

Wisconsin Public Psychiatry Network Teleconference (WPPNT)

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WPPNT Reminders

How to join the Zoom webinar

- **Online:** <https://dhs.wi.zoom.us/j/82980742956>(link is external)
- **Phone:** 301-715-8592
 - Enter the Webinar ID: 829 8074 2956#.
 - Press # again to join. (There is no participant ID)

Reminders for participants

- Join online or by phone by 11 a.m. Central and wait for the host to start the webinar. Your camera and audio/microphone are disabled.
- [Download or view the presentation materials](#). The evaluation survey opens at 11:59 a.m. the day of the presentation.
- Ask questions to the presenter(s) in the Zoom Q&A window. Each presenter will decide when to address questions. People who join by phone cannot ask questions.
- Use Zoom chat to communicate with the WPPNT coordinator or to share information related to the presentation.
- Participate live or view the recording to earn continuing education hours (CEHs). Complete the evaluation survey within two weeks of the live presentation and confirmation of your CEH will be returned by email.
- A link to the video recording of the presentation is posted within four business days of the presentation.
- Presentation materials, evaluations, and video recordings are on the WPPNT webpage: <https://www.dhs.wisconsin.gov/wppnt/2021.htm>.



Center for Integrative Psychiatry
Ayurveda Wellness and Spr

Integrative and holistic approach to Mental Wellness

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Center for Integrative Psychiatry
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Disclosure

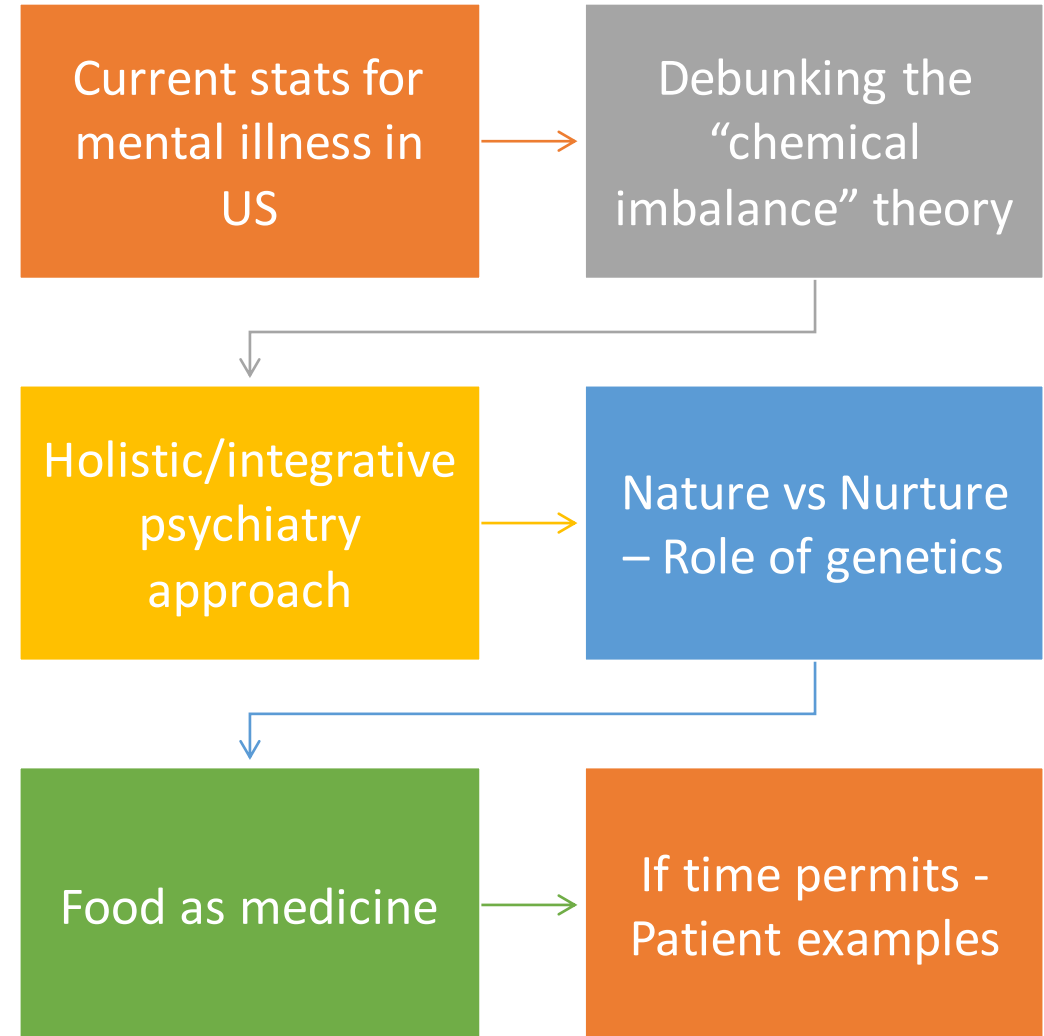
Owner of Trinergy Center for
Integrative Psychiatry

and

Trinergy Ayurveda Wellness and Spa
in New Berlin.

Thanks to IFM for use of their
slides.

Overview



Mental Health in the US – CDC/WHO Stats



The country with the highest prevalence of mental illness - US

Over a 12-month period, 27% of adults in the U.S. will experience some sort of mental health disorder.

Depression – Most common type of MI & THE leading cause of disability by 2020. Also the costliest disease in terms of lost productivity and wages

nearly 50% of U.S. adults will develop at least one mental illness during their lifetime.

Mental Health in the US – CDC/WHO Stats



About 1 in 54 children has autism spectrum disorder (ASD) – 2016 (while in 1975, it was 1 in 5000).



nearly 50% of U.S. adults will develop at least one mental illness during their lifetime.



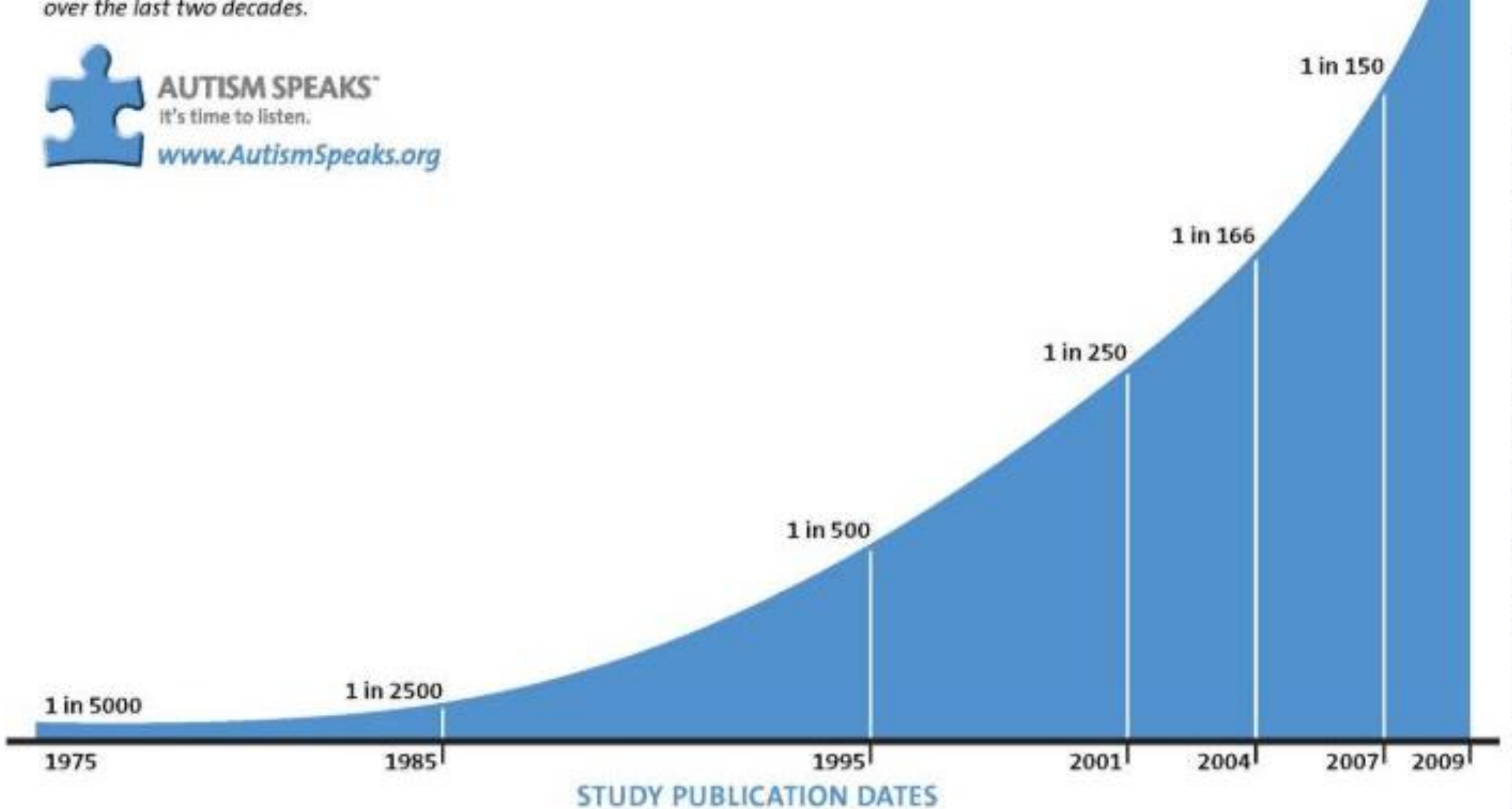
Economic burden of mental illness in the US— \$300 billion in 2002.

over the last two decades.



