

How Medical Myths are Propagated

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Almost everybody has a theory on health and very often commonly held beliefs that underline such theories are irrational and unscientific. People will, however, cling to their pet beliefs with the argument that they know something works (or doesn't work) from personal experience. Beliefs and practices are socially constructed and change over time as material conditions change.

Thus, for example, in large parts of Eastern India it is believed that when a person is ill a change in the staple cereal (from rice to wheat) is beneficial. Interestingly, in many parts of North India the opposite is believed to be true. People will argue vehemently in both regions that they know from 'personal experience' that their belief is true and the change in the staple consumed works because the replacement is 'more easily digestible'. There is a much simpler explanation – most illnesses cause loss of appetite and a change in food consumed can stimulate appetite. Thus a shift from rice to wheat in East India works in the same way as a shift from wheat to rice in North India. In many parts of South India, especially in Kerala, drinking warm water is considered beneficial. It is believed that warm water helps digestion of food. Again, the explanation is simpler. In hot and humid climates gastrointestinal infections are more common and boiling the water helps get rid of most infections that are water borne. So it is healthy to drink warm water that has been previously but not necessarily for the reason we believe.

Many such beliefs and practices usually have a rational explanation as to their origin, but with changed material circumstances these can become obsolete and even harmful. Ancient texts, as well as many modern texts, speak to the benefits of drinking water. This is an entirely rational belief as 70% of our body mass is water and even a 5% depletion can lead to extremely serious ill effects. When water sources were not always easily accessible and manual labour that leads to water depletion was common, there was no real need to think about the maximum amount of water that should be consumed. However recent studies show that some people are drinking too much water, and more dangerously, are giving their children too much water. Too much water puts a load on our kidneys, which can find it difficult to flush out enough, and water can accumulate in the body. This can lead to very serious consequences, especially when it leads to swelling in the brain.

While practices that impact on health have always been socially constructed, based on material conditions, today medical myths are being increasingly shaped by the 'medical industrial complex' and the food and beverages industry. Here we examine some instances of how industry is shaping both the practice of medicine and our nutritional practices.

WHO NEEDS CARDIAC STENTS?

It is widely assumed that people who have heart disease and develop chest pain after mild to moderate exercise should be treated by a procedure called 'angioplasty' and the insertion of a device called a stent. Essentially what angioplasty does is to clear a clogged artery in the heart and the stent is a rigid tube that is inserted into the artery and is supposed to help to keep the artery open. More than 500,000 heart patients worldwide have stents inserted each year to relieve chest pain, according to conservative estimates.

Researchers in the UK, in a widely published study, discovered something that was startling. In a study, carried out in the Imperial College London, 200 patients with a profoundly blocked coronary artery and chest pain severe enough to limit physical activity, were recruited.

After initial treatment with medicines the subjects of the study were assigned to two groups. The first group had an angioplasty done and appropriate stents were inserted in them. In the second group while

the catheter that guides the stent was inserted, no angioplasty was done and no stents were implanted. Patients did not know which group they had been assigned to.

When the researchers tested the patients six weeks later, both groups said they had less chest pain, and they did better than before on treadmill tests. Researchers found no difference in the response to the treatment in patients from both groups. In other words, the procedure involving angioplasty and stenting was no superior to a placebo effect! The researchers also concluded that the placebo group felt better because they thought they should feel better after the procedure!

The study puts to question why the health industry has been aggressively promoting the use of cardiac stents. In many cases the only people who benefited were the devices industry, high profile cardiologists, and stent manufacturers. Stents will still probably be considered useful but in a very much smaller number of patients, like those who suffer a heart attack.

ADDICTION TO SUGAR

Let us move to the practice of consuming sugar. Most of us do not realize that our bodies do not require sugar in a pure form. Carbohydrates which are needed for energy (which sugar also provides) are available in all traditional diets in the form of cereals and some vegetables. Small children do not have a craving for sweets, it is we who get them hooked to the taste of sugar when we feed them sugar rich diets – from biscuits to sweetened beverages.

