

22nd Annual Spring Symposium
Presented by Panhandle Nurse Practitioner
Association

**Autism Spectrum Disorder
An UPDATE**

April 11, 2015 Amarillo

Pia Habersang, EdD, CNS, MSN




Is Autism **STILL** a Problem



Have Things **Changed** with
Autism?




Or are they still **Changing**?



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What do **YOU** think ?



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Objectives for Today

The participants will be able to

- List Today's Consensus of what Autism Spectrum Disorder is and is not
- Recognize changes in prevalence of infectious and chronic diseases
- Identify various elements/ triggers causing changes in brain which then results in behavior we call "autistic"
- Understand the impact of genetically modified foods
- Appreciate the impact of glyphosate
- Recognize possible links of MSG and Autism
- Understand suggested tips for providers to incorporate in their practice.

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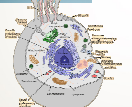

- List Today's Consensus of what Autism Spectrum Disorder is and is not
- Recognize characteristic diseases
- Identify various factors which then result in ASD
- Understand the pathophysiology
- Appreciate the clinical presentation
- Recognize possible interventions
- Understand the current state of practice.

The Belief that Autism is fixed prenatally / immutable postnatally is abandoned and there is a consensus that:

AUTISM is Multifactorial Disorder



AUTISM is a Multifactorial Disorder







Genes absolutely affect the brain, BUT there's no solid proof that they're the only player



Mitochondrial dysfunction

- Low antioxidants
- Fatty Acid deficiency

Epigenetic triggers impacting The expression of genes / disorders

Some Things are still Changing

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Drop in Infectious and Rise in Chronic Immune-related disorders

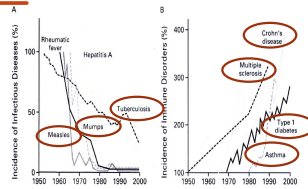
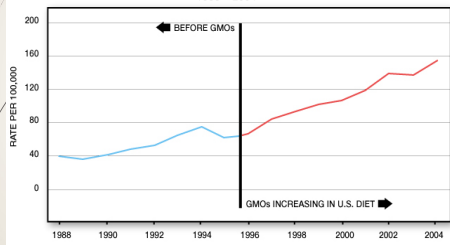


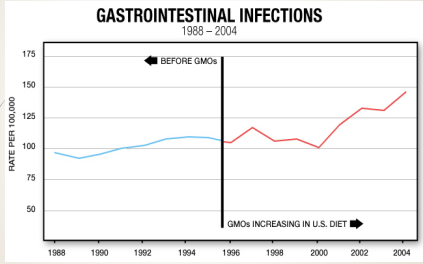
Figure 1. Inverse Relation between the Incidence of Protozoal Infectious Diseases (Panel A) and the Incidence of Immune Disorders (Panel B) from 1950 to 2000. In Panel A, data concerning infectious diseases are derived from reports of the Centers for Disease Control and Prevention, except for the data on hepatitis A, which are derived from Jousset et al.¹⁰ In Panel B, data on immune disorders are derived from Swastirick et al.,¹¹ Dubois et al.,¹² Tsoomilento et al.,¹³ and Pugliese et al.¹⁴

Some Things are still Changing

CHRONIC CONSTIPATION 1988 - 2004



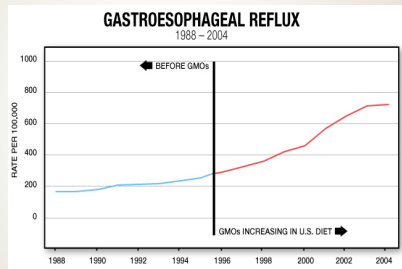
Some Things are still *Changing*



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http://research.lfb.org/research/html/nhs_gmo_0315/?code=LNHSR304&ver=1&n=NHS_gmo_0315

