

The Endocrinology of Obesity and Degenerative Joint Disease

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Abstract : Obesity is the most prevalent global problem that continues to rise at alarming rates both in the industrialized and developing countries. Adipose tissue is an endocrine tissue that secretes numerous chemical signals, hormones, lipids, cytokines and coagulation factors as well as prompting insulin resistance which is a primary contributor to Type II Diabetes-one of its most common adverse effects on health. Other hormones whose levels are linked to obesity and nutritional state are leptin, IGF-1, and adiponectin. Several studies indicate that obesity is the leading cause of high levels of cholesterol that leads to fatty liver disease, gallstones, hypertension, increased risk for cancer and degenerative joint disease that primarily affects the weight bearing joints of the lower extremities. The activation of inflammatory pathways promotes synovial pathology that results in accelerated degeneration of the joints. The study examines the prevalence of obesity in the US female population in comparison to that of the developing world and its emergence as a significant and potentially modifiable risk factor in degenerative disease of the hip and knee joints that has resulted in staggering healthcare cost. Studies have shown that as the prevalence of obesity rises, we continue to see a rise in degenerative joint disease. The percentage of arthritis cases linked directly to obesity has risen from 3 percent in 1971 to 18 percent in 2002. A person with obesity is around 60 percent more likely to develop arthritis than someone of normal body weight. In women, obesity is associated with increased mortality from breast, cervical, endometrial and ovarian cancer that may accompany debilitating joint diseases and restricted mobility.

Keywords : obesity, endocrine, degenerative, mortality, joint diseases, cancer, debilitating, mobility

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