A review published in the British Journal of Sports Medicine now suggests that “Consuming sugar produces effects similar to that of cocaine, altering mood, possibly through its ability to induce reward and pleasure, leading to the seeking out of sugar”. While whether sugar is addictive like cocaine is still a matter of debate, what we do know is that sugar acts on the same ‘pleasure centres’ of the brain as cocaine. The Food and Beverages industry has known this for a very long time and has in fact tried to obfuscate research on the link between sugar and obesity. A New York Times report says that Coca Cola has funded research since 1964 to deliberately confuse issues and to basically suggest that consuming high amounts of sugar is not harmful as long as people exercise regularly. The report says “in 1964, John Hickson, a top sugar industry executive, discussed a plan with others in the industry to shift public opinion “through our research and information and legislative programs.” Another New York Times report from 2015 details how Coca Cola has spent hundreds of millions of dollars to fund fraudulent research that minimizes the impact of sugar on obesity, diabetes and heart disease.

Coca Cola is powerful and ubiquitous and it claims that the Coca Cola brand is the most recognized brand in the world. Coca Cola also has powerful friends. The Bill and Melinda Gates foundations, the self acclaimed champion of better health across the world, holds a large number of shares in the company. No surprise then that Melinda Gates (Bil Gates’ wife and partner in the Gates Foundation) famously talked about the virtues of the company and what other could learn from Coca Cola!

HOW MUCH WATER SHOULD WE DRINK?

We move on now to something even more basic – water. As we discuss earlier, consuming large quantities of water is not a very good idea, especially for children. If we drink too much water, the sodium levels in blood may drop to dangerously low levels, causing hyponatremia -- a condition in which cells swell with too much water. Most symptoms of excess water intake are due to swelling in the brain, and can range from mild to moderate confusion, to even unconsciousness and deep coma. Children (and older people) are especially at risk because their kidneys cannot get rid of excess water as fast as adults. The advise to drink 6-8 glasses of water per day (for adults) is still sound advise. However various health websites and pop nutritionists and even home grown godmen and *babasextol* the virtues of water and suggest that there is nothing like too much water intake. In India ancient texts are invoked to suggest that the more water we drink the more so called toxins will be washed away. In reality the body tells us when we need water, and we all recognize it as thirst. Even children know when they are thirsty. There is no added benefit in drinking water if we are not thirsty.

It is a moot question where the fad for drinking excess water originated in the West. Many trace it to motivated campaigns by front organizations of packaged water companies. 'Hydration for Health', an initiative aimed at medics to promote the drinking of water, which was created and is sponsored by Danone, the French maker of Evian, Volvic and Badoit bottled waters, says in its supposed public interest messaging "many people, including children, are not drinking enough". Perrier (another packaged water MNC subsequently acquired by the F&B giant, Nestle) actually started the bottled water boom in the United States in the 1970s. In 1978, Americans bought 500 million gallons of bottled water. Over the next decade, it nearly quadrupled, to 1.8 billion gallons. Soon Perrier was muscled out of the bottled water market by Pepsi and Coca Cola. In 2014, Americans spent \$35 million a day, on bottled water, which, is about 1,000 times more expensive than drinkable tap water. So it shouldn't be very difficult to understand where the fad for drinking more and more water came from.

BELIEFS TEMPERED BY SCIENCE

Today everybody can claim to be an expert on any subject on earth because they have access to the internet and numerous social media platforms. This has given rise to a rapid promotion of irrational and unscientific beliefs and myths. While a lot of useful information can be accessed from the internet, increasingly content on the internet is being shaped by corporate interests. The social media has become a major source of fake news, and in India, such fake news is also deliberately planted by right wing organizations in a planned manner. It has thus become even more necessary to be vigilant about sources of information and how we interpret them. All of us are curious about health, as it concerns everybody. It is important that our beliefs be critically examined on the altar of scientific reason and rationality.