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A Science of Medicine
The Art of Care

Obesity and its consequences

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September 2015

For Tibb, being overweight, or even obese, is not a disease. Tibb sees obesity as a sign of a serious imbalance in our inner harmony, or *homeostasis,* brought on largely by our faulty lifestyle and personal bad habits. In some people, genetic or hormonal make-up may be involved, possibly compounded by exposure to certain environmental factors.

When we gain excess weight, it is the outcome of serious disturbance of harmony (*homeostasis)* within us. This upsets the balance between the energy we take in as food and drink, and the energy we expend in physical movement plus most metabolic activities within.

Unfortunately, being seriously overweight brings with it a number of real threats to our wellness. For example, it is closely linked to the onset of type 2 diabetes, heart disease, certain cancers, and joint disorders. Quality of life is inevitably severely reduced, and issues of self-esteem and social status arise.

Sadly, there is no 'quick fix' for being obese, and it should not be expected. First, this condition has most likely developed over many months, if not years. Second, there are many mechanisms involved in regulating our body weight, so no diet, drug, supplement, appetite suppressant or exercise programme is likely to be successful *over the long term*. As excessive body mass has many causes, treatment needs an holistic approach.

This is where Tibb comes in. Tibb adopts an holistic approach to restore our desirable body mass. It helps to arrest the emerging threat to our personal health that obesity in particular poses, by encouraging us to adopt changes to our lifestyle. These changes are achieved in the spheres of *dietotherapy, physical exercise, improved sleep hygiene, the use of natural appetite suppressants, counselling,* and other measures.

In the first of three parts on the Tibb view on overweight, obesity, and their management, the background to these conditions is outlined – body weight regulation, the road to becoming overweight, causes identified, and the consequences.

The second part deals with the various practical ways available for weight reduction.

The final part explains in detail the contribution that Tibb can make in support of our quest for a desirable body weight.

Food: abundance or famine ● What do 'overweight' and 'obesity' mean? ● The Tibb attitude to fat ● Physis and the body's weight regulation ● Lifestyle Factors and body weight ● Why is being overweight a problem? ● Further Reading

Food: abundance or famine

In the days of Ibn Sina and Hippocrates, the original pioneers of Tibb, someone overweight was something of a rarity, especially if young or even middle aged. Until quite recently, years of food abundance were not guaranteed, and for most people famines were only two bad harvests away. Nowadays, people in the developed world rarely go hungry, and famines are rare. Food shortages for them are a thing of the past, thanks to better agricultural practices, transport systems, real-time communication, and superior food preservation and storage facilities.

An unintended consequence is that overweight people are becoming very common, and almost the norm in some countries. A cursory look around any shopping centre or sports stadium emphatically confirms this. The reasons are not difficult to uncover. Not only is energy-dense, attractive food of acceptable quality and affordable price easily and widely obtained by most, but physical activity by most people has plunged dramatically over a few decades. Walking and cycling have given way to transport by car, bus, train and taxi. Leisure time is now largely filled with passive activities, especially in the young. Television viewing, addiction to computer-based entertainment and social media has superseded physical pastimes and pursuits to an alarming extent. The inevitable outcome is that energy intake has increased markedly in many people, but energy expenditure has decreased extensively. The inevitable outcome is a worrying increase in the numbers of overweight, and more alarmingly, obese people.

What do 'overweight' and 'obesity' mean?

Our own body weight lies somewhere on a spectrum from severely underweight through to morbidly obese. But how do we know whereabouts on this spectrum we are? This is an important bit of information, as we need it to know (a) where we stand regarding the risk of one or other weight-related disorder, and (b) how effectively weight reducing measures are working.

Body mass can be assessed in several ways:

(a) Measurement of accumulation of body fat – 20% above normal for age, gender and height is considered overweight.

(b) Body Mass Index (BMI) – relating body weight to height. It is not ideal, but useful for assessing change in body fat.

(c) Waist measurement – easily done, and requires no calculation.