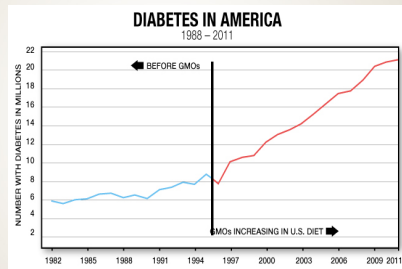
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Some Things are still **Changing**

Rise in Autism Prevalence v. Other Major Chronic Conditions in US

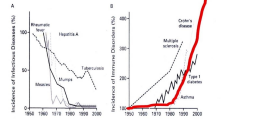


Figure 1 illustrates the rapid increase in the prevalence of Psychological Infections Diseases (PID) and the prevalence of Chronic Diseases (CD) from 1980 to 2010. In Panel A, the prevalence of PID is shown as a red line, and the prevalence of CD is shown as a black line. The red line shows a sharp increase starting around 2000, while the black line shows a more gradual increase. The x-axis represents the year, and the y-axis represents the prevalence of chronic diseases in percent.

Why **Is this** Happening ?




What do **YOU** think ?




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Thoughts from Martha Herbert, MD, PHD



The Autism Revolution: Whole body Strategies for Making Life All It Can Be
(Harvard Health Publications/Random House, 2012)





In order to achieve Solutions for Autism

- We need to embed it more clearly in the larger set of challenges of which it is a part.
- We need to be able to ask the right and most productive scientific questions about **core issues** in autism such as **what changes in the brain to produce the behaviors we label as "autistic"**




What are those Core Issues?

1. The large number of children who are chronically or frequently sick.
2. The large number of people who have chronic illnesses.
3. The growing challenges to the health of people's **brains**.
4. 
5. The state of being challenging

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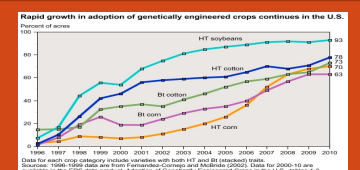
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What are those Core Issue?

1. The large number of children who are chronically or frequently sick.
2. The large number of people who have chronic illnesses.
3. The growing challenges to the health of people's brains.
4. The **global crisis** comprised of the myriad challenges to the health of people, including
 - serious compromises to our food supply including food that is nutrient-poor, chemical-laden, processed and manipulated;
 - Exposure
 - Electrom
 - Stressor ways to k best.
5. The state of being challenging



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<http://www.factcomany.com/>

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 - Exp...
 - Ele...
 - Str... way bes...
5. The st... being a challenge

BUT WHY

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Here is WHY

- As a society we have allowed our food supply to be manipulated resulting in many if not all the CORE ISSUES just discussed.
- In particular with the introduction of GM food e.g. Bt-potatoes, Bt-corn, Bt-sweet corn, Roundup Ready soybeans, Roundup Ready Corn..

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Bt-CORN: WHAT IT IS AND HOW IT WORKS

by Ric Bessin, Extension Entomologist
University of Kentucky College of Agriculture

Bt-corn is a type of genetically modified organism, termed **GMO**. A **GMO** is a plant or animal that has had genetic material from another organism inserted into its genome. Bt-corn is a genetically modified corn that has been engineered to produce a protein that is toxic to certain insects, such as the European corn borer. Bt-corn is marketed today as a pest-resistant corn, and is often used in conjunction with pesticides, or as a source of Bt-sweeteners in corn products.

Genetically modified corn is created through biotechnology. In addition to the Bt gene, a sweetener gene is also inserted into the corn genome. The Food and Drug Administration (FDA) has approved Bt-corn as nutritionally equivalent to non-GM corn.

To transform corn, a donor organism is identified and its DNA is inserted into the total genome of the corn. A donor organism is a bacterium that produces a protein that is toxic to certain insects. The gene for this protein is inserted into the corn genome. This is an alternative to spraying insecticides for control of European and southwestern corn borer.

