Special Diets, Nutrition Care,& Gut Health…

…On A Budget

nutrition care for children

Gut Health In Autism: 5 Steps To Savings

1. Early Intervention
2. Use fewer lab tests
3. Get insurance coverage, then delegate
4. Get discounts on labs, foods, supplements
5. Know where to spend, when to curb, & how to use supplements

Step 1: Your Early Intervention Program

- ✓ Early Intervention team therapists can help you sort which problems are which - for free or low cost - in your home.

Tap your local Early Intervention Program

NECTAC.org

National Early Childhood Technical Assistance Center

IDEA mandates free or low cost access to screening and intervention for children age 0-3 with **suspected or diagnosed** developmental delays. This may include nutrition screening, monitoring, and care, as well as therapeutic interventions for autism.

Tap your local Early Intervention Program

What are the eligibility criteria in your state?

http://www.nectac.org/~pdfs/pubs/nnotes21.pdf

Who coordinates these services in your state, and how do you reach that person?

http://www.nectac.org/contact/ptccoord.asp

Nutrition Puzzle Pieces

…For Sensory Integration, Autism Spectrum, ADHD, Conduct/Behavior Disorders, Mood/Learning Disorders, Growth/Feeding

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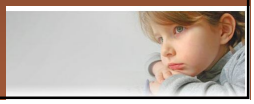


Nutrition Puzzle Pieces

…Fit together better when they are identified, sorted, and prioritized BEFORE intervening. Get the baseline to save money later on

Sequence, Sequence, Sequence

1) Identify
2) Sort
3) Prioritize

Step 2: Use Fewer Lab Tests

- Leverage evidence-based nutrition assessment tools for children
- Prioritize growth and feeding
- Know your child's nutrition baseline before diving in
- Let nutrition care process inform lab choices

Biomedical Interventions…

…Integrate food, special diets, supplements, medications, herbs, probiotics…

…Are Mostly Nutrition Care.

Identify

Standard Nutrition Assessment + Functional Medicine -->

…Broadens discovery of nutrition problems & saves money

Nutrition Assessment Has 5 Steps

1) Medical history, from before pregnancy
2) Anthropometrics, from birth to present
3) Clinical signs & symptoms
4) Food intake data

Last, and least?

5) Labs

"Functional Medicine"

1) Relies heavily on lab data to describe baseline.

2) Then you do some more labs.

But ASD Kids Don't Quite Fit The Standard Nutrition Assessment Model

- Multiple co-morbidities outside nutrition diagnoses
- Need team treatment and coordination with other specialists *and* nutrition professionals

…And labs alone don't fully describe nutrition problems.

- ✓ Review of food intakes shows what nutrients are lacking - before blood is drawn
- ✓ Reference ranges are big; clinical signs may precede labs out of range
- ✓ Review of growth pattern over time shows how long nutrients have been lacking
- ✓ Reviewing food intakes and growth data together show whether the problem is malabsorption, poor intake, or both

Save Money On All Those Labs By Using Them Less Often

1) Use Nutrition Focused Clinical Exam (p.67 Special Needs Kids Eat Right) to identify problem nutrients.
2) Juxtapose growth data with food intake data and stool patterns, to identify likely triggers for malabsorption.

Most importantly… Kids are growing

- Kids can keep growing into their early 20s.
- Energy (calories) needed per pound can be as high as 5x that of adults, depending on age, growth status.
- Impaired growth can skew many lab tests your doctor may be using.

Prioritize This As #1

Growth pattern = what's eaten + how it's absorbed.

So, to troubleshoot this, you need:

- an accurate food diary
- growth data, past and present
- stool pattern (clinical signs), and…
- MAYBE: some labs

When Growth Lags, Food Intake Data Help Explain Why

- Food Intake Adequate?

If Yes ⇒ Look for malabsorption for calories, proteins, fats and/or all of these.

If No ⇒ Look for a sensory modulation issue, mechanical feeding/swallowing issue, reflux, zinc or iron status, bowel infection, or painful bowel condition.

Metabolism shifts caused by calorie malnutrition or PCM…

- Low thyroid function (1921)
- Thyroid unable to trap iodine in PCM (1978)
- "Global deterioration" of thyroid parameters in prolonged malnutrition
- Changes in secretion & metabolism of thyroid hormones (2001)
- Structural changes to thyroid gland

Neurological & Neurotransmitter changes … (Levitsky & Strupp, 1995)

- ↓Cerebral cortex size (reversible?)
- ↓Hippocampus size (resistant)
- ↓Brain myelin (resistant)
- Changes in brain concentration of serotonin, norepinephrine (reversible?)
- Reduced receptors for norepinephrine in brain (resistant)
- "Enduring alterations in central endorphin system"
- Reduced optic fibers from eye to brain; visual cortex structural changes (reversible?)

