The Good, the Bad, and the Ugly of AI in Medicine Transcript

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Introduction and AI formula cautionary tale

Catherine, my friend and associate, who's very good at doing AI searches now, had her labs done. She uploaded her lab. and got an answer. So they came back with a formula.

And Catherine said, to me, what do you think about this formula? Now I've been teaching herbal formulas for, again, almost 30 years. I'm very familiar and I looked at it and said this might kill you.

She said really? Hi and welcome to The Balancing Point. functional medicine and integrative health simple, practical and fun. So you can restore balance, boost vitality and enjoy a healthier life every single day.

Hello and welcome to another edition of The Balancing Point. This is Dr. John Needers here with you. And today I want to talk about something that's very near and dear to my heart.

It's the good, the bad and the ugly. of AI and medicine. So I now get about five times the number of emails that I used to get because people will look up anything I give to them or recommend to then on AI, and then have dozens of questions based on whatever AI tells them.

AI in medicine: content vs context

That can get frustrating just from a time aspect. I'm totally fine if people look things up and have questions about them, et cetera. But what I have found, and I've seen this many times, is that it's hard for people to understand the difference between content and context, right?

AI gives content. Usually pretty accurate, but it is completely dependent on how you ask the questions. Like we will go in, we use AI all the time. But we'll go in and try asking the question several different ways just to make sure it's understanding what we want.

And so it can be very helpful in that way. You know, I could dig through a textbook for 15 minutes looking at the number of molecules of ATP that are produced from one molecule of glucose.

Or I can ask AI and they'll have an answer for me in about two minutes. Now I have enough background and context and information that I know if what they're saying is accurate, right?

Because I will know within a very close parameter the answer to whatever questions that i'm asking. So like NADH. I looked that up this morning because I couldn't remember what one of the letters stood for.

And so that can be really quick and really powerful, but I can tell the difference because a long background and context in medicine, anatomy, physiology, and I've taught nutrition for about three decades.

So for me, it's easy for to put things together with context. I had a couple patients last week who had created their own diet plan. Fine, absolutely.

When I questioned them about why you make this decision, it was clear they had no idea. And in my opinion, their plan was actually a bad plan. It was incorrect.

But they were very fixated on their AI answer. So I let them have that. I mean, they're it's their money. But I did point out that I didn't agree with it.

But what I noticed that was really amazing is how little they understand, like the one patient had no chemistry background, no a nutritional background, et cetera.

And she thought AI was telling her to take certain things at the same time and to never take things certain at same.

Why context matters in lab interpretation

I could tell it was the way she asked the question. But we had a fun example here in our office. Catherine, my friend and associate, who is very good at doing AI searches now, had her labs done, which she and I have our labs quite frequently just so we can spot trends early.

So she uploaded her and got an answer. And then she realized, oh, I didn't tell AI that I have had a severe mold problem and I still have a great sensitivity to mold.

So she added that to her questions. They came back with a formula. Catherine said, to me, what do you think about this formula? Now I've been teaching herbal formulas for, again, almost 30 years, so I'm very familiar.

I looked at it and said this format might kill you. And she said, really? And I said yeah, this formula is to dry you out. And if you knew Katherine, you would know that she's too dry already.

When she takes drying medicinal herbs, it makes her feel horrible. Well this was an entire huge formula of very, very drying herbs that would have at least made her very bad.

That's context, okay? Each of those steps adds a little bit more context to the equation. And I think it's fine to the people that look things up and they want to add it to their repertoire, but often there's a lot more context to know what is going to be good for you and what isn't.

And basically, this all boils down to what's called the Dunning-Kruger effect. There were two social scientists, David Duning and Justin Kruger, who back in the 1999, I wrote a paper about this effect.

And essentially, it's people with low knowledge or skill in a particular area may overestimate how competent they are, because they think that's all there is to know.

Where people that are competent, extremely competent may underestimate their ability because they think anybody, since they can do it, anybody else can.

Dunning-Kruger effect and overconfidence

And this was the case with me when I was younger. I had a very strong ability at arithmetic, right? I could add, subtract, divide, in my head, any huge numbers, I would do running baseball stats, every time a player would come to bat, i would re-evaluate their batting average in head etc.

Well I kind of assumed everybody could do that, and one day I'm driving down the street with my wife and she's going, What's $329.87 minus $22.20? And she keeps asking me these questions.

And finally, I glanced over and I see that she's having me do her checkbook. I can do it faster in my head than she could do calculating it, right? So you see these things where Another example for me is I've been teaching, as I said, nutrition for at least 30 years.

And what I know is that I don't know everything. I there are many people out there that are much brighter, much wiser in different aspects of nutrition than I am.

So I respect that. And I don't assume I'm the best because I am not the the. Whereas someone with much less understanding than I have might assume that they're the, that know all there is to know.

And so that's the basis of the Dunning-Kruger effect. That people that are quite competent may underestimate their ability and people who are incompetent may overestimate their abilities.

This is what I see with AI because it gives people just enough content to get them in trouble often. Now, some things, it's fine, you know. One example that comes up is The stock market.

I don't do the stock markets because I do not understand the stocks market with any sophisticated level of understanding. So I just stay away from it.

You know, we might have some investments going through some other channel with people that do know what they are doing. But it is very easy and I have seen this many times with my patients where they will come up with a new idea, a couple of them invested in trust deeds and a Many went into the stock market.

Some did sports betting. Well, each of those areas requires a great deal of expertise. I mean, to think someone's going to to beat, to outdo professional gamblers who that's their entire life and they have huge supercomputers.

They know every bit of information about every team way before the average person can have it. So to bet against that, well, be careful. I mean, definitely don't bet any money you can't afford to lose.

It can be fun to bed on a team that you want to win and you could root for them.

Using AI carefully and closing remarks

But hoping to make a living at that is not very reasonable. The stock market though, I see a lot. People read a book on the stockmarket and they know everything.

Actually, this happened to me when I was in my 20s. I'd been a professional poker player and I did a significant amount of gambling on different things as I wasn't a group of friends that we all did.

We'd occasionally go out and play the horses. So I found a new book, on horse racing systems. And the first time I put it into play, I won seven out of nine races.

That's insane. But I didn't know better. So I've got the perfect system. I kept betting. Because I was too incompetent. The people are out at the track with their stopwatches.

They're paying off. people to give them inside information. And I was just reading in the newspaper. So these can be dangerous. Make sure that you have enough context to go along with any content that you're going to act out on.

In fact, there's some interesting memes. I think they're not very nice, but it talks about going from Mount Stupid to the Valley of Despair. So the people that think that they know everything and don't, to people like me, I guess, that can despair because I don t know enough ever about anything.

And so I'm constantly working to realize more things. So anyway, I just want to thank you and urge you to be a little careful, be little cautious with AI.

It can be great tool, but it should not be over relied on. Thanks. Talk to you soon. Thank you for joining me on The Balancing Point. If you enjoyed today's episode, please follow the show, share it with a friend, and leave a review.

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