AUTISM SPEAKS™
It's time to listen.

www.AutismSpeaks.org

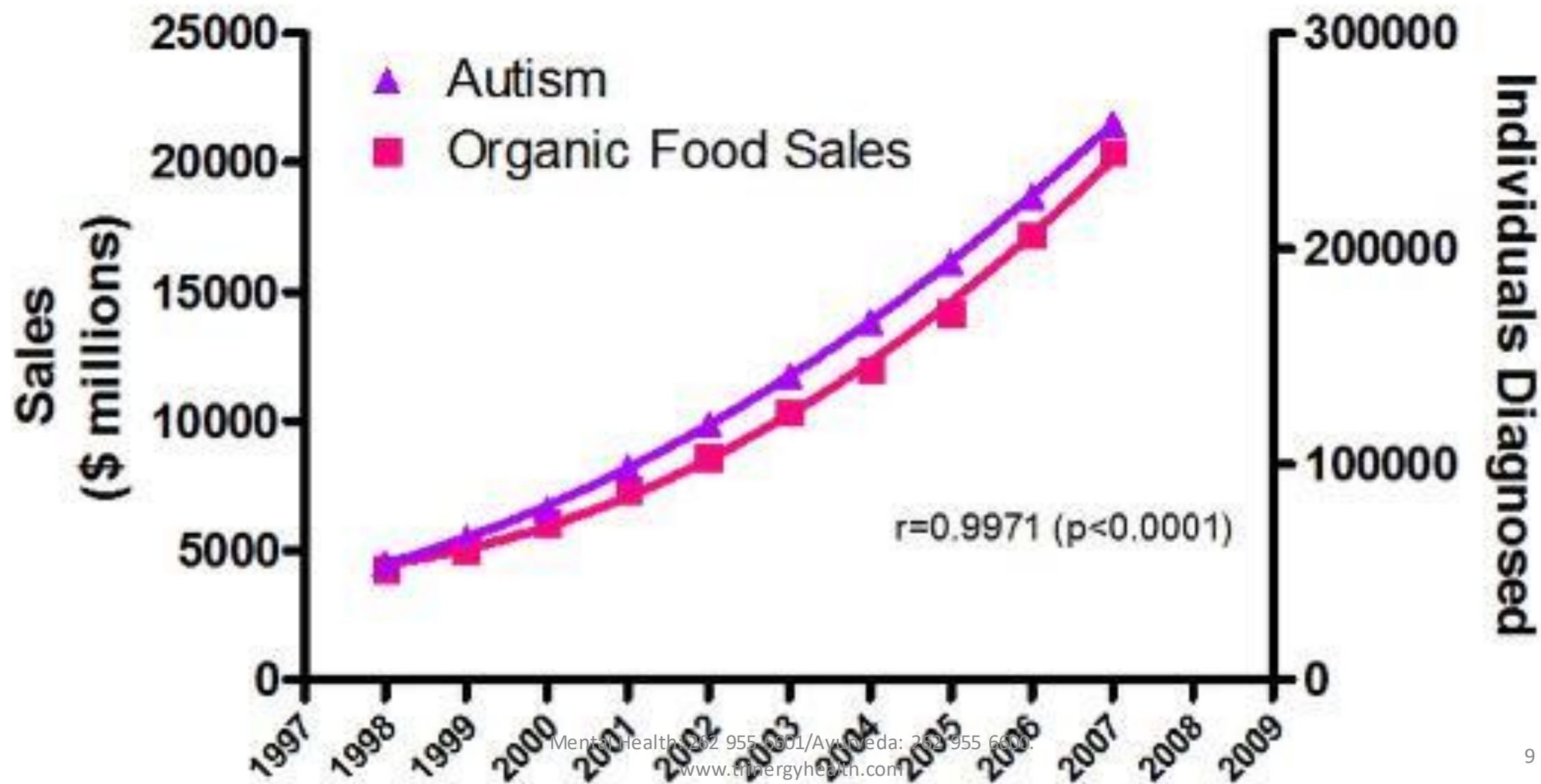


*Recent research has indicated that changes in diagnostic practices may account for at least 20% of the increase in prevalence over time, however much of the increase is still unaccounted for and may be influenced by environmental factors.

Mental Health: 262 955 6601/Ayurveda: 262 955 6600.

www.trinergyhealth.com

The real cause of increasing autism prevalence?

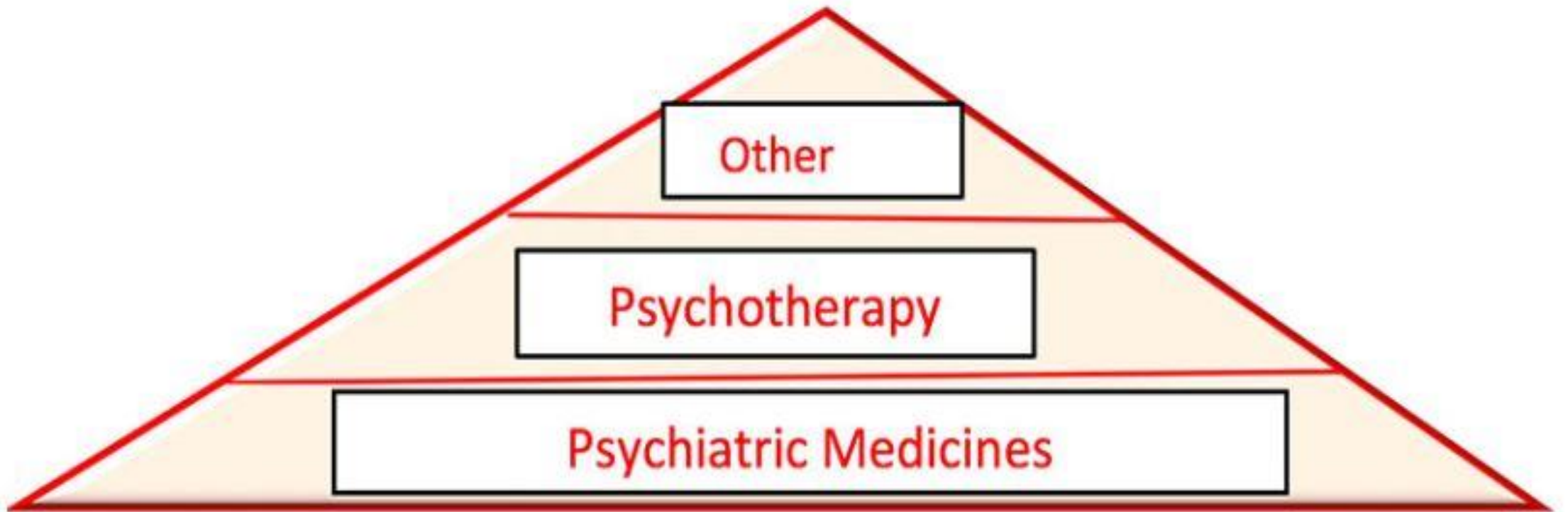




How are we
responding to
this crisis?

The Standard Psychiatric practice – Dr Julia Rucklidge's Ted talk

Current Psychiatric Approach





So, what's our response?

- Pill for every ill
- Symptomatic treatment
- Quick fix approach
- Acute care approach for chronic illness
- And, where are we heading with this approach?

MH Med use in US – CDC/WHO Stats



From 1988–1994 through 2005–2008,
antidepressant use in US increased nearly 400%



13% of Americans over the age of 12 take an
antidepressant



JAMA Update Dec 12,
2016:

1 in 6 US adults takes at
least 1 psychotropic, 80%
chronically.



2nd most common prescription is an Antidepressant



1 in 4 women ages 50 to 64 take an AD

Is this
approach
working?

*Let's take the
example of
Depression:
STAR*D*

Step 1+2:
Recovery (6
months without
relapse) Rate:

• AD vs Placebo =
29% vs 36%

Long term
outcomes seem
to be poor.

Recovery in Remitted First-Episode Psychosis at 7 Years of Follow-up of an Early Dose Reduction/Discontinuation or Maintenance Treatment Strategy

Long-term Follow-up of a 2-Year Randomized Clinical Trial

Lex Wunderink, MD, PhD; Roeline M. Nieboer, MA; Durk Wiersma, PhD; Sjoerd Sytema, PhD;
Fokko J. Nienhuis, MA

CONCLUSIONS AND RELEVANCE Dose reduction/discontinuation of antipsychotics during the early stages of remitted FEP shows superior long-term recovery rates compared with the rates achieved with MT. To our knowledge, this is the first study showing long-term gains of an early-course DR strategy in patients with remitted FEP. Additional studies are necessary before these results are incorporated into general practice.

Is this approach
working?

According to the World Health Organization,

***mental illness** results in more disability in*

***developed countries** than any other group*

of illnesses, including CANCER & HEART
DISEASE.

How are we doing so far?

Why? Because we do not have a framework to understand mental illness



Where are we going wrong?

Let's examine our current psychiatric practice

Patients are diagnosed based on an **atheoretical** system of symptoms & signs. (Did you hear of Election Addiction Disorder?)

Match “pills to the ills” aka symptomatic treatment

Main theory of psychopathology: “neurochemical imbalance”

Where are we going wrong?

- 60 -70 years of research but no “silver bullet”
- “symptom relief” Vs “illness remission”
- Well, when there is no “theory of disease causation” how can there be proper treatment.

Physicist Fritjof Capra

“The great shock of the 20th century science is that systems can’t be understood by analysis. The properties of the parts can only be understood by the whole.”

Current Psychiatric Practice

***“It ain’t what you don’t know that gets
you into trouble. It’s what you know for
sure that just ain’t so.”***

Mark Twain
(Is it time to put to rest Cartesian Mind-
body dualism?)

So, what can help?

Article | [Open Access](#) | Published: 11 August 2015

Longer-term outcome in the prevention of psychotic disorders by the Vienna omega-3 study

G. Paul Amminger , Miriam R. Schäfer, Monika Schlögelhofer, Claudia M. Klier & Patrick D. McGorry

Nature Communications **6**, Article number: 7934 (2015) | [Cite this article](#)

Vienna Omega 3 study



40 Omega 3 Vs 40 Placebo. All high risk for psychosis patients



12 weeks of 1.2 gm of Omega 3 fish oil



At end of 12 months – 4 of Omega 3 vs 16 of placebo group had psychosis



At end of 5 years – these improvements still seen



Functionally better – Omega 3 group.



All indices - Omega 3 group was better



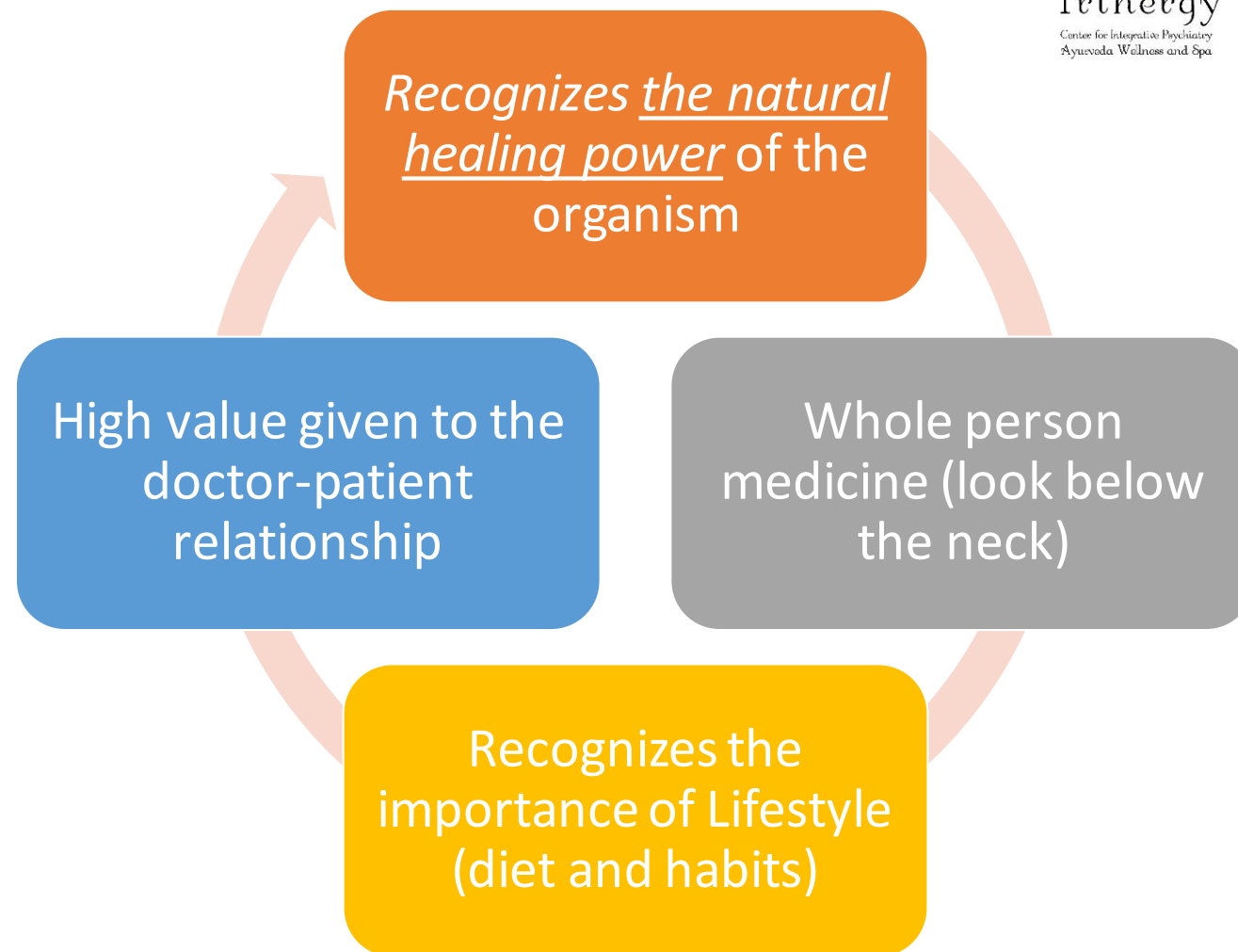
Holistic/ Integrative Mental Health

A healing approach that uses both conventional and complimentary / alternative medicine to understand and treat psychiatric conditions.

