Jenny McCarthy continues to do her best to exploit what celebrity she has to confuse the public about autism. ABC News, for some unfathomable reason, has decided to write a gushing and credulous piece about McCarthy's latest attempt to practice medicine on her son.

The article relates how McCarthy's life changed when her son, Evan, had his first seizure, leading to a diagnosis of autism. This led to the standard narrative we hear over and over from proponents of dubious treatments - McCarthy would not give up and accept the defeatist attitude of those know-it-all doctors, and she eventually found treatment...and hope.

Of course, I have nothing but sympathy for parents dealing with children with neurological issues. Most parents I personally know in such a situation do not give up, and make an earnest attempt to do everything they can for their child. Most parents also, in this endeavor, listen to the advice of experts.

McCarthy, however, decided that her "mommy instinct" was somehow superior to the carefully amassed knowledge of dedicated experts who have spent their lives trying to understand a complex disorder.

Actually, the article does not mention that McCarthy at first thought that Evan was a crystal child and that she was an indigo mom. Later she discovered that Evan was rather a victim of evil vaccines, and this resulted in her giving a huge boost to the anti-vaccine movement. There is now overwhelming evidence that vaccines do not cause autism, but why let facts get in the way of a good story and gut feelings?

She has not abandoned her anti-vaccine stance, but apparently is now promoting a special diet to treat autism. The diet is nothing new, avoiding gluten (primarily found in wheat products) and dairy. She, as with many other parents, have tried the diet and were impressed by the rapid improvement in their child's behavior and ability. The article talks about it as a cloud lifting, and the comments are full of other parents echoing this observation.

Such observations are useful to medical science, but not as a basis for a reliable conclusion. They are a source of hypotheses, nothing more. As experienced skeptics know, people are

good at seeing patterns and making connections, but many of the apparent patterns we see are mere illusions. We then need to confirm the patterns with objective and carefully controlled data. Often the illusions vanish when proper controls are put into place.

The humble and rational person, with some knowledge of science and self-deception, should accept the objective data over their own anecdotal observations. But that is not how humans are hard-wired - we find our own anecdotes to be incredibly powerful and hard to ignore.

The ABC article does not discuss any of this, of course. They make scant mention of the fact that mainstream doctors remain "skeptical" but give no indication as to why. The result of this shoddy journalism is to reinforce the impression that doctors are dismissive.

To date there have only been a few small studies looking at the effect of a gluten-free or casein-free diet in autism. The results are not impressive. A review of existing studies published in 2008 concluded only that:

"Current evidence for efficacy of these diets is poor. Large scale, good quality randomized controlled trials are needed."

The diet has been around for a couple of decades at least. If the effect was as obvious and dramatic as some parents claim, why hasn't it been demonstrated in a quality clinical trial? What we do know is that the unblinded observations of parents is plagued by confirmation bias and other biases and fad diets resulting from such anecdotal evidence has not faired well in the past.

For example, sugar consumption is not related to hyperactivity , despite many parents' strong beliefs that they have observed this phenomenon.

In a remarkable parallel, another mommy armed with her instinct, Robyn O'Brien, has taken on the medical conspiracy to hide the fact that food is a major cause of neurological and behavioral problems in children. She believes that additives and processed food are to blame. She claims to have observed an improvement in her children's behavior after going all natural and

organic.

This notion has actually been around since the 1920's, so there as been almost a century for scientific studies to demonstrate a real connection. Recent reviews of the evidence, however, conclude that there is no compelling evidence for such a connection.

For a phenomenon to remain controversial and without solid scientific evidence for so long, it either must not exist or be a tiny and inconsistent effect. Some physicians recommend that if a parent suspects a connection between a particular food and their child's behavior or neurological symptoms that they should do their own double-blind trial with their child and the food in question.

There does appear to be room for high quality studies of gluten and casein-free diets and symptoms of autism, but a significant effect seems unlikely. If such studies are done, however, I don't expect it will end the controversy. There is a great deal of emotion and bias tied up with our food making it particularly difficult to set aside our beliefs in favor of objective evidence.

Steven Novella, M.D. is the JREF's Senior Fellow and Director of the JREF's Science-Based Medicine project.