Considered to be safe to humans (though currently, genetically modified foods in the United States do not require special labeling to notify consumers) -- here is what happens to the insect feasting on the crop:

- Within minutes, the protein binds to the gut wall and the insect stops feeding.
- Within hours, the gut wall breaks down and normal gut bacteria invade the body cavity.
- The insect dies of septicaemia as bacteria multiply in the blood.

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IF GMO can do this to rats
What do you think it does to
our patients?

http://research.lfb.org/research/html/nhs_gmo_0315/?code=LNH5R304&ver=1&n=NHS_gmo_0315

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Another reason
WHY

Glyphosate

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Glyphosate's Suppression of Cytochrome P450 Enzymes and Amino Acid Biosynthesis by the Gut Microbiome: Pathways to Modern Diseases†

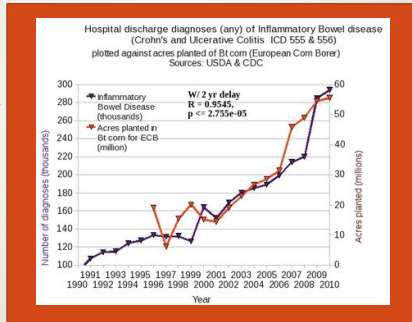
Entropy 2013, 15(4), 1416-1463; doi:10.3390/e15041416

Abstract: Glyp...
The industry as...
the main foods...
inhibition of cyto...
enzymes play a...
the damaging eff...
the body is insid...
the body. Here, ...
biosynthesis of...
Consequences of...
gastrointestinal...
Alzheimer's dise...
and we show the...
homeostasis by...
Keywords: glyp...
pathways, gut mi...
Parkinson's dise...
This is an open...
unrestricted us...

- Glyphosate causes extreme disruption of the microbe's function and lifecycle.
- What's worse, glyphosate preferentially affects beneficial bacteria, allowing pathogens to overgrow and take over.
- Glyphosate inhibits cytochrome P450 (CYP450) enzymes, a large and diverse group of enzymes that catalyze the oxidation of organic substances.

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Hospital Discharges with ISB diagnosis



Another reason WHY

MSG
(Mono Sodium Glutamate)

<https://www.youtube.com/watch?v=iL4SD5f2toQ>

Ingredients To Avoid

ALWAYS Contain MSG	OFTEN Contain MSG
<ul style="list-style-type: none"> • Monosodium Glutamate (MSG) • Glutamate <i>anything</i> • Glutamic Acid • Hydrolyzed <i>anything</i> <ul style="list-style-type: none"> • Hydrolyzed Corn Gluten • Hydrolyzed Pea Protein • Plant Protein • Textured Protein • Autolyzed <i>anything</i> <ul style="list-style-type: none"> • Autolyzed Yeast Extract • Autolyzed Plant Protein • Yeast Extract • Yeast Nutrient • Caseinate <i>anything</i> <ul style="list-style-type: none"> • Calcium Caseinate • Sodium Caseinate • Gelatin • Aspartame (any artificial sugar) <p>The next ingredients listed do not contain MSG, but are added to activate MSG already contained in the food product. These two chemicals are very expensive and have no other function. If you find them on the label you can be assured that MSG is present.</p> <ul style="list-style-type: none"> • Disodium Guanylate • Disodium Inosinate 	<ul style="list-style-type: none"> • Carrageenan (ingredient in Chocolate Milk) • Xanthum Gum (ingredient in Salad Dressings) • Maltodextrin (ingredient in Splenda) • Flavor(s) and Flavoring(s) <i>anything</i> <ul style="list-style-type: none"> • Malt Flavoring • Natural Flavor(s) & Flavoring(s) <i>anything</i> <ul style="list-style-type: none"> • beef, pork, chicken, etc • Boullion and Broth <i>anything</i> • Barley Malt • Malt Extract • Soy Sauce Extract • Soy Protein Isolate • Ultra-pasteurized Soy Sauce • Whey Protein Concentrate • Soy Protein Concentrate • Pectin Soy Protein • Whey Protein Isolate • Whey Protein Protease • Protease Enzymes • Protein Fortified <i>anything</i> • Enzyme Modified <i>anything</i> • Enzymes <i>anything</i> • Fermented <i>anything</i> • Citric Acid • Seasoning(s) (the actual word) • Spice(s) (the actual word)

