



# Autism and the Gut

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# Objectives

- Common GI problems associated with autism
- Common treatments for these problems
- So what's the deal with the whole leaky gut thing?



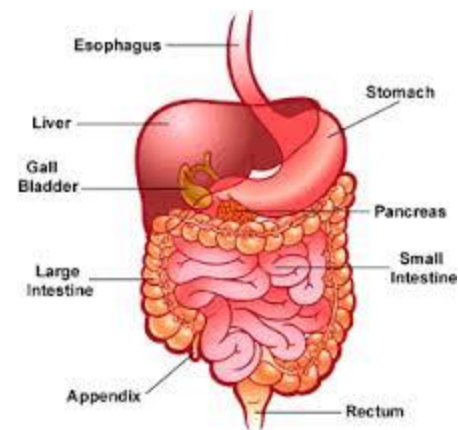
# Ground Rules

- Not here to start any fights or insult anyone
- Save Questions/Comments for the end
- Levels of evidence
- Every patient is unique
- Let's raise the level of conversation from theory/emotion, to what we know



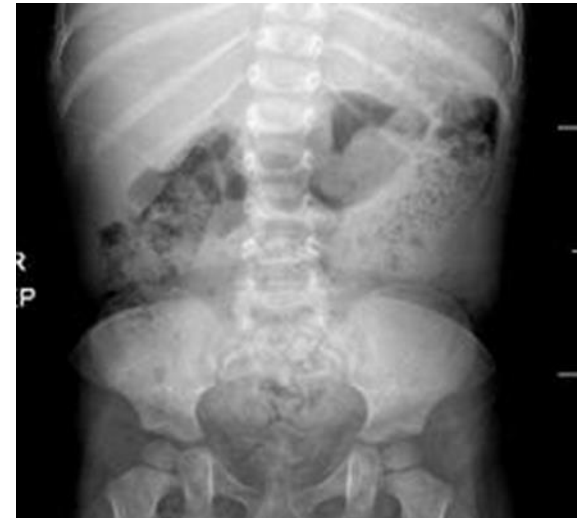
# Common GI Problems

- Constipation/encopresis 33% vs 17%
- Oral aversion 25% vs 16%
- No difference in rate of abdominal pain, reflux, or diarrhea [Pediatrics](#). 2009 Aug;124(2):680-6
- Obesity 20% vs 13% [Child Obes](#). 2013 Apr;9(2):125-31
- Reflux symptoms are different



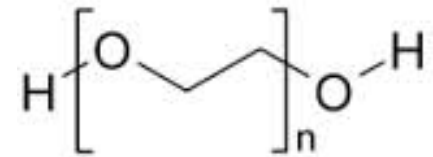
# Constipation/Encopresis

- Functional
  - Diet
  - Toilet habits
  - Sedentary
  - Bacteria
  - Genes
  - Mild anatomic issues
- Organic
  - Medicines
  - Thyroid
  - Celiac



# Constipation

- Diet – limit milk, peanut butter, carbs; more fiber (soluble vs insoluble)
- Toilet habits – after every meal, 1 minute/yr
- Probiotics – Align, lactobacillus, yogurt
- Osmotics – Miralax [Z Gastroenterol.](#) 2006 Feb;44(2):167-72., milk of magnesia
- Stimulants – senna, bisacodyl
- Weekend cleanouts



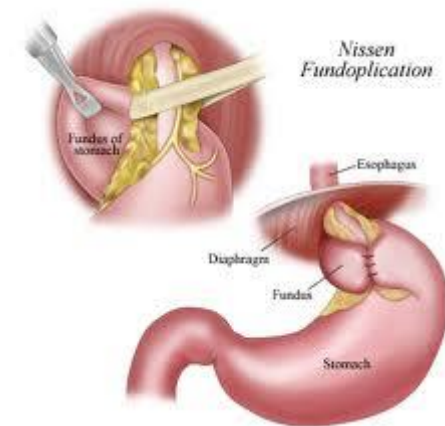
# GERD

- Everybody refluxes
- Disease is with pain, respiratory, feeding
- High pain threshold and limited verbal
- Present with feeding refusal or self-mutilation
- Diagnosed with history, endoscopy, or pH probe...UGI not so much



# GERD Treatments

- Low acid diet
- Elevating head of bed
- Acid suppression
  - Zantac, Nexium, Prilosec, Prevacid
- Nissen Fundoplication





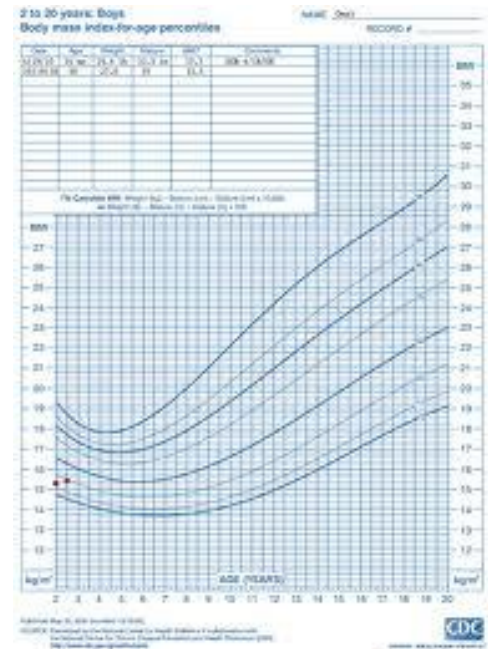
# Feeding Refusal



