risk of osteoporosis by adopting healthy eating habits, doing regular exercise and avoiding heavy smoking and drinking of alcohol.
References
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Smolin, L. A. & Grosvenor, M. B. (2012). Nutrition: Science and Applications, 3rd Edition. Ney York, NY: Wiley Global Education, 2012.