[HTTP://PREVENTDISEASE.COM/HOME/TIPS100.SHTML](http://preventdisease.com/home/tips100.shtml)

How Free Glutamate affects AUTISM

HOW FREE GLUTAMATE AFFECTS AUTISM SPECTRUM DISORDER

DIETARY INTAKE

- MSG
- Hydrolyzed proteins
- Plant proteins
- Textured vegetable protein
- Yeast extract
- Yeast nutrient
- Caseinate
- Gelatin
- Aspartame

WITH HYPERSENSITIVITY AND/OR ALLERGY

- MSG
- Hydrolyzed proteins
- Plant proteins
- Textured vegetable protein
- Yeast extract
- Yeast nutrient
- Caseinate
- Gelatin
- Aspartame

PROCESSED FOODS CONTAINING EXCESSIVE GLUTAMATE

- MSG
- Hydrolyzed proteins
- Plant proteins
- Textured vegetable protein
- Yeast extract
- Yeast nutrient
- Caseinate
- Gelatin
- Aspartame

Legend

- MSG
- Hydrolyzed proteins
- Plant proteins
- Textured vegetable protein
- Yeast extract
- Yeast nutrient
- Caseinate
- Gelatin
- Aspartame

References

- ...

Tips for providers from Martha Herbert, MD, PHD

- Meet,..... listen to,..... and learn
- Think about the whole person
- Be open
- Look beyond blanket diagnosis of autism
- Take problems seriously
- Think physiologically
- Become fascinated with the environment
- Learn about systems biology
- Explore practical approaches
- Take time to remember

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Meet.... children with Autism

The Every Day of Some Autisms



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.... Listen to Parents and learn



This little girl has SEVERE inflammatory bowel disease but her self abusive behavior was attributed to her autistic behavior rather than her severe pain.

(Presented at Carnegie Mellon University, 11-17-05)
The Seat of the Soul; The Origins of the Autism Epidemic
Andrew Wakefield

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.... Listen to Parents and learn

From this to




PS: It was not anything the mother was feeding the child because his sister is absolutely normal Same household

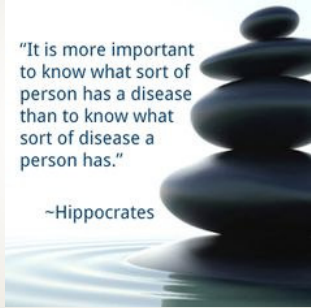
But he has inflammatory bowel disease and Autism

(Presented at Carnegie Mellon University, 11-17-05)
The Seat of the Soul; The Origins of the Autism Epidemic
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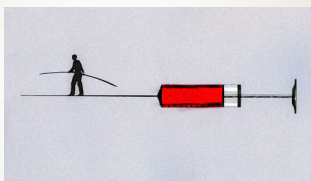
Think about the whole Person

"It is more important to know what sort of person has a disease than to know what sort of disease a person has."
~Hippocrates



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Be Open



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Be Open



To Get Parents To Vaccinate Their Kids,
Don't Ask. Just Tell

DR. BELL
[HTTP://WWW.NPR.ORG/BLOGS/HEALTH/2015](http://www.npr.org/blogs/health/2015)

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Be Open




To Get Permission To Vaccinate Your Child, You Must

X

The Moral Right to
Conscientious,
Philosophical and
Personal Belief
Exemption to Vaccination
Informed Consent

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Be Open



Workshop report: Fever and autism

David Mooreman
1 April 2018

Fevered kids: The alleviation of autism symptoms could be a result of fever's effect on noradrenergic neurons in the locus caeruleus. On 5 February 2010, the Simons Foundation gathered a panel of experts to discuss what initially appears to be a surprising and unrelated pair of subjects: autism and fever. But as SFARI director Gerard Fischbach discussed in his column last month, anecdotal reports have found that [some autistic symptoms](#) improve and abate, in individuals with autism.