Attempts to find the root cause of a person's psychological problems and work towards achieving overall mental health and balance.

Diet, nutrition, lifestyle; are cornerstone of evaluation and therapy.

Holistic/ Integrative Mental Health

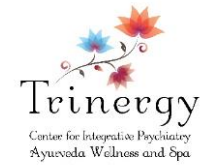




IF YOU WANT
TO TRANSFORM
THE WAY YOU
PRACTICE, YOU
NEED A PLAN



CHANGING
THE WAY WE
DO MEDICINE,
AND THE
MEDICINE
WE DO





IF YOU WANT
TO TRANSFORM
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FUNCTIONAL MEDICINE

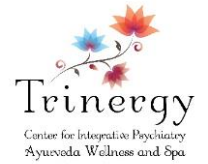


is a

- personalized, patient-focused (not disease-centered)
- systems-oriented model
- that addresses the underlying causes of disease
- engaging both patient and practitioner in a therapeutic partnership.
- empowers patients and practitioners to achieve the highest expression of health

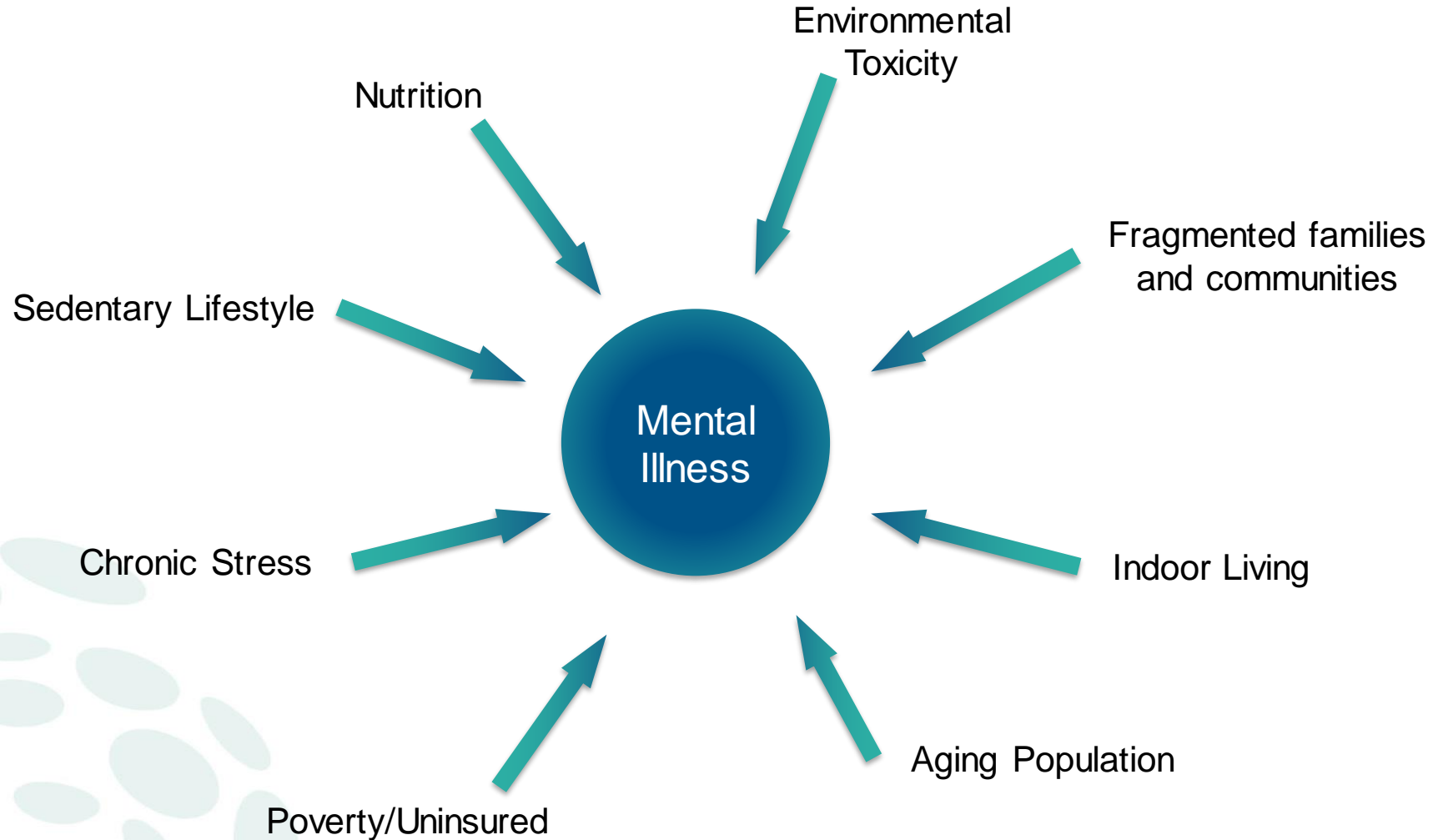
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FM Paradigm: Overview

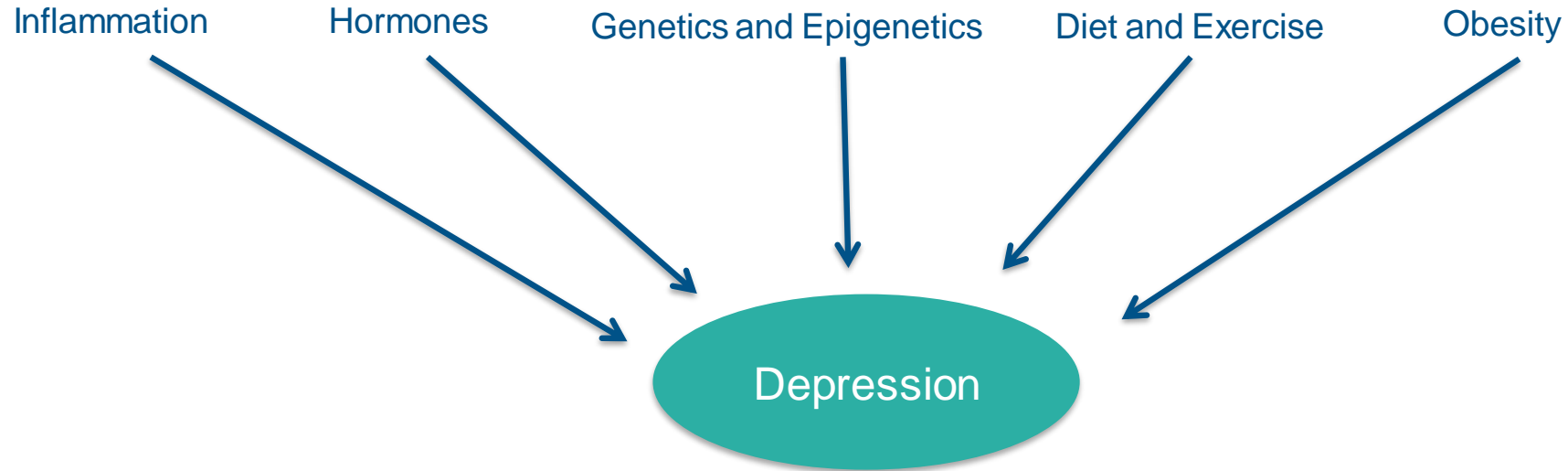


- Tools – The Difference
- New Framework for Interpretation of Clinical Information
- Physiological Systems vs. Diseases
- Continuum of Optimal Function to Disease – innate healing abilities of an organism
- Concept of comorbidity becomes obsolete

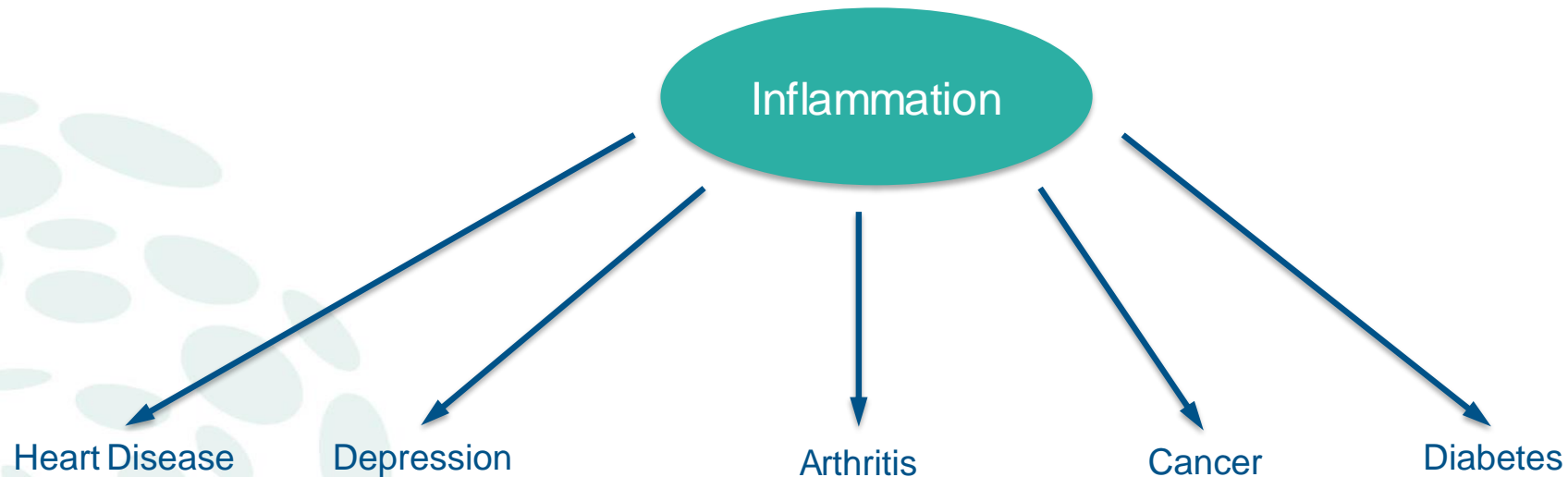
Antecedents, Triggers, and Mediators (Engel's Bio-psycho-social formulation?)



