Twitter Thread by Cutty Snark



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I'm bored, let's do a thread on Homoeopathy. A few weeks ago I made an offhand comment here about Homoeopathy being bullshit. This seems to have hurt a surprising number of feelings, so allow me to clarify my position. 1/

2/ For context, let's go all the way back. Human anatomy is fairly straightforward, and cadavers have always been around, so our ancestors figured out certain things thousands of years ago. It wasn't hard to understand obvious complaints, like broken bones or external wounds.

3/ They realised that certain plant and animal parts relieved certain symptoms and started using them, though they didn't know the science behind how they worked. They even started doing surgery - pus drainage, bone-setting, trephination, even Caesarians and nasal reconstruction.

4/ Impressive, but they were treating things that had obvious causes. Diagnosis was tricky when the symptoms were vague, like seizures or cough, because they didn't understand physiology yet. So they started guessing at the causes of disease, and came up with various theories.

5/ The Chinese thought it had something to do with the body's energy balance, or Qi. Indians thought it was an imbalance of the three Doshas. The Greeks, Romans, and Persians thought it was an imbalance of the body's four 'Humours' - blood, phlegm, black bile, and yellow bile.

6/ They all concluded that illness was related to the elements, seasons, and astrology, and depended on the patient's temperament and body type. They also thought God had something to do with it, because it made sense that a supreme creator would have a say in public health.

7/ They discovered a lot more stuff that became the basis for medicine. For instance, that inoculation prevents some diseases, that diabetic people have sweet urine, that the lungs and heart are connected by vessels, and that lemons kept sailors from dying of scurvy at sea.

8/ When the microscope was invented, they finally saw cells and microbes. There were theories that disease was caused by invisible things, but the prevailing idea was that disease was caused by bad air or 'miasma'. This idea was very firmly ingrained, so no one put 2+2 together.

9/ So this is where medicine was until the 1800s - a mixture of herbs, superstitions, and half-understood concepts of physiology. In Europe, it was still based on the theory of the four Humours. Diseases were thought to be caused by imbalances of these, and treated accordingly.

10/ Doctors looked at a patient's symptoms, and forcefully induced opposing symptoms. If they thought a disease was caused by too much blood, they advised bloodletting. They used toxic herbs, strict diets, and procedures like blistering or holding red-hot pokers under the nose.

11/ The medicines were also terrifying, containing things like arsenic and mercury, deadly nightshade, and some flat out insane things like Egyptian mummy powder and goose turds (really). None of these were purified or tested; just compounded by the practitioners and prescribed.

12/ Predictably, the effects of these treatments were often much worse than the illnesses themselves. George Washington was one notable casualty, having died as a result of overzealous bloodletting (several pints removed), when his illness was likely a respiratory complaint.

13/ So when people in the late 1700s said that they were 'worried about the side effects of medicines', that was actually a very reasonable stance to take. And when one Dr. Samuel Hahnemann, M.D, made a 'gentler' alternative called Homoeopathy, it understandably became popular.

14/ Except Dr. Hahnemann, despite his good intentions, was as clueless as his counterparts. He thought that it was wrong to treat illness by simply forcing opposing symptoms to happen (he had a point), but instead of doing actual research, he just did the opposite of the others.

15/ Instead of treating a fever with medicines to reduce a temperature, he gave compounds thought to *cause* fever, but diluted until it was basically water. He got the idea when he once took quinine (a malaria cure) and developed a fever, and theorised that 'like cures like'.

16/ His thinking was : malaria causes fever; quinine also causes fever; quinine cures malaria; therefore anything that causes fever can cure fever. (He chose to ignore the fact that literally no one else who tried to replicate his experiment developed fever after taking quinine).

17/ He thought that the spirit of an ingredient in a dilution was activated by 'potentization of dynamization', which means 'shake well before use'. Fascinating, but he didn't know how it worked, and even now the only explanation you'll get is 'quantum physics or something idk'.

18/ His medicines certainly didn't have any side effects. They didn't have any effects at all. But it was better than being given a hot milk enema or wrapped in freshly killed sheep's intestines (of course those were real things) by the other doctors, so he did very well indeed.

19/ But in the 19th century, things started changing for medicine. Germ theory was accepted, and research into bacteria began. Advances in chemistry meant that drugs could be isolated. Genetics and cell biology were understood. The stethoscope was invented, improving diagnosis.

20/ It was clear that the old theories were not compatible with new scientific discoveries, and these discoveries came with irrefutable evidence. And then medicine did the one thing that set it apart from other healing systems : it gave up its beliefs and accepted the evidence.

21/ Modern medicine is unique because it accepts if it is wrong or outdated and keeps evolving, never saying 'this is how it's always been done'. It is humble. Alternative medicine is not. It can't question itself, because it knows that everything will fall apart under scrutiny.

22/ To be fair, we don't understand quantum physics yet, and it may hold secrets. But that doesn't change the fact that Homoeopathic medicines don't work better than placebo. If they did, we would accept them even without fully knowing the science, because whatever works, works.

23/ If Homoeopathy wants legitimacy, the burden of proof is on its practitioners to show that it works. Not with anecdotes from patients, but with high-quality evidence. Until then, I must - sorry, Dr. Hahnemann - remain of the opinion that Homoeopathy really is bullshit.