How actual body weight relates to ideal weight of someone of same age, gender and body frame.

- ***Calculate body fat content: Using skin-fold calipers or water immersion. Men above 25% and women above 30% are considered obese.***
- ***Body Mass Index: your weight in kilograms, divided by your height (metres), squared. ($M \div h^2$) (Below 18.5 – Underweight / 18.5 to 24.9 - Healthy weight / 25 to 29 – Overweight / 30 to 40 – Obese / Over 40 - Morbidly obese).***
- ***Waist measurement: Men: overweight >92 cm; obese >100 cm. Women: overweight >79 cm; obese >87 cm. (all approx).***

The Tibb attitude to fat

Tibb has no issues with fat or fatty tissue. It accepts that fatty (*adipose*) deposits are an important, indeed essential, part of a person's body. Virtually all biological structures need some fat, such as triglycerides and cholesterol. In one form or another it is an integral part of nerve fibre, brain tissue, breast and lung. It supports and cushions internal organs such as the kidneys, spleen and liver from everyday bumps and knocks. As a storage site, it is a major reservoir of energy, supplying energy-rich material when needed. It also stores a number of vitamins, essential omega fats and other metabolic factors.

Ideally, fat storage and release should be in a fine-tuned equilibrium, so when food intake is plentiful, fat stores are topped up; and when times are lean, fat stores are depleted to provide necessary energy. When this equilibrium is disturbed by overeating and/or lack of exercise, for example, then body mass will increase. If it is disturbed the other way when someone is recovering from a serious illness, or is fasting, then body mass will decrease. *Being overweight, Tibb contends, is a sign that the body's internal equilibrium, or homeostasis, is dysfunctional.*

Physis and body weight regulation

The regulation of our body fat deposits is controlled by Physis, the governor of all our metabolic processes: our so-called '*inner doctor'*. Its action is critically important in keeping us healthy. Physis maintains a dynamic balance between the energy available from the digestion of food, and the provision of energy for muscle activity, internal activities and metabolism. This is achieved through the agency of *homeostasis*.

Homeostasis is the overall process involved in maintaining harmony between the various tissues and organs in the body. It also ensures equilibrium exists between the body's workings and the changing external environment. Generally, disease develops when Physis' actions are seriously disrupted, so that homeostasis, Physis's agent, is unable to compensate properly. It is often the inevitable consequence of years of a faulty lifestyle and poor behaviour.

Lifestyle Factors and body weight

Tibb has identified a number of Lifestyle Factors which are associated with most chronic disorders. In obesity the main ones are the food and drink we consume, the physical activity we commit to, and the quality of sleep we achieve. Other factors which may influence body mass are emotional state (especially stress) and elimination of natural waste and toxins.

Physis is also influenced by our personal habits and a number of environmental factors. Poor personal habits include smoking, alcohol intake, drug use and abuse, and hygiene issues.

> ***Tibb asserts that being overweight or obese results from distorted Lifestyle Factors, the main ones being the food and drink we regularly consume; the amount and intensity of physical exercise carried out; the quality of our sleep; and the way we respond to emotional stress.***

The problems of obesity

There are major problems linked to excessive body mass, and these can be divided into three areas: (a) the effect on the *adult person*; (b) the effect on our *children*; and (c) the effect on our *community*.

> ***Generally, an overweight person is two to three times more likely to have hypertension or coronary artery disease, and is more than ten times at risk of type 2 diabetes, compared to his leaner colleagues***.

***Personal*.** Being overweight is not only storing up excess fat, but also serious health problems for the future. They include the following:

- **Diabetes type 2**, which promotes a wide range of other disorders
- Raised **blood pressure**, upping risk of stroke and heart failure
- **Arthritis** in the knees, hips and ankles, bringing pain and walking difficulties
- Chronic **back pain**, degrading quality of life
- **Fatty blood vessels**, leading to heart and circulation problems
- **Heartburn** and reflux, affecting eating
- **Fatty liver disease**, leading to a failing liver

There is evidence that obesity, over time, is linked to a number of *cancers* – especially of the breast, thyroid and kidney, and several of the digestive tract: oesophagus, gallbladder, pancreas and colon. The reason(s) are not clear: maybe because fat cells secrete hormones such as insulin which trigger cell growth, especially cancers, or they interfere with factors which inhibit tumours from growing. Interestingly, overweight people often show signs of chronic, low-level inflammation – one of the early steps in cancer development.

