

## The myth of healthy obesity

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*Numerous recent studies have shown that excess weight is associated with a significant increase in the risk for many serious diseases including cardiovascular diseases, diabetes and several types of cancers.*

### NORMAL METABOLISM?

People who are overweight, particularly those whose excess fat is located in the abdomen, usually develop what is called metabolic syndrome, a combination of hypertension, hyperglycemia and hypertriglyceridemia which considerably increases the risks for type 2 diabetes, cardiovascular diseases and cancers.

A small proportion of overweight individuals do not exhibit the derailed metabolism that is typical for such excess weight. These people show normal levels of blood glucose and insulin, are not hypertensive and have a normal blood lipid profile. They thus seem, apparently, to be in good metabolic health (“fat but fit”).

This concept of obese health is not supported by recent, large population studies. A very large study performed on 3.5 million individuals showed that individuals who were obese but considered to be in good metabolic health remained at higher risk of coronary diseases (increase of 59%), stroke (increase of 7%) and of heart failure (increase of 96%) compared to those who were of normal weight<sup>1</sup>.

According to another important study, this increased risk for cardiovascular diseases observed in obese people is due to the fact that this state of apparent good metabolic health is transient and illusory. The researchers observed that about half of these obese individuals developed a metabolic syndrome over the ten years of the study, and that the earlier the appearance of this syndrome, the greater the risk of cardiovascular diseases<sup>2</sup>. In other words, if the body can provide short-term compensation for the derangements caused by obesity, this adaptation is usually temporary and a prolonged period of obesity results in disequilibrium of the metabolism and induces the development of cardiovascular diseases and cancers.

### COLLATERAL DAMAGE

It is also important to mention that the effects of obesity are not limited to the risks of developing a cardiovascular disease. For obese people who seem to be in good metabolic health, they nonetheless remain at greater risk of developing certain diseases as compared to a person of normal weight (e.g. osteoarthritis, pulmonary diseases, phlebitis, infertility and certain types of cancers). Even if the blood glucose and response to insulin seem normal from an endocrinological perspective, the effect of excess weight will have orthopedic consequences (knee or hip surgery)<sup>3</sup> and will also increase the risk of cancers.



### LEADING CAUSE OF CANCER

Excess weight is now the leading risk factor for cancer in the United States. This link between obesity and cancer is particularly concerning: according to analyses performed by the American Centres for Disease Control and Prevention, excess weight increases the risk for thirteen types of cancers, and up to 55% of new cancer cases diagnosed in women since 2014 are directly linked to excess weight. The same phenomenon exists in the UK, where a study has recently shown that obesity will overtake smoking as the principal cause of cancer in women within a few years<sup>4</sup>.

In summary, we should thus consider obesity as actually a pathological state incompatible with good health, associated with a significant increase in risk for many serious diseases, including cardiovascular diseases, diabetes and several types of cancers.

- (1) Cherian L, Caleyachetty R et al. Metabolically healthy obese and incident cardiovascular disease events among 3.5 million men and women. *J. Am. Coll. Cardiol.* 2017; 70: 1429-1437.
- (2) Mongraw-Chaffin M et al. Metabolically healthy obesity, transition to metabolic syndrome, and cardiovascular risk. *J. Am. Coll. Cardiol.* 2018; 71: 1857-1865.
- (3) Neeland JJ, Poirier P and Després J-P. Cardiovascular and metabolic heterogeneity of obesity: clinical challenges and implications for management. *Circulation* 2018; 137: 1391-1406.
- (4) Brown KF et al. The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015. *Br. J. of Cancer* 2018; 118: 1130-1141.