There are none so blind as the double blind!

We live in an age of evidence based medicine.

What does it mean? It means that we medics can not make one little step to the right, to the left, forward or backwards until we have a stackful of double blind placebo controlled studies to justify that step. The truth may be staring us in the face, our clinical knowledge and instincts may be telling us what to do, but we have to resist all that and say the famous phrase "There is no evidence!". No evidence until Her Majesty Science will provide us with that evidence. Let us have a look at her majesty and how much we can rely on her evidence.

It is amongst scientists that I met the most cynical people, who do not believe anything. They have got a good reason for that. They are the insiders who know very well all the hundreds of different pitfalls in scientific studies. They also know all the hundreds of political knots our modern science is tied in. Science is an expensive business.

Large number of studies are funded by companies or organisations which expect the scientist to come up with particular results, suiting their agenda. There are many ways in designing and conducting a scientific study, which would ensure a particular result. At the end of any study, when all the data is collected, this data has to be statistically analysed. People, who are familiar with statistics, will tell you that there are many statistical methods to analyse the same data. Depending on which method you choose, you may arrive at very different results.

Large commercial companies, who conduct research to back their products, usually have an army of statisticians employed to do just that. When the study is completed, the public at large is given a conclusion from that study, made by whatever party is interested to popularise that conclusion. The public at large has no chance to look at the study in detail, to see the numbers and to interpret them for themselves. Of course there are many properly conducted studies, but how do we know which one is which? Majority of people have no training, time or ability to analyse them for themselves. So, they are fed the "scientific evidence", based on studies, which often are politically manipulated, statistically twisted or simply incorrectly conducted.

There is no other science so thoroughly confused and confusing than nutritional science. Incidentally, it is amongst nutritional scientists that I met a lot of very unhealthy people. They are the people who tell us what we should and should not eat, so they should be healthy themselves, shouldn't they?

Majority of nutritional scientific studies are funded by food industry. Is it a surprise then that all the brightly packaged foods offered to us by food industry are fully backed by nutritional science? Foods with virtually no nutritional value, full of E-numbers, flavour enhances, colorants, preservatives, chemically altered proteins, chemically altered fats and carbohydrates, pumped with sugar and salt. Never in the human civilisation there have been such drastic changes in the way we eat, as in the last 50-60 years.

Apart from the food industry, who else do we have to thank for this change? The humble nutritional science of course, which provided us with huge amount of confusion and misinformation about foods. Their "scientific evidence" made us abandon the natural foods, which we used to eat for thousands of years, and replace them with nicely packaged chemical concoctions, which we call "food" nowadays. There is no doubt that this dramatic changes in the way we eat are largely responsible for the epidemics in obesity, diabetes, heart disease, cancer and many other health problems, which plague the human race today.

For every bunch of nutritional studies telling you that a particular food or nutrient is harmful for you one can find an equal amount of studies telling you how good it is for you. I would certainly never rush to make any conclusions based on one study. But unfortunately that is exactly what happens.

I will never forget a presentation made by the head clinical nutritionist of one of the top kidney hospitals in the country. After an hour of listening to all the scientific evidence, available on the subject, the audience was completely confused what should be the right nutritional management of patients with kidney failure. It was obvious that the nutritionist, charged with helping these patients, was thoroughly confused as well. The audience went home feeling very sorry for the patients of that kidney hospital.

It is particularly amusing to see scientists proclaiming what we should or should not eat based on studying one particular small aspect of human biology. A lot of worried parents once contacted me to say that a scientist in a seminar told them that olive oil is bad for their autistic children. This Earth shattering advice was based on a study of one particular chemical reaction in the body where one of the ingredients of olive oil apparently may be interfering with that particular chemical reaction. Well, a human body does not equal to that one chemical reaction, it has got trillions of chemical reactions going on at the same time, interacting with each other, changing in response to what the body is doing at the time and many other factors.

Olive oil is not made of one ingredient either. It has got hundreds of different ingredients and as a whole it is a time proven health-giving food, used by people for thousands of years. But of course that scientist has spent years of studying that one chemical reaction, so naturally that is the most important single thing in the whole of human body, as far as this scientist is concerned. If you spend long enough digging a hole in the ground, then your whole world becomes that hole.

In our modern world it is very easy to become a victim of "scientific evidence". Of course, those scientists have laboratories, expensive and sophisticated equipment, so they should know! I meet patient after patient confused and bewildered by all the conflicting bits of information they get from different scientific sources. As a result they finish up at a complete loss of what exactly they should eat and what they should not.

People are absolutely right to try and learn as much as possible. The more you know the more you are capable to help yourself or your child. However, there are number of things which are important to realise before looking at the scientific evidence.

• Scientific evidence is often full of conflicting information, negating each other and unless you have thoroughly ploughed through every study on the subject, do not attempt to make any conclusions.

- Science is tightly bound by political and commercial constraints, so never take any single study on its face value.
- An amazingly large percent of studies are conducted or interpreted incorrectly.
- Science can only present you with what it has studied. It can not tell you anything about things, which it didn't get round to study yet. As a result that little bit of knowledge may give us a completely wrong view of the whole problem. A little knowledge is more dangerous than no knowledge at all.
- Scientific evidence can only be used in context with proper clinical assessment of the patient and must never be taken as a gospel on its face value.

Scientific evidence is like a large jigsaw puzzle, where each study is a small piece. Because not all aspects of the problem have been studied yet, an unknown number of pieces of this puzzle are missing. On top of that many pieces, which are available, may be false and misleading. God save anybody who tries to manage their health based on this puzzle!

So, what are we to do?

I am not on a crusade against science here. It is thanks to science we, humans, have reached such a high level of sophistication. Because we made science work for us! It is our human ideas, instincts, empirical knowledge and experience, which employed the science and used it to our advantage. Not the other way round! At the moment we have a situation, where we are afraid to think, to listen to our instincts or experience unless science allows us to. From being our employee science has become our boss. Remember, that it is our human mind that has to put all the pieces of scientific jigsaw puzzle in the right places. Without that they mean nothing.

It is human mind, which employs experience, empirical knowledge, thinking and available scientific data and thus moves progress. Throughout years there always have been doctors and other medical practitioners, whose clinical experience and knowledge led them against available at the time scientific evidence. Health practitioners who work with real people every day, dealing with their real health problems accumulate an empirical clinical knowledge of what works and what doesn't. These people are not working with laboratory equipment detached from patients. Very often their clinical experience goes against perceived science. But more often than not science eventually confirms what this people knew through their clinical experience all along.

Unfortunately, this kind or medicine does not fit into the straight jacket of evidence based official medicine. As a result more often than not the official medicine brands it quackery and alternative. It is no secret that official western medicine is run by pharmaceutical industry, where money and profit rule the roost. The alternative medicine uses diet and natural ways of healing the patient. There is no profit in that for the pharmaceutical industry, so this rather powerful industry does not like alternative medicine.

Were does all this leave the patient? Well, millions of patients around the world have discovered that having been through every expensive test and treatment of the evidence based very scientific official medicine, they get real help from using diet and natural approaches. There is centuries old wisdom accumulated in treating disease with natural means. A lot of modern scientific knowledge has complemented and confirmed this wisdom. It is an area where science knows its place.

To conclude, we should not get intimidated by scientific evidence and never try to make any changes in our lives based just on it. Science is only one of the tools in our human toolbox. Let's keep it in its right place!

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