The world is getting fatter with technology as part of the problem and not the cure

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Credit: AI-generated image (disclaimer)

If you are one of the majority of people who make New Year's resolutions, you are also very likely to fail at keeping them. Losing weight and being more active are always in the top 5 resolutions and unfortunately for the majority, the hardest to ever achieve for any significant period of time. No amount of technology or novel

psychological approaches will help as we are unfortunately battling with our fundamental programming fuelled by the most primitive of drives.

Each year, people in countries like the US, UK and Australia are getting heavier and doing no more activity than in previous years. This is despite the advent of technologies that track activity and heart rate, that so far have not brought about any fundamental changes in behaviour.

In a survey of Australians with diabetes, only 25% of adults reported following a healthy eating plan on all days. Only 17% participated in 30 minutes of physical activity on all days. Interestingly, only 13% of diabetics surveyed used apps to help with their condition and the majority of those that did had type 1 diabetes.

The story of diabetics is repeated for all other chronic diseases. Even with a condition that can be improved or at least slowed down with better eating and physical activity, sufferers fail to do so.

The other point to stress about the obesity crisis is that it is a global phenomenon and not a specifically "western" problem.

So are we fighting our genes and if so, is there anything we can do about it? In evolutionary terms, there has been a popular theory that suggested the presence of "thrifty genes" whereby the body stored fat efficiently during times of plenty to tide humans over when food was less readily available. This was fine when we were hunter gatherers or even simply more physically active, but over time, the populations of the world have become more sedentary and far less active. It is estimated that stone age man expended about 1,240 kcal in physical activity and consume 2,900 kcal whereas modern man expends just 555 kcal in physical activity and consumes 2,030 kcal.

We are generally intrinsically motivated to eat. We are not equivalently

motivated to do physical activity. Our basic drives are to eat when we can because we find this pleasurable, store as much energy as possible and do as little activity as possible. When there is no external driver to do the physical activity, it is very hard for most people to exert the self control to do it anyway. Even when people do find the self control to engage in physical activity, it usually only happens for a short period of time.

Technology has largely been responsible for driving the sedentary life. Transportation has played a large part in removing the need to walk and ongoing changes to the workplace has removed physical activities from the other part of our lives. Worse still, computers at work have encouraged us to be completely static for most of our day bringing its own unique health problems. Television, computers and mobile phones are now completing the job of keeping us still outside of work.

Even the recent Pokémon Go craze that saw millions of people downloading an app and walking whilst playing failed to have a significant impact on overall health and activity levels. Researchers found that physical activity of players was only boosted by a small amount and for a period of a few weeks before returning to the pre-game levels. Most intervention studies that look at ways of promoting activity or better diet tend to work in the short term, if at all, but can't be sustained or be applied to the population at large.

Without the drive of adversity, and with technology that is keeping us sedentary and still, our increasingly high fat, high sugar diet is making us a fatter population each year. Whatever the latest fad of behavioural modification of diet or exercise, only a very small percentage of people will benefit in the long term.

So what will work in terms of protecting the world from increasing chronic diseases as a result of increased levels of obesity and inactivity?

Drugs are the obvious default. Statins have brought about population-wide benefits that couldn't be achieved by diet and exercise. In the UK, [6 million people](#) are on statins and this is thought to be saving that population from 1,000 significant cardiovascular events. In the case of diabetes, drugs like [metformin](#) may also prevent survival and also extend life in some circumstances.

Unfortunately, anti-obesity drugs have so far had limited [success](#) and come at a high cost of unwanted side effects.

The other way of tackling the problem is to alter the fundamental code that is driving humans to eat and to be sedentary. There may well be specific [genes](#) associated with obesity that could be manipulated. Other genes associated with the metabolism of fat and eating behaviour are also [possible targets](#) for tackling obesity. The problem with gene therapy however is scaling it up to impact the population as a whole.

It is hard to see the situation improving. Technology will increasingly automate manual jobs reducing the overall energy expenditure even further. Technology can't at present significantly contribute to increasing activity or tackling overeating. So whatever the solution may be, it is not currently sitting on our shelves waiting to be bought or gifted.

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