More metabolic shifts caused by calorie malnutrition and PCM…

- Altered kidney function: ⇓ creatinine
- Chronic diarrhea (poor gain): ⇓ B12 absorption, not repaired with intrinsic factor
- Growth hormone: ⇓ chronic low kcal, ⇑ PCM
- Changes in insulin metabolism

Low Total Cholesterol, Affect, & Aggression

- Wallner B, Machatschke IH. The evolution of violence in men: The function of central cholesterol and serotonin. *Prog Neuropsychopharmacol Biol Psychiatry* 2009; Feb 15 (Epub ahead of print)
- Atmaca M et al. Serum leptin and cholesterol values in violent and non-violent suicide attempters. *Psychiatry Res* 2008; 158(1):87-91
- Guey-Mei J et al. Leptin and cholesterol levels are low in major depressive disorder, but high in schizophrenia. *J Affective Disord* 2006; 90(1):21-27.
- Golomb BA. Cholesterol and violence: is there a connection? *Ann Intern Med* 1998;128(6):478-87

Why is BMI <5-10th percentile for age so bad for kids?

- Lower cholesterol (higher aggression?)
- BMI is a positive predictor of bone mineral content
- Increased frequency and severity of infections
- Cognition, attention, focus: ⇓⇓
- Early FTT: stunting, poorer academic performance at age 8 years

Some signs & sx that go with nutrients

- ↓Iron status: Hyperactivity, irritability, cognitive deficit, poor focus, insomnia, mouthing non food
- ↓Calories: Anxiety, insomnia, poor focus/attention, irritability
- Inflammation from gluten: Anxiety, ataxia, mood disorders, oral tactile sensitivity, reflux, poor appetite
- Toxic metals: Oral defensive or mouthing/eating non food; neuro-psychiatric changes
- Cis-Palmitate (vitamin A) and Tocopherols (Vitamin E): Visual and auditory processing; expressive language

Step 3: Get insurance coverage,& delegate!

- Tap in network provider team
- Code the care correctly - NOT for "autism"
- Ask for sliding scale or Medicaid pricing for visits
- Consult notes for every visit

Delegate To Your In-Network Team

Nutrition problems can be…

- immune related: allergist, immunologist
- growth related: RD/LD; endo MD
- feeding disorders: SLP, OT
- digestive issues: GI MD, ND
- functional deficits: ND, metabolics

Delegating…

1) Let your in-network pediatric providers do some foot work:

→gliadin antibody, IgE to foods, iron status, ferritin

→serum copper, zinc, ceruloplasmin

→Clostridia difficile, H. pylori, Campylobacter,

Delegating at reduced cost…

2) Ask your biomedical provider for insurance support

→ask for a coded superbill

→codes *should* describe nutrition, GI, metabolic, allergy issues

→codes *should NOT* describe "psychiatric" conditions

Step 4: Discounts on Labs, Foods, and Supplements

- Ask your provider for discounts on labs, supplements
- Compare pricing at DirectLabs.com
- Compare pricing & shipping costs for supplements on line
- Check manufacturer websites for discount programs & coupons

Step 4: Discounts on Labs, Foods, and Supplements

- Coupons abound for gluten free foods
- TropicalTraditions.com; BellaGlutenFree.com; FreeCoconutRecipes.com
- Barter for local fresh produce, meat, eggs
- Twitter is free; use TweetDeck to keep running search column for discounts on items you need
- Garden it yourself: Herbs, lettuce, kale, squashes, tomatoes, carrots, peppers

5. Spending right on supplements…

Focus on food more than supplements

→ adequate total food intake drives normal brain function

→ supplements don't fix problems triggered by poor total intake

→ consider medical foods for special situations

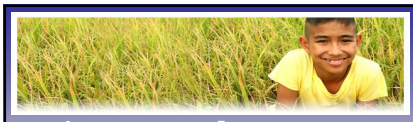
5. Spending right on supplements…

Prioritize typical absorption of whole foods

→ >15-30 billion CFUs mixed strain probiotic

→ Herb tinctures to eradicate yeast, Strep, Klebsiella in gut

→ Wait to add nutraceutical dosing until bowel habits normalize



Saving on supplements…

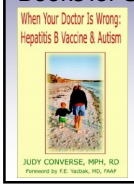
Splurge when it matters most

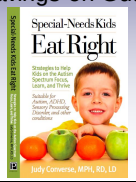
→ Probiotics & fish oils: Cheap ones not worth it!

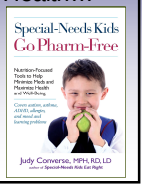
→ Consolidate into a good high potency multivitamin & mineral rather than several individual vitamin & mineral supplements

→ Purity & Potency Assurances: GMP, USP, TGA certificate

Books for Savings on Gut Health…







Why kids need nutrition focused strategies, *now*

- US children are more chronically ill and disabled than ever before in our history.
- 25% of US children have a special need, chronic disease, or disability (18.5 million children).
- A tsunami of children with autism has just begun to age out of public education, & into assisted living.

"Malnutrition has a far more powerful impact on child mortality than is generally appreciated" Pelletier 1995

CDC surveillance data (NHANES):

- Iron deficiency is increasing, not decreasing. Most prevalent in toddlers, and females age 12-49. (Looker et al, MMWR 2002)
- Other marginal nutrients for US children are vitamins A, D, and E.

…Kids with special needs: 60% have nutrition problems that impair growth and functioning.

"If a nation could vaccinate its way to good health, the USA would be the healthiest nation on earth"

- John Stone, contributing editor for Age of Autism

US ranks 46th in world for infant mortality, but highest for vaccines given in 1st year. Vaccine doses in 1st year significantly correlated w worsening IMR (Miller & Goldman 2011).