One Condition: Many Imbalances



One Imbalance: Many Conditions

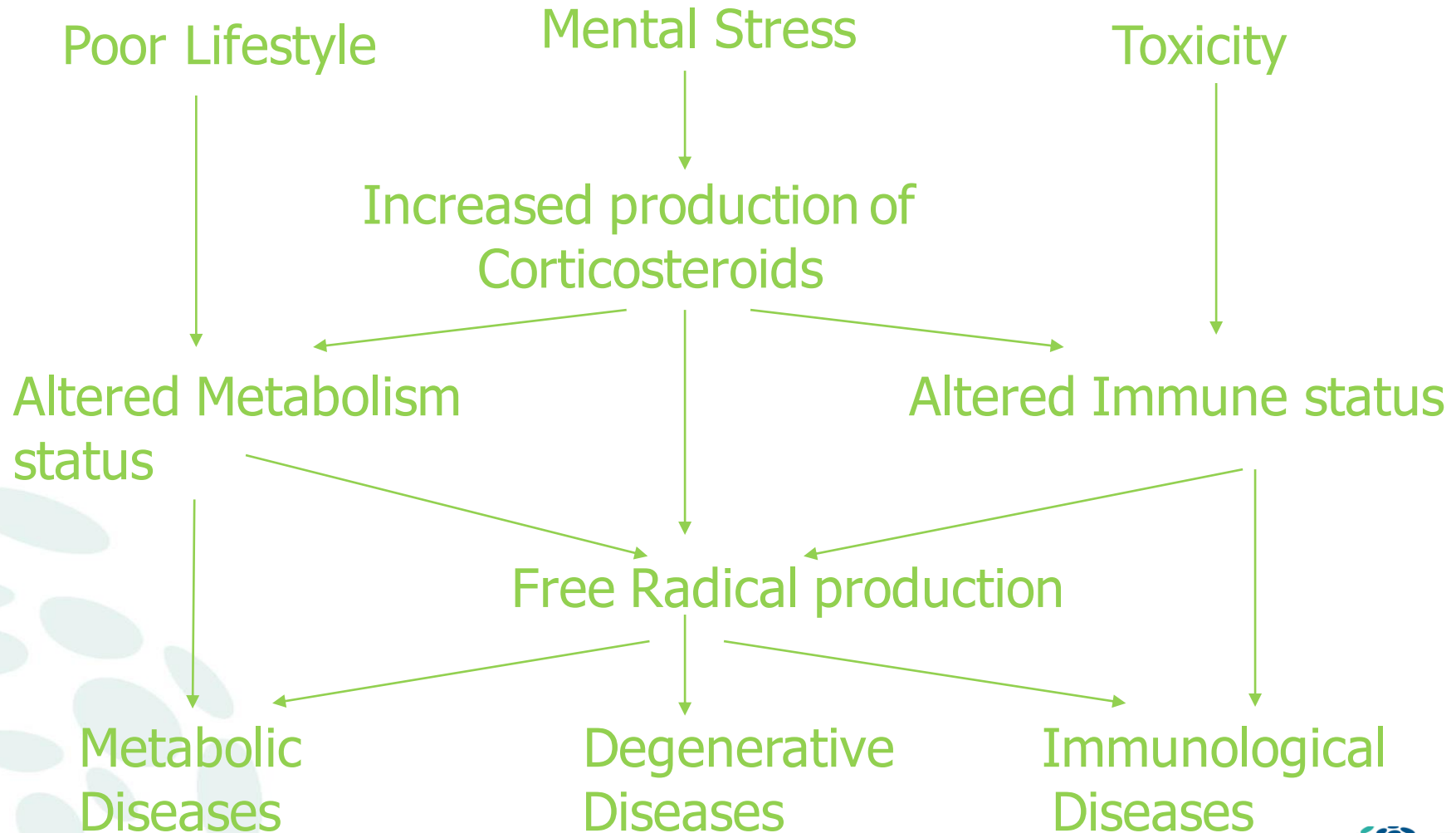


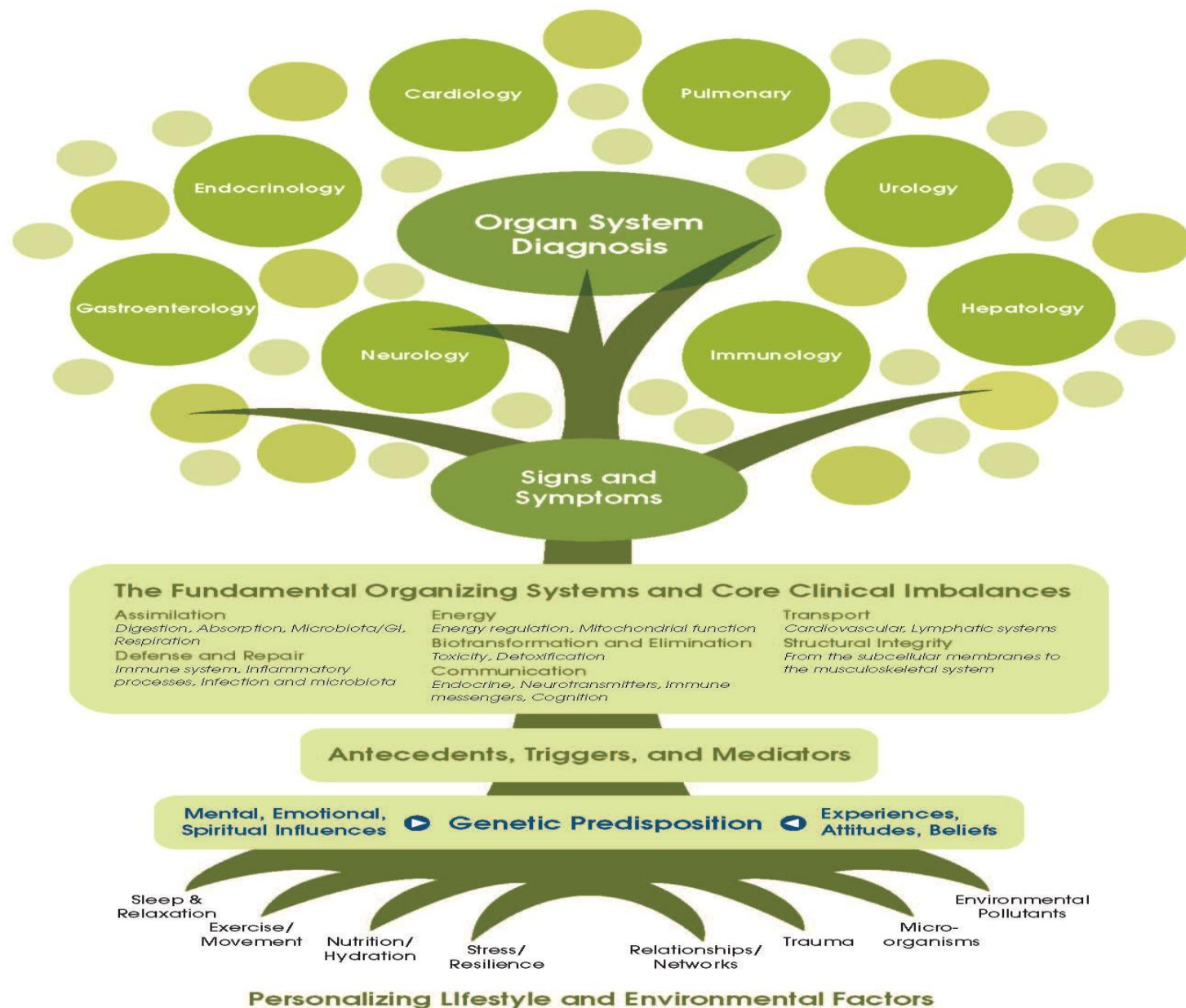
2 Basic tenets

Chronic disease results from the emergence of a disturbed metabolism

Lifestyle and environment are the major factors altering gene expression that results in disturbed metabolism.

Chronic Diseases – How do they develop?





FUNCTIONAL MEDICINE TIMELINE

Mediators/Perpetuators

Antecedents

Triggers or Triggering Events

Preconception

Prenatal

Birth

Current Concerns

Signs, Symptoms or Diseases Reported

Name: _____

Date: _____

CC: _____

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Version 3



New Paradigm

- A team of Functional medicine trained professionals
 - A Super-generalist MD/DO, Functional nutritionist, Lifestyle coach, movement/exercise coach, Stress reduction therapist, “relationship therapist” (all these roles can be offered by one person too!), massage therapist, etc.
- We (patient & physician) figure out how everything is connected...Educating patient is of paramount importance.
- GPS system: Retrace steps towards health & vitality (continuum concept)
- Emphasize self care and resilience

New Paradigm

- Root Cause medicine
- Personalized and individualized approach
- Address the 5 causes of any illness:
 - Toxins, allergens, infections, diet and stress – start with the gut anyway!
- Ingredients for optimal function
 - Food, nutrients, hormones, environment (air, light, water), movement, rhythm, love, meaning/purpose of life



human mind-body system = complex web of interconnections

Brain chemical imbalance – is it cause or effect?

