

# HPA axis is related to childhood asthma and allergy risk...for beginners

## Opinion

I went into pre-term labor between 25-26 weeks of gestation and was given antenatal steroid therapy to rapidly mature my son's lungs. By the grace of God, he was delivered at nearly 33 weeks of gestation. He was perfect in every way and came home with me three days after birth.

He later developed food allergies, environmental allergies and asthma. When I reflect back, his allergies presented very early in age...at about 3 months of age. At the time, I attributed his symptoms to sensitive skin like I have. If you ever tasted baby-food green beans and peas you could understand why they refused to eat it and spit it up...as for that darn sensitive skin after he ate it... I was stumped.

I have always believed his asthma was due to the corticosteroids I received to mature his lungs. I asked several pediatric allergists if there was a correlation between the development of asthma after receiving in-utero corticosteroids and was surprised that they always said, "I don't know." I wanted to say, "What? You don't know? You might want to do a little research." Then again I am not your typical, accept what the doctor says and move along, type of person. I did some research and quickly realized that it was a very complicated question to ask, and although the pediatric allergists are quite intelligent the pharmaceutical researchers are downright brilliant!

Several studies were developed to test the hypothesis that fetal exposure to corticosteroids in the antenatal phase is a risk factor for the development of asthma in childhood. Yes, it most definitely may cause childhood asthma!

There are time sensitive complications associated with the corticosteroid therapy and because of that the hypothalamic-pituitary-adrenal axis (HPA axis) is affected. The HPA axis is a complex set of influences and feedback reactions amongst three endocrine glands: the hypothalamus, the pituitary gland and the adrenal gland. There can be moderate to severe side effects to the HPA axis including childhood asthma. According to my research, I received the corticosteroids at the optimal time...meaning the highest benefit and the least risk to my son.

My son's asthma is significant, but very well-controlled, thanks to the brilliant pharmaceutical researchers' never-ending and uber-interesting hard work. He takes Qvar every day and only uses the rescue inhaler when he is sick, playing outdoor sports, playing in cold air etc.

Now I am not going to go into details, but any alteration of the functioning of the HPA axis can have numerous effects on the human body. My MSAC degree combined with this knowledge explains why my son has increased fears about many things. In addition to the life-

threatening food allergies, environmental allergies and asthma he may have HPA axis alterations...explaining the extreme fears that most people would term irrational. This supports my prior research about the two terms I've coined, "Food Allergy Related Anorexia Disorder" & "Food Allergy Anxiety Disorder." It has also opened a world of previously unexplained conditions such as schizophrenia and many other genetic diseases that they are researching.<sup>1</sup>

I think I am on to something here...does anyone want to give me a scholarship for a PhD program leading this research? Darn, I didn't think so.

In conclusion, if you have an asthmatic child do some research. If you have a food allergy child, read some peer reviewed articles and even Wikipedia. We need to gain as much knowledge as we can if we want to make a difference in the food allergy world. I want to add to the world...join me!

My references are listed below, read them.

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## Conflicts of interest

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## References

1. Pole JD, Mustard CA, To T, et al. Antenatal Steroid Therapy for Fetal Lung Maturation and the Subsequent Risk of Childhood Asthma: A Longitudinal Analysis. *J Pregnancy*. 2010;2010: 789748.

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