Fatter and fatter: South Africa's rise in body mass index

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A meta-analysis recently published by Finucane et al.[1] describes national, regional and global trends in body mass index (BMI) based on data from studies in nearly 200 countries covering the period from 1980 to 2008. The comparative aspects bring a new light on the global issue of the diseases of overnutrition. Southern Africa stands out as one of the places in the world where the trend has been toward greater obesity. The increase in BMI reflects an increase in wealth of southern Africa in comparison to our eastern and central African neighbours over the last three decades, but an associated increase in obesity has made us a higher risk population.

The calculation of BMI is a useful way to identify the presence of excess bodyweight. It is a simple calculation of weight in kilograms divided by the square of the height in metres and, although it is unreliable in muscular individuals, the BMI does broadly track the percentage of body fat and gives a good estimate of health risk as a result of excess weight. Clinicians have defined BMI values of greater than 25 kg/m^2 as being overweight, and values greater than 30 kg/m^2 as being obese. Repeated studies have shown that the risks of premature death and debilitating disease increase in overweight individuals, and become very high in people designated obese.[2]

Over the years that I have taught first-year medical students at the University of Cape Town, I can't say that I have noticed an increase in BMI. We would measure and weigh all of the students as part of the first-year practical sessions. The vast majority had perfectly healthy BMI's of 19 kg/m^2 to 22 kg/m^2 or so, and the only secular trend in BMI that I noticed was my own as it crept up past the 25 kg/m^2 mark in my middle age. Finucane et al.'s study has demonstrated that indeed I was not the only one gaining weight and that a serious risk to health has been developing in our country.

Their data show that the average worldwide BMI has increased by about 0.5 kg/m^2 over these decades. In the same 28 years, the age-standarised percentage of obese individuals on a world scale has doubled. I knew about the obesity pandemic, but seeing the figures for southern Africa was a shocker: the sub-continent topped the world scale in 2008 with 36.4% of women and about 20% of men being obese. Southern Africa has topped the world scale in 2008 with 36.4% of women and about 20% of men being obese. In South Africa itself, overweight individuals made up 50% of men and over 60% of women in 2008. A small consolation is that more North American than South African men were obese (nearly 30%) but more South African women were obese compared to their North American counterparts, of whom only 31% were obese.

Many South African researchers are now examining the implications of these high levels of overweight and obese people, especially in children.[3] Different ethnic or racial groups perceive the problem in different ways. Although very few African women considered themselves to be overweight (16% in one set of data),[4] the actual value as defined by a BMI in excess of 25 kg/m^2 was closer to 59%. The same data set recorded 54% of white women perceiving themselves to be overweight while only 49% actually were overweight.[4] And at times it appears to be good to be overweight – HIV-positive overweight and obese patients from Soweto have a lower risk of contracting tuberculosis.[5] Governments can legislate, but ultimately it is people themselves that need to make the lifestyle decisions which can counter the rise in obesity in South Africa.

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