Diseases are downstream effects of upstream mechanisms

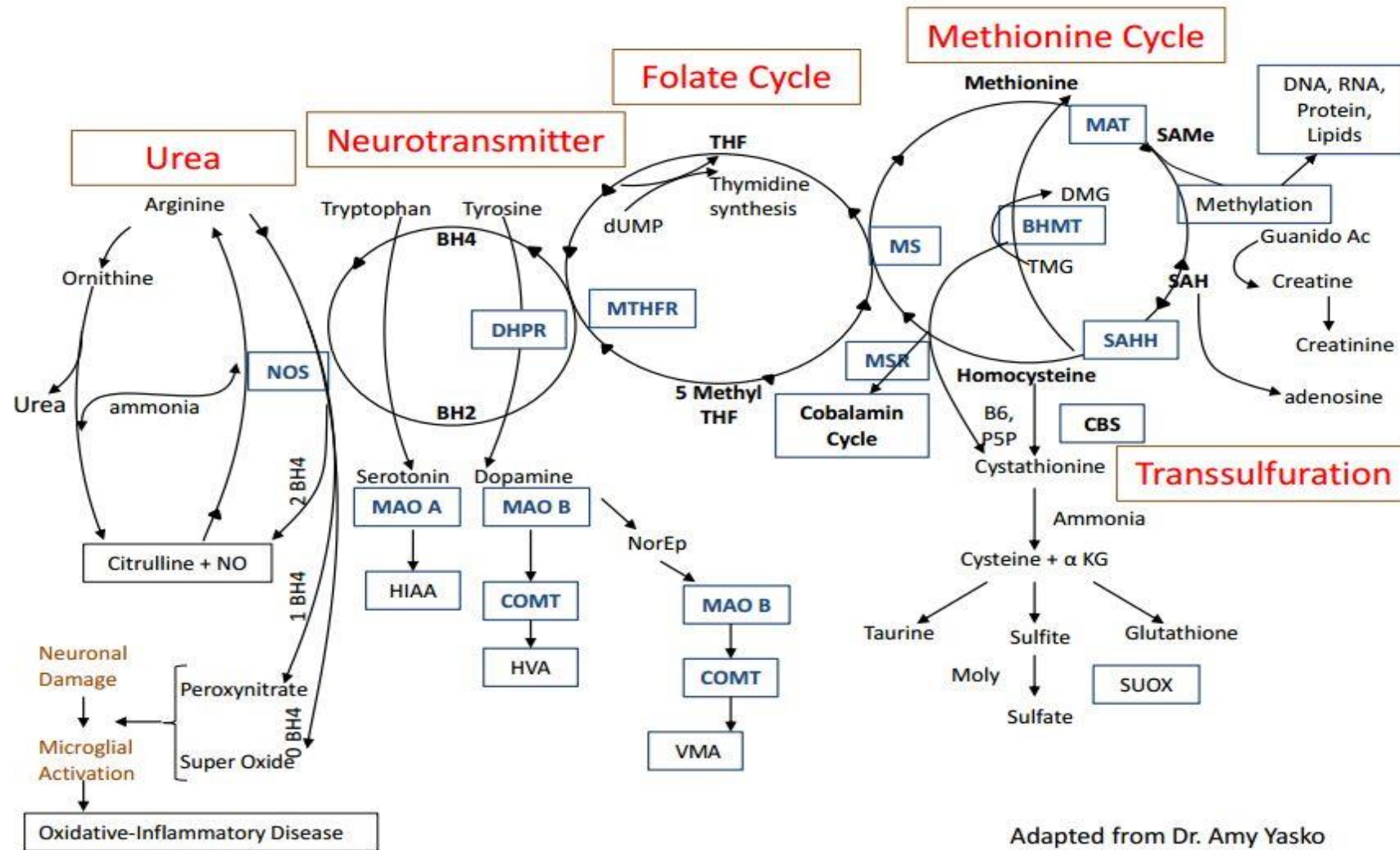
Gut, immune system, hormonal system, genetics, microbiome, nutrition, etc. are all involved in mental health

What we
know now....

Recent advances in psychopathology

- Methylation genes/Homocysteine metabolism: MTHFR & other SNP's
- Inflammation
- Genetic vs Epigenetics
- Gut & Microbiome

Methylation cycle



Inflammation

Unexpected role of interferon- γ in regulating neuronal connectivity and social behaviour

Anthony J. Filiano^{1,2}, Yang Xu³, Nicholas J. Tustison⁴, Rachel L. Marsh^{1,2}, Wendy Baker^{1,2}, Igor Smirnov^{1,2}, Christopher C. Overall^{1,2}, Sachin P. Gadani^{1,2,5,6}, Stephen D. Turner⁷, Zhiping Weng⁸, Sayeda Najamussahar Peerzade³, Hao Chen⁸, Kevin S. Lee^{1,2,5,9}, Michael M. Scott^{5,10}, Mark P. Beenhakker^{5,10}, Vladimir Litvak^{3*} & Jonathan Kipnis^{1,2,5,6*}

21 JULY 2016 | VOL 535 | NATURE | 425

OPEN

Molecular Psychiatry (2016) 00, 1–9

www.nature.com/mp

ORIGINAL ARTICLE

Antidepressant activity of anti-cytokine treatment: a systematic review and meta-analysis of clinical trials of chronic inflammatory conditions



Nature vs Nurture

Lifestyle and environment are the major factors altering gene expression that results in disturbed metabolism.

Genes are the 'blue print' for building the human organism.

Environment provides the 'building blocks' (and this is a repetitive, continuous process)

Genetic code vs Zip code (Case in point – Covid19)

Genetic Vs Epigenetics



One gene – one protein-one disease: this has been disproven. Human genome has only 26K genes; yet complex phenotype. Rest of gene material – what is it?



Epigenetics: Factors that influence the expression of genes – food, internal/external, immediate/distant environment



Exposome: exposure to environmental toxins



Nutrigenome: Effect of nutrients or lack thereof on the genome

THE HUMAN MICROBIOME PROJECT SAYS THE HUMAN BODY HAS 100 TRILLION MICROSCOPIC LIFE FORMS LIVING IN IT.

YOU CALL THIS LIVING?

Gut Microbiome – Current research

- human genome – only 26,600 protein encoders – yet complex phenotype
- Rice genome – has 46,000 protein encoders – yet simple phenotype
- Complexity due to the genome of 1000s of species of gut microbiome
- 1 :10 human to bacterial cells/genome
- 3 kgs of bacteria in the gut

Gut Microbiome – Current research

Functions of the microbiome:

- Synthesis of GABA
- Synthesis of BDNF
- Certain bacterial toxins produced due to gut dysbiosis implicated in various disorders – PANDAS, schizophrenia, autism, dementia etc.
- Beneficial role of certain probiotics in treatment of various illnesses.

FUNCTIONAL MEDICINE TIMELINE

Mediators/Perpetuators

Antecedents

Preconception

* GENES

* MOM'S HEALTH

* C-SECTION
DYSBIOSIS

Prenatal

Triggers or Triggering Events

Birth

* COLICKY - GI
* FORMULA FED
* SLEEP PROBLEMS

* EAR & OTHER
UR INFECTIONS
* ABx EXPOSURE
* GI ISSUES
* NAIL BITING

* ANXIETY BEHAVIORS
* ONGOING GI ISSUES
* ACNE
* STRESSFUL LIFE EVENTS

* FRANK PSYCHIATRIC
DIAGNOSIS

INFANCY

AGE 2-3
TILL
SCHOOL
STARTS

AGE 6-7
TILL
TEENS

TEEN TO
ADULT

Current Concerns

Signs, Symptoms or Diseases Reported

Name: _____

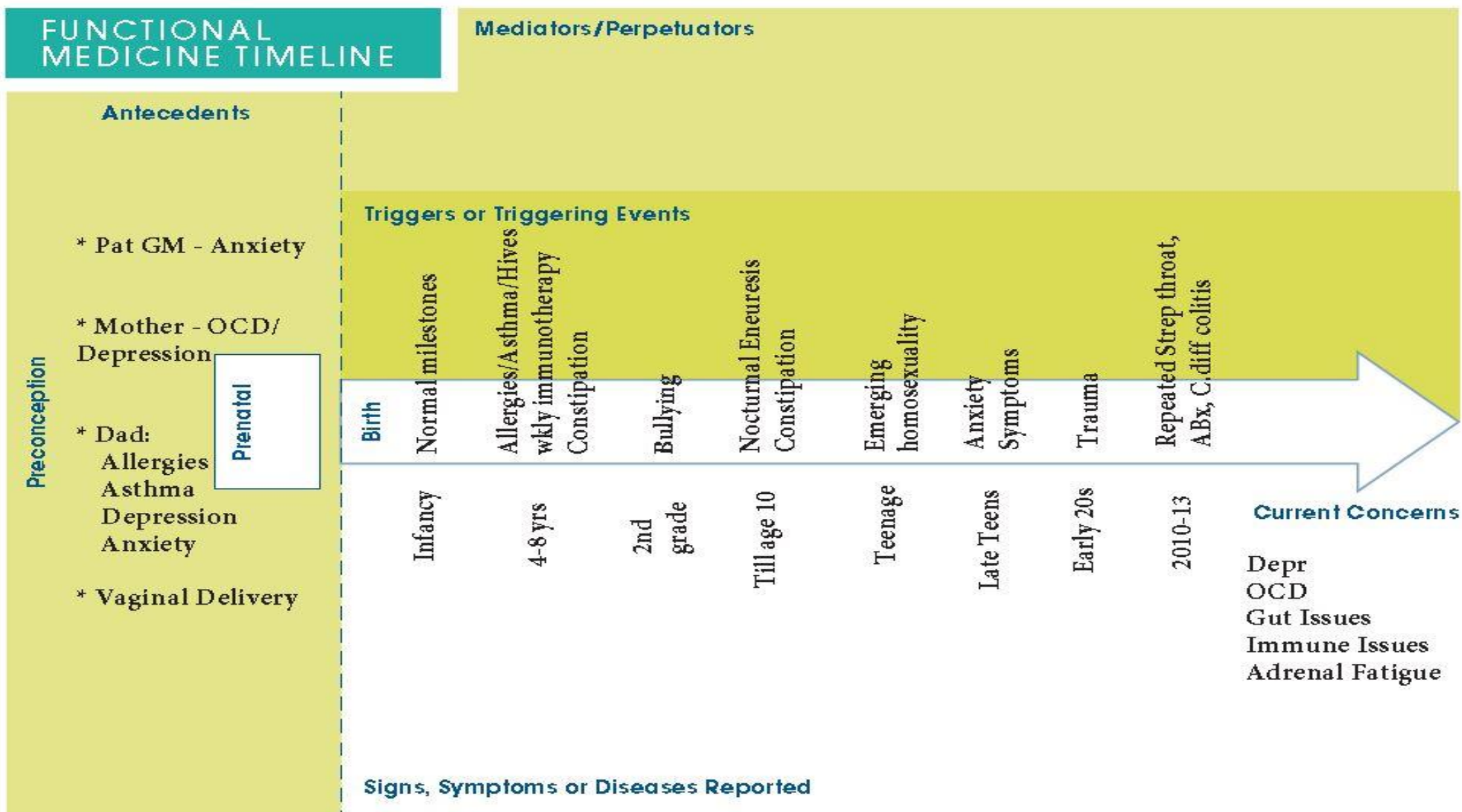
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Case Example

- 34 yr old SWM seeking treatment for depression, anxiety & ADD
- Trigger: inability to progress in academics.
- Antecedents: genetic loading of anxiety, depression, Allergies/asthma/hives/gut issues/food sensitivities since childhood – Recent hx of rptd strep throat– ch and rptd abx exposure leading to c-diff colitis,
- Mediators: poor self care/diet, poor coping skills, ongoing gut/adrenal-stress issues, stressful life events including trauma growing up.

