Scientists identify genes that increase risk of bone weakness

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New Delhi, May 3 (India Science Wire): Deteriorating bone health is emerging as a significant health problem in India. A group of Indian scientists have now identified variations in a set of genes that can help predict if someone is prone to bone-related disorders.

Combined interactive effect of variations in the genes - PLIN1, CFD and ADIPOQ - has been found to be responsible for a two-fold increased risk of low bone mass among North Indian populations.

Low bone density is an indicator of poor health of bones and it can increase the risk of fractures and related complications due to bone deterioration. Several factors such as food habits and hormones are responsible for quality and quantity of bones in the body but a significant cause of it could also be one's genetic makeup.

The variations or minor changes were studied in genes associated with breaking and making of body fat and in bone development. The study shows that obesity (or excess body fat) and bone health status go hand in hand at the genetic level as well and it is possible to pre-determine it. This form of early diagnosis can pave the way for timely and efficient management of this foreseeable bone condition.

The study, published in scientific journal *Gene*, has been conducted by scientists at the Guru Nanak Dev University, Amritsar and Panjab University, Chandigarh. The researchers claim that it is the first study of its kind from India highlighting the genetic factors and its interactive effect on bone health among North Indians.

The research team included H.S. Sandhu, Sanjeev Puri, Rubina Sharma, Jasmine Sokhi, Gagandeep Singh, Kawaljit Matharoo and A J S Bhanwer. The research was supported by the Centre with Potential for Excellence in Particular Areas (CPEPA) and Maulana Azad National Fellowship (MANF) of the University Grants Commission. (India Science Wire)