



A recent article in the The Times Entitled "Too fat - but is it my fault?" covered the the more obscure reasons for our obesity epidemic according to researchers at Yale, Cornell and Johns Hopkins. Some of the items on the list may come as a shock.

1. Too little sleep

Inadequate sleep (less than 7-9 hours) increases hunger and appetite and interferes with the hormonal regulation of fat metabolism. Research shows that less sleep leads to increased body weight. Sleep deprivation results in reduced levels of leptin, a protein that regulates body fat, and increases in ghrelin, which stimulates food intake. Sleep restriction increases hunger and appetite. Over the past 50 years the average daily time spent in bed has dropped from more than nine hours to about seven. "The changes are consistent with chronic sleep deprivation leading to increased risk of obesity," say the scientists, writing in the International Journal of Obesity this month.

2. Pollutants

Endocrine disruptors — synthetic chemicals found in pesticides and some plastics — can enter the body through the food chain, and interfere with the work of hormones. When levels go up, so, too, does body mass index. Some of the chemicals are thought to work against male hormones, leading to higher levels of fat. Levels of these man-made chemicals in the environment have increased. The amount of polybrominated biphenyl

ether concentration in women's breast milk, for example, has almost doubled every five years from 1972. "By disturbing hormonal regulation, endocrine disruptors may fatten in a number of ways," the scientists say.

3. Comfortable temperatures

Homes are on average warmer than they were 30 years ago. The average temperature in UK homes has increased from 13C to 18C (55F to 64F) since 1970. In hotter climates, we're also keeping cooler. In the southern United States, which has some of the highest obesity rates, the percentage of homes with air-conditioning increased from 37 to 70 per cent. There is some evidence that living in homes and working in offices where the temperature is "comfortable" can contribute to weight gain. This is because the body doesn't need to use energy to keep warm or cool, meaning that calories are not used up. "Exposure to temperatures above or below the thermoneutral zone increases energy expenditure which decreases fat," say the scientists.

4. Not smoking

Research indicates that smokers tend to weigh less than non-smokers and that they put on weight when they give up. Nicotine works as an appetite-suppressant. Rates of cigarette smoking have declined steadily as obesity rates have gone up over the past few decades. Between 1993 and 2004 the number of men who smoked dropped from 28 per cent to 22 per cent. The scientists say: "Centers for Disease Control and Prevention scientists estimate that between 1978 and 1990, smoking cessation was responsible for about one quarter of the increase in the prevalence in overweight in men and for about one sixth of the increase in women."

5. Use of medicines

Antidepressants, anticonvulsants, antidiabetics, antihypertensives, contraceptives and antihistamines have all been linked to weight gain. Beta-blockers can result in weight gain of about 3lb (1.4kg). One study of oral contraceptives estimated an average weight gain of 11lb. "Most (of these) pharmaceuticals were introduced or had their use dramatically increased in the past three decades," say the scientists. Over the past 30 years there has been a particularly dramatic increase in the use of antidepressants.

6. Getting older

As men and women age, weight increases. Women tend to put on weight after 35 and after the menopause because of hormonal and metabolic changes. In men, extra weight is often the result of increased abdominal fat linked to conditions such as diabetes.

Developed countries such as the UK and America, which have the higher rates of obesity, now have an older population. Between 1970 to 2000, the proportion of the adult population aged 35 to 44 has increased by 43 per cent.

“It is likely that these demographic changes are contributing to the increased prevalence of obesity in at least a small way,” say the scientists.

7. The age of your mother

Studies of children in Britain have found that the risk of obesity increases with the age of mother. In nine-year-olds, the odds of being obese increased by 14.4 per cent for every five-year increase in maternal age. One theory is that as women age, their offspring get lower levels of the proteins they need to regulate fat. The age at which women have children is increasing globally. In the UK, it has increased by 1.4 years in a decade. “

Increases in maternal age might produce a 7 per cent increase in the odds of obesity,” say the scientists.

8. Low birth weight

Research suggests that low birth weight, and the rapid catch-up in growth that often follows, may increase the risk of obesity. Mothers who were themselves of low birth weight are at increased risk of gestational diabetes which, in turn, increases the risk of obesity in their child. Overfed babies are also at risk of obesity and the effects can be inherited over several generations. Incidence of low birth weight in the United States increased to 7.8 per cent in 2002, the highest for more than 30 years.

9. Your genes

Research with animals and human beings suggests that body-mass index (BMI) may be inherited. There is also some evidence that men and women with a genetic predisposition toward greater fatty tissue are reproducing at a higher rate. The higher the parents' body-mass index, the greater the number of offspring. If men and women with a larger BMI are more likely to reproduce, it will result in more children with genes that predispose them to obesity.

10. Your parents' choice of mating partner

Men and women with a predisposition to a greater BMI are more likely to pair with each other. This phenomenon is known as “assortative mating”. As BMI is partly inherited, this increases the number of children being born who are predisposed to obesity. Because the number of very thin people has stayed about the same, assortative mating

seems to increase the average population weight. The scientists say: "Combined evidence strongly suggests that assortative mating has contributed to the epidemic."

1. Manipulation and mind control by the giant food corporations with their advertising
2. Food allergies
3. Nutrient deficiencies
4. Food Addictions
5. Societal pressure
6. Emotional triggers and wounds
7. Insufficient motivation to exercise
8. Eating a diet that is not meant for the human race
9. Metabolic imbalances from suboptimal eating
10. Hormonal imbalances
11. Toxicity
12. Genetics