Case Example



Name: _____

Date: _____

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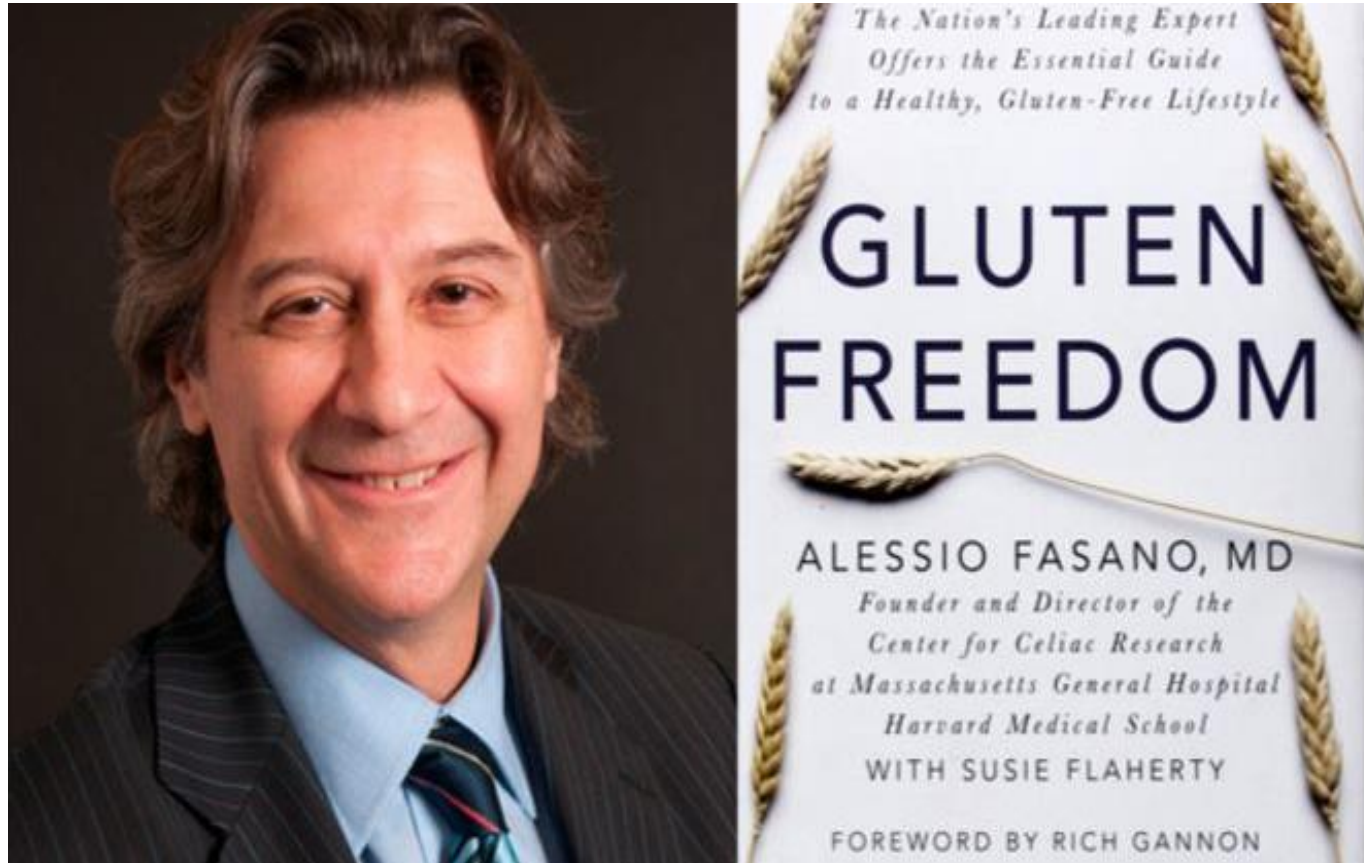
Case Example

- Functional Evaluation:
 - Leaky gut w food sensitivities, SIBO, Ch adrenal fatigue, early metabolic syndrome, OCD
- Treatment:
 - Heal the gut first!
 - 4R protocol – remove, repair, replace, re-inoculate
 - Treat adrenal fatigue: adaptogens, Vit D, rest, relaxation techniques, love & connections, meditation.
 - Evaluate MTHFR gene assay and supplement as needed (Betaine, 5mthf, methylb12, NAC, SAME etc).
 - Intensive CBT/ERP outpt therapy for OCD.

But why focus on the gut???

IFM mantra

“When in doubt, heal the gut first!.”



“Gut is not like Vegas. What happens in the gut does not stay there.”

ORIGINAL ARTICLE

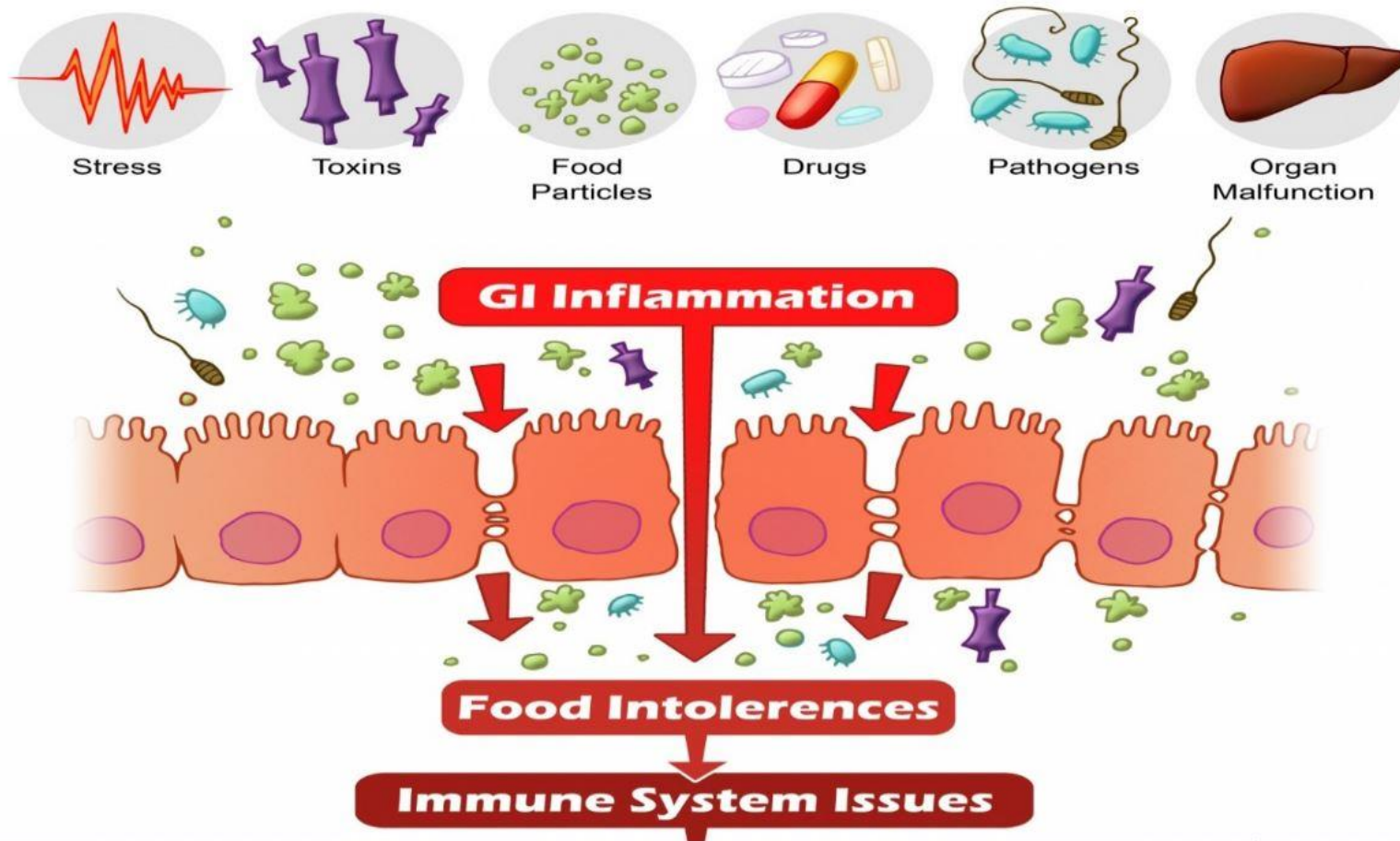
Intestinal cell damage and systemic immune activation in individuals reporting sensitivity to wheat in the absence of coeliac disease

Melanie Uhde,¹ Mary Ajamian,¹ Giacomo Caio,² Roberto De Giorgio,² Alyssa Indart,¹ Peter H Green,^{1,3} Elizabeth C Verna,¹ Umberto Volta,² Armin Alaedini^{1,3,4}

Conclusions These findings reveal a state of systemic immune activation in conjunction with a compromised intestinal epithelium affecting a subset of individuals who experience sensitivity to wheat in the absence of coeliac disease.

What is Leaky Gut?

Leaky Gut Progression





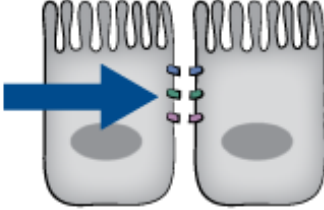
Leaky gut, leaky brain: the role of zonulin

Medicine

The discovery of ZONULIN

began with a failed attempt to develop a cholera vaccine¹

ZONULIN
is a protein that can
OPEN
TIGHT
JUNCTION
PROTEINS²



GLIADIN & INTESTINAL BACTERIA
are the main triggers for
ZONULIN
RELEASE²

ZONULIN has been identified as a biomarker for many conditions including:

COELIAC DISEASE, INFLAMMATORY BOWEL DISEASE, TYPE 1 DIABETES, ASTHMA, MULTIPLE SCLEROSIS, SCHIZOPHRENIA AND CANCER^{2,3}

ZONULIN AND THE LEAKY BRAIN HYPOTHESIS²⁻¹⁴

1 ZONULIN RELEASE

- Release of zonulin triggered by endothelial cells exposure to gliadin and pathogenic bacteria.
- Zonulin stimulates opening of TJs.
- Increase in intestinal permeability.
- Increased passage of stressors into lamina propria.

L. RHAMNOSUS (LGG) increases TJ protein gene expression, inhibits zonulin release and restores intestinal permeability.⁴

L. PLANTARUM, *L. ACIDOPHILUS* and *B. LONGUM* increase TJ protein gene expression, inhibits zonulin release and restores intestinal permeability.⁹

ZINC enhances TJ barrier function.¹⁰

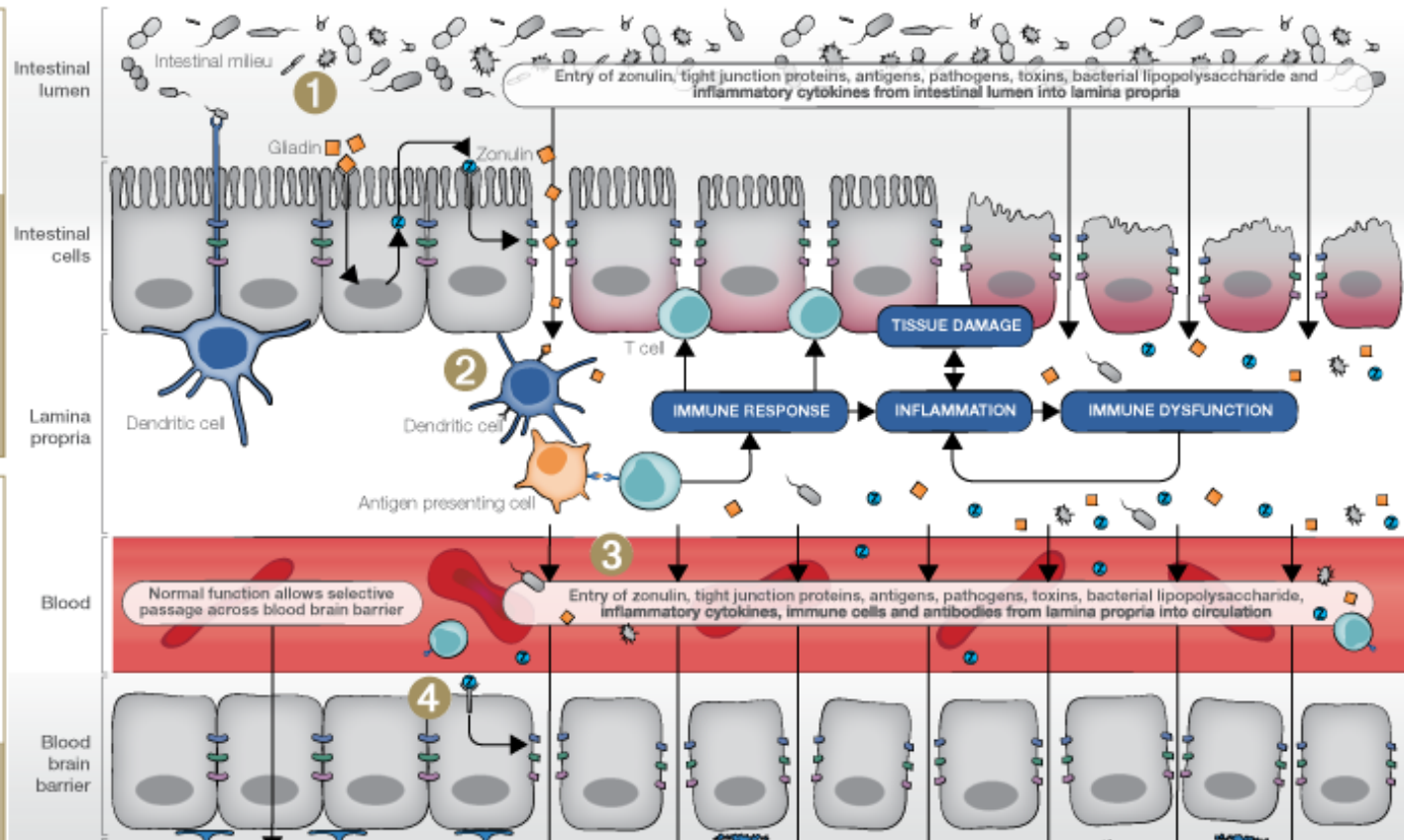
PROBIOTICS may competitively inhibit pathogenic bacteria from stimulating zonulin release.