Dominick Purdy, vice president for medical affairs at the Albert Einstein College of Medicine, described some of this evidence, detailed in the numerous letters he has received from parents of children with autism. These parents consistently reported that during episodes of fever in their children, "the veil was lifted," or less often disabled enough to produce some of parents, approximately 30 to 40 percent of collected clinical samples will strengthen families in the collection report improve.

What could be the neural link underlying symptoms could be a result of fever's projections from many regions in the brain. What's more, the LC itself seems to be most intriguingly, activation of the LC's ability to form and change interactions. Despite these observations, however, what could be the mechanism? Is the mechanism? Perhaps most importantly, with **Clinical studies: a role for** letters from parents are enabled in the his colleagues at the Kennedy Krieger Aberrant Behavior Checklist — include [Linda Mills](#) at the University of Misso, with autism spectrum disorders improve hyperactivity and hypotonia, and autistic symptoms such as pain tolerance and auditory hypersensitivity, improve with fever. Among these results, an effect on pupillary reflex was prompted further study. In a population of 29 children with autism, Mills and her collaborators found that pupil constriction in response to flashes of light is *decreased* and *stable*, then in controls.

If a child does better with fever or
Loses their diagnosis, may be it's
telling you something new about
autism, not proving they didn't have
autism in the first place

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**Look Beyond the blanket
Diagnosis of Autism**

- Remember the "web" with many threads.
- Look for ways to help or take account of any accessible parts o the web

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Think Physiologically

"The music of Life" by Denis Nobel. Learn how physiology rather than genes is where the action is in living systems.'

- Gut brain connection
- Autism is a brain disorder

Or

- A disorder that affects the brain



Become fascinated with the Environment

EPIGENETICS


Learn about environmentally vulnerable physiology and how to support and protect it

- Biological
- Physiological
- Emotional
- Spiritual




Learn about Systems Biology

- Studying things as they interact, rather than looking at them separately.
- System's biology is not entrenched in reductionistic thinking
- This way of thinking will make you more humble but also help you tune in better to many more ways you can be of service



Explore practical approaches

- P4 medicine: Predictive, Personalized, Preventive and Participatory (Ohio State University)
- Therapies
 - OT - Apraxia, Sensory Overload
 - Speech
 - Behavioral
 - ABA , Constructive Play
 - Music
 - Vision
 - Food
 - Hippo
 - Art



Take Time to remember


- Keep logs of what interventions are done
- What are the observed changes
- Introduce only ONE intervention at a time
 - Diet
 - Supplement
 - Therapies



Explore practical approaches


- <http://jenisonjrhighlinks.weebly.com/blog>
- https://www.autismspeaks.org/news/news-item/author-talks-raising-two-non-verbal-boys-who-became-marathon-runners?utm_medium=text-link&utm_content=Author%2520Talks%2520Raising%2520Two%2520Non-Verbal%2520Boys%2520Who%2520Became%2520Marathon%2520Runners%2520&utm_campaign=mostpopular
-





The One Pager - Take Home Message

- 1st visit → Hx, C.A.R.S., ATEC, Lab (Food Ig6, Vitamin D3, B12)
 - Start CF/GF diet **Clonidine**
 - Read and learn
- 2nd visit → Discuss Lab, repeat CGI, ATEC
 - Antifungals, chlorella, **Melatonin**
 - Start probiotics, digestive enzymes
 - Detoxamin Suppository
- 3rd visit → CGI, ATEC
 - Methyl B12, DMG,
 - TMG, GSH **Risperdal**
- 4th visit → C.A.R.S., ATEC
 - LDN, Nicotine patch
- 5th visit → **Always review the basics**
 - and fine tune your approach**





THANK YOU