On top of these, being seriously overweight can have a serious effect on someone's quality of life, due to:

- The onset of **depression**
- The occurrence of **social stigmatisation**
- The problem of **urinary incontinence**
- Problems with **personal hygiene**
- Development of **gum disease**
- **Skin rashes** appearing in the flesh-folds

> ***Being overweight increases risk following surgery - greater chances of infection, pneumonia, and blood clots in the lung and legs.***

***Our children*.** More than 20% of our children are overweight or even obese – and the number is rising inexorably. Another alarming statistic is that the number of children admitted to hospital due to bodyweight-related problems has *almost doubled* in recent times. The prognosis is bleak: in a generation or so, these same children will be adults, plagued by diabetes, hypertension and a whole host of ailments which reduce their quality of life and drain healthcare budgets.

The community. Diseases not linked to infection or infestation account for almost a third of local healthcare spend. Smoking and substance abuse account for some of this, but the main culprit is obesity. In South Africa, around 40% of men, 70% of women and 23% of children are seriously overweight or obese – the highest rates in Sub-Saharan Africa. In some developed countries, medical costs related to obesity have escalated enormously, to more than 10% of yearly healthcare spending. This does not include whatever is paid for private programmes, procedures, supplements, appetite suppressants and support groups. Disorders related to excess body weight include hypertension, heart disease, joint problems and diabetes-linked ailments such as as those of the kidney and eye, and poor blood circulation.

The predictable costs to the community are:

(a) **Increased taxation** to satisfy escalating national and local budgets to deal with this looming and pervasive epidemic.

(b) **Increased absenteeism** and **decreased productivity**, leading to a poorly performing, low-productivity workforce.

(c) **Reduced disposable income** (overweight people spend more on healthcare than their leaner cousins).

(d) **Increased medical insurance** to cover accidents and treatment of obesity-linked disorders

> ***Increased body mass and obesity point to an unhealthy lifestyle. This is now arguably the no.1 leading cause of many preventable conditions. Obesity is second only to smoking as a cause of several cancers.***
> ***A staggering 70% of chronic health problems are preventable. The common theme for these chronic diseases, such as diabetes, heart disease and digestive disorders is being obese, which puts people at higher risk for developing them.***

[*In the next Tibb Consumer Article on overweight the causes and remedies are examined. The potential for lifestyle management will be detailed, together with several other treatment options for a successful loss of weight.*]

Further Reading

Tibb and Physis: http://www.tibb.co.za/articles/Tibb_and_Physis%20.pdf

Tibb and Lifestyle Factors: http://www.tibb.co.za/articles/Tibb_and_Lifestyle.pdf

Review of overweight:
file:///C:/Documents%20and%20Settings/User/Desktop/CHRONIC%20DISEASE%20&%20LIFESTYLE.htm

Statistics, cost and prevalence: http://www.financialmail.co.za/fm/CoverStory/2014/12/18/health-and-lifestyle-the-cost-of-obesity

Financial cost of obesity: https://www.linkedin.com/pulse/20131122150210-14634910-america-s-biggest-fiscal-problem-the-fat-are-getting-fatter

Obesity and diet: http://articles.mercola.com/sites/articles/archive/2013/06/15/obesity-dangers.aspx?

Obesity and cancer: http://articles.mercola.com/sites/articles/archive/2099/12/31/cancer-insulin-resistance-heart-disease.aspx?e_cid=20150727Z2_DNL_art_1&utm_source=dnl&utm_medium=email&utm_content=art1&utm_campaign=20150727Z2&et_cid=DM82819&et_rid=1050478181