2 IMMUNE RESPONSE DEVELOPMENT OF LEAKY GUT

- Increased exposure to stressors triggers immune response and inflammation.
- A vicious cycle develops where inflammation and tissue damage further increase intestinal permeability, leading to even greater passage of stressors therefore perpetuating the cycle.
- Altered immune responses and increased inflammation in the gut also interact with HPA axis and neurotransmitter metabolism.

PROBIOTICS modulate immune response and down-regulate inflammation, thereby promoting healthy gut barrier function.⁴

ZINC supports healthy immune function and



4 BLOOD BRAIN BARRIER DYSFUNCTION - LEAKY BRAIN

- The BBB includes endothelial cells and TJs.
- Astrocytes located beneath endothelial cells prevent entry of unwanted molecules across the BBB.
- Zonulin from the blood binds to zonulin receptors on the BBB.
- Zonulin stimulates opening of TJs.
- Similar to what happens in leaky gut, stressors, including zonulin, TJ proteins, antigens, pathogens, toxins, bacterial lipopolysaccharide, inflammatory cytokines and antibodies are allowed passage into the brain.

Gut microbiota may regulate BBB via modulation of TJ protein expression and production of short chain fatty acids.¹¹ PROBIOTICS may be beneficial.

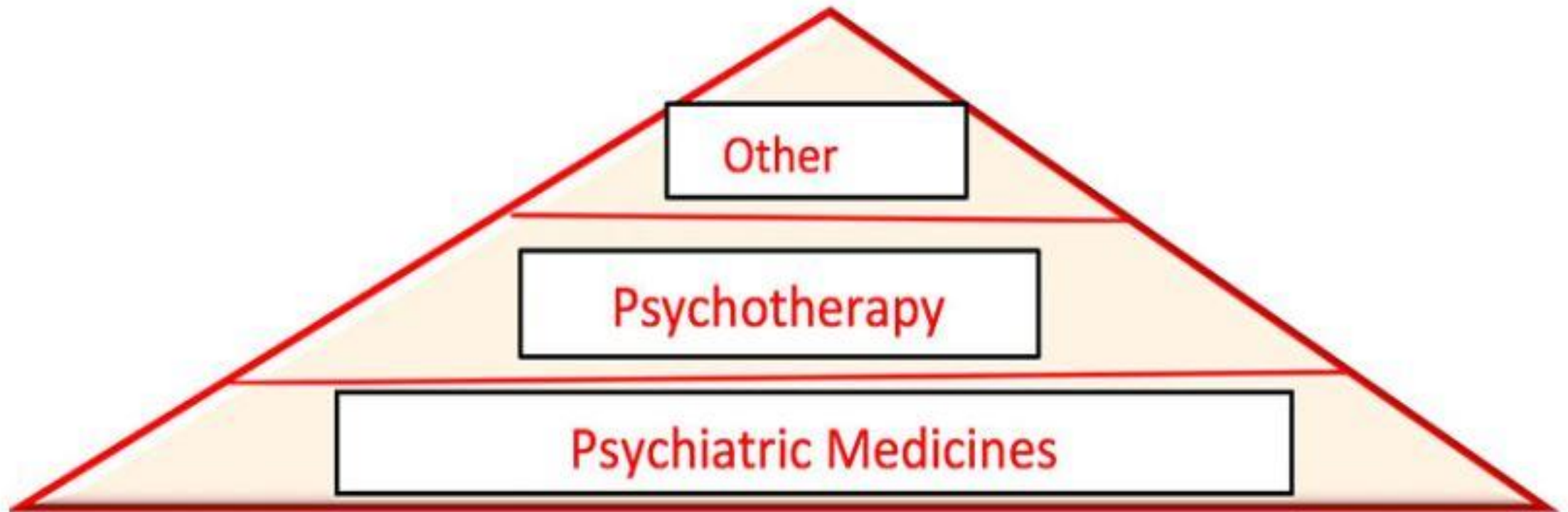
ZINC enhances TJ barrier function.¹⁰

5 IMMUNE RESPONSE NEUROINFLAMMATION

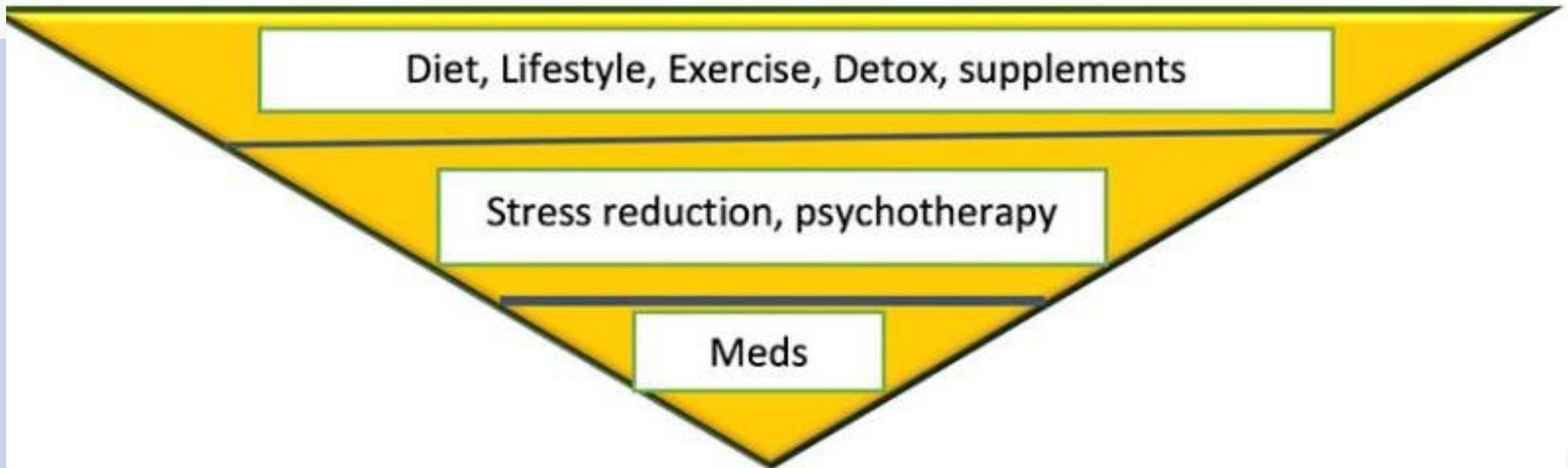
- Increased passage of unwanted molecules causes damage to astrocytes.
- Immune response is stimulated by microglia.
- A vicious cycle of increased passage of stressors and inflammation develops, leading to neuroinflammation.
- Neuroinflammation can also impact on brain communication with the gut and HPA axis.
- Chronic neuroinflammation has been associated with various conditions including mood disorders, Alzheimer's disease, autism spectrum disorders, dementia, schizophrenia, cognitive decline and

The Standard Psychiatric practice

Current Psychiatric Approach



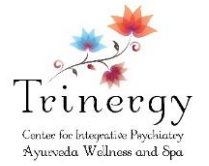
Holistic approach....



To recap: What are the Primary Causes of Disease - What do You Need to Get Rid of?

- **Poor diet (SAD)**
- **Stress (physical, psychological)**
- **Toxins (biologic, elemental, synthetic)**
- **Allergens (food, mold, dust, animal products, pollens, chemicals)**
- **Microbes (bacteria, ticks, yeast, parasites, viruses, gut microbial disruption)**

What Do We Need To Thrive? For Optimal Functioning?



- **Foods (protein, fats, carbohydrates, fiber)**
- **Vitamins, minerals, accessory or conditionally essential nutrients, hormones**
- **Light, water, air – Access to natural environment**
- **Movement, Rhythm**
- **Love, community, connection, Meaning, purpose**



Diet & Lifestyle
change.....

.....is fundamental to recovery from any
chronic illness, including mental illness



As you sow, so shall you
reap

*When we move from
habits that are
harmful to behaviors
that are beneficial, we
reap the benefits in
the form of improved
health and vitality.*

Food As Medicine



“Let food be thy medicine and medicine be thy food” - Hippocrates

“the body is the outcome of food. Even so, disease is the outcome of food. The distinction between ease and disease arises on account of wholesome nutrition or the lack of it.” Charaka Samhita

“When diet is wrong, medicine is of no use. When diet is correct, medicine is of no need”. Ayurvedic proverb

Food As Medicine



"You are what you eat"



But now, we are learning that...



We are what we eat, digest and absorb.

||| We are what
we eat, digest
and absorb!



How does Food Act as medicine?



Provides nutrients – many illnesses directly related to poor nutrient quality of food. Scurvy to ADHD



Nutrigenomics: food can directly affect gene expression for better or worse



Nutritious foods contain beneficial substances like vitamins, fatty acids, antioxidants, phytonutrients, minerals, fiber and much more.



A modern problem: Toxicity of food! From pesticides to artificial dyes, flavors, chemical preservatives, and genetic modification.

How does Food Act as medicine?

Controls inflammation.

Balances blood sugar

Detoxifies and eliminates toxins

Balances hormones.

Food is medicine



Not just Calories.



Food is energy



Food is connection



Food is memory



Food is information – to upgrade or downgrade our bio-software on a daily basis.

Food as medicine

Favor

- Food that is freshly prepared, seasonal and indigenous

Favor

- Organic & whole foods

Avoid

- Processed, refined food. food w dyes, preservatives, pesticides, additives, hormones, GMO's

Food as medicine



Balanced diet – should have all 6 tastes – salt, sweet, sour, bitter, pungent & astringent.



3 main components: Proteins, Fats, Carbohydrates



Many minor components: vitamins, minerals, phytonutrients, essential elements etc.



Food preparation: Cook in stainless steel, cast iron, ceramic or earthen ware.



Variety is the name of the game – switch grains, vegetables, protein sources – guided by the season.

Food as medicine



Eat Organic as much as possible: ewg.org is a good resource.



AVOID: Plastics at all cost!



Oils: Ghee, olive oil, coconut oil, peanut oil. Avoid grain oils/soy oil.



Eat like our grandparents

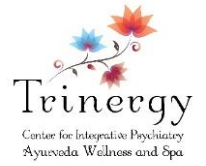


Develop body-mind awareness

Patient Examples:

- Anxiety: <https://trinergyhealth.com/testimonial-holistic-anxiety-cure/>
- Autism: Next Slide.
- Depression in 11 year old: <https://trinergyhealth.com/reating-child-depression-with-integrative-psychiatry/>
- Migraines: <https://trinergyhealth.com/amys-testimonial-no-more-migraines/>
- Schizophrenia:
 - <https://trinergyhealth.com/schizophrenia-psychosis-novel-solutions-to-an-old-problem/>

Autism and Hashimoto's Patient Example



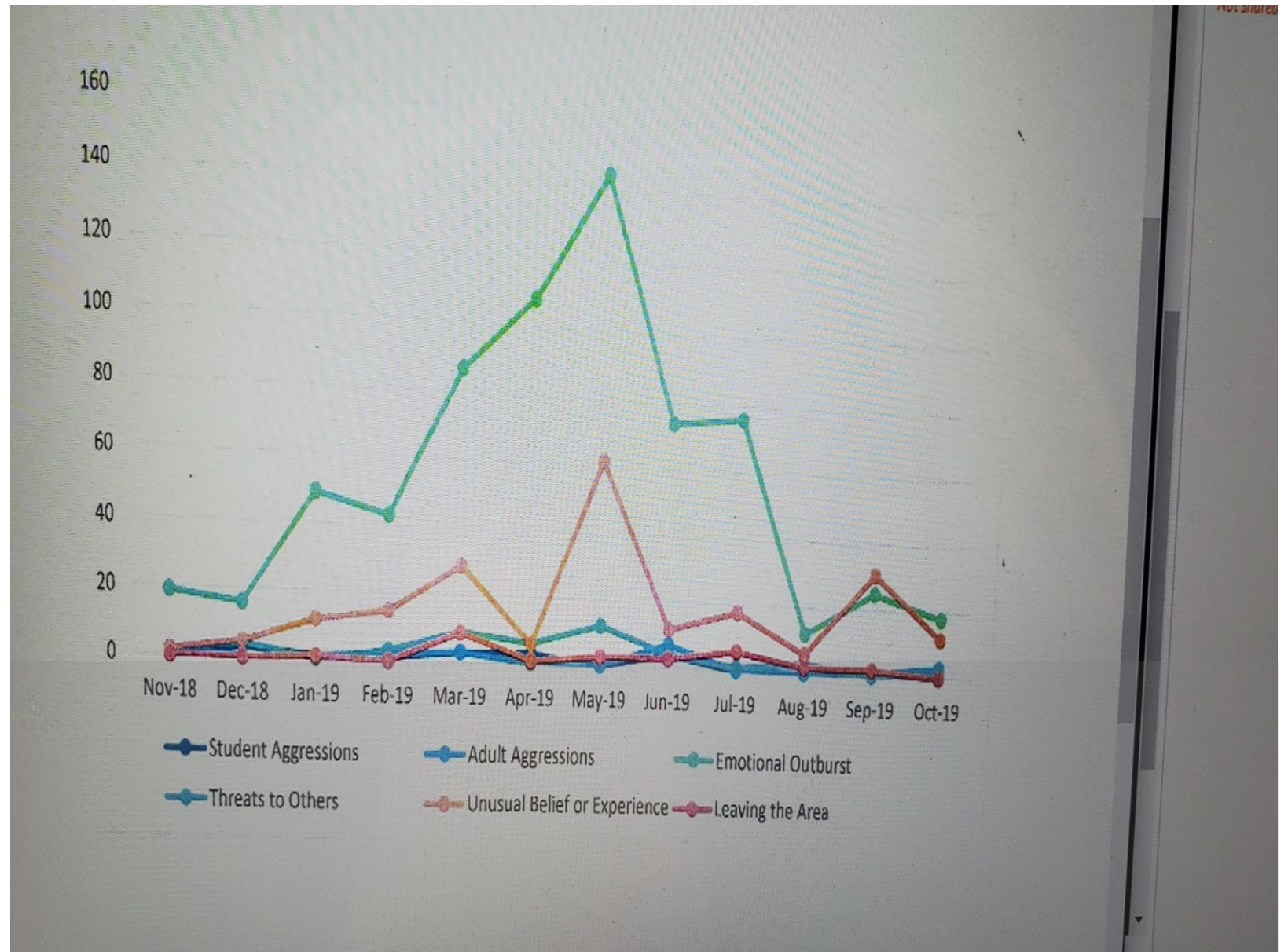
- 17 year old SWF with ASD, living in group home.
- On Abilify, lithium, clonazepam for severe behavioral problems of agitation, emotional outbursts and “psychosis” – laughing, talking to self, severe stimming. But no improvement with meds and usual standard of care.
- Diagnosed with hypothyroidism and under care of endocrinologist.
- On review, her TSH was 120 !!! Highest value of my career and this was after 6 months of treatment with synthroid by endo. Working hypothesis was that lithium was causing the hypothyroidism

Autism & Hashimoto's Patient Example

- First visit in Aug 2019.
- I ordered more labs – as expected she had severely elevated TPO, TG antibodies. As long as this inflammation is going on, Synthroid can barely touch the TSH levels.
- Group home staff engaged in this new paradigm of care.
- Patient put on elimination diet – dairy, gluten, corn, soy, eggs for 6 months. Still eliminating dairy, gluten, corn and soy.
- Targeted supplements – based on FM and Ayurveda.
- Focus on nutrient supplementation, anti-inflammation and detoxification.

Autism & Hashimoto's Patient Example

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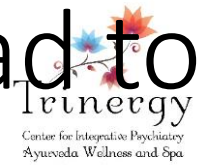


Autism & Hashimoto's Patient Example

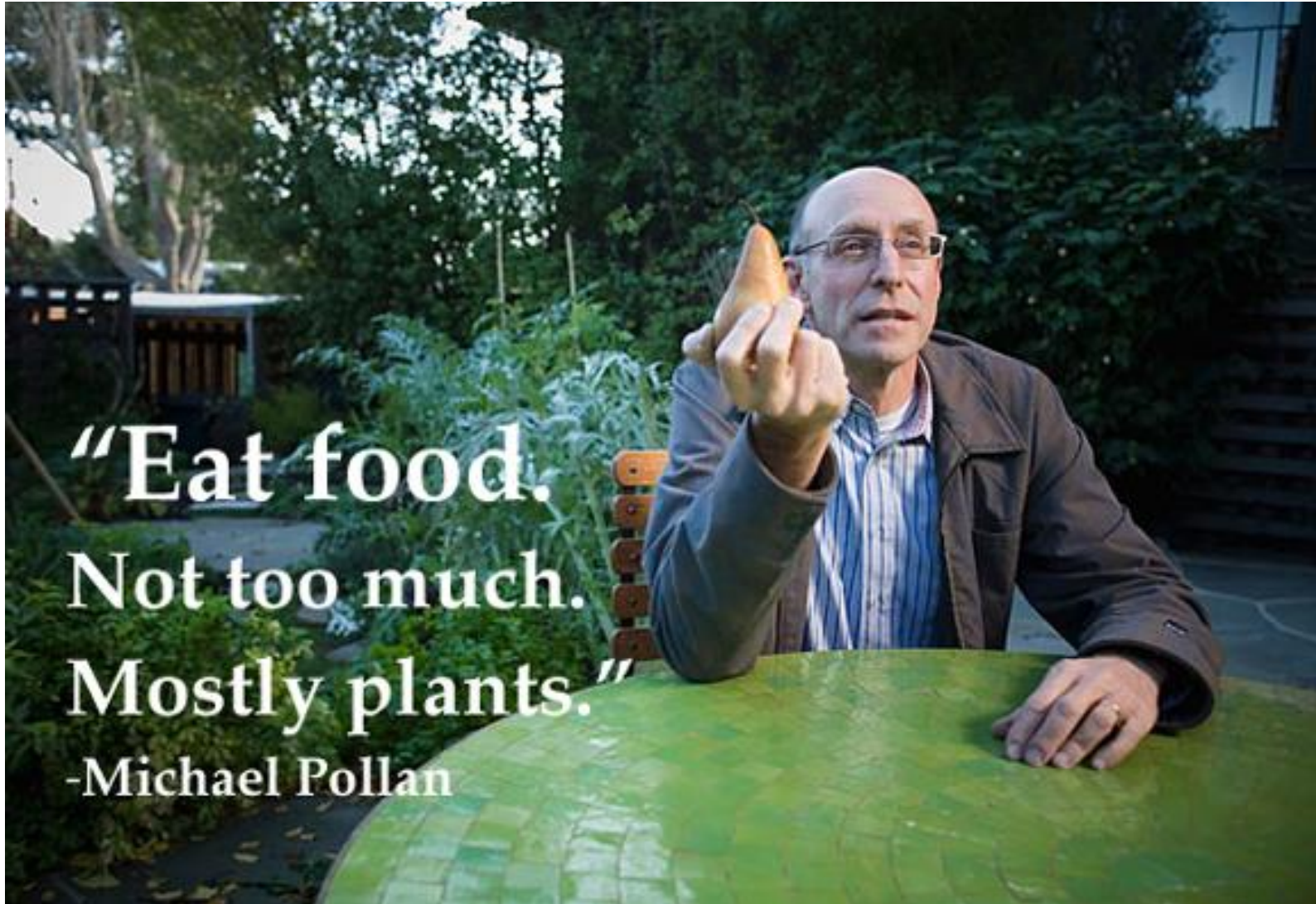
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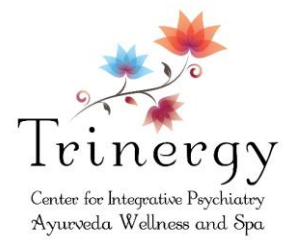
Here's what the 15 year old boy's mom had to say...



- "On another note, we started the elimination diet as a family and we're loving it! Everybody feels better, our son, most of all. His color and mood are improved and he's being as diligent as a 15-year old can be. He's very motivated which is new! We'll get the blood work done this Saturday. I'll be very interested to hear what you have to say about the two DNA reports. I cried when I saw them; with my cursory understanding, I was both relieved and horrified to think that after 8 years of struggle; diet and massive doses of Vitamin D might be our best responses to his poor mental health. I feel angry at the traditional medical establishment for the massive misinformation. At the same time, I'm looking forward to doing something other than trying to survive as a family. Thank you for helping us take the first steps toward healing"



Last but not
the least....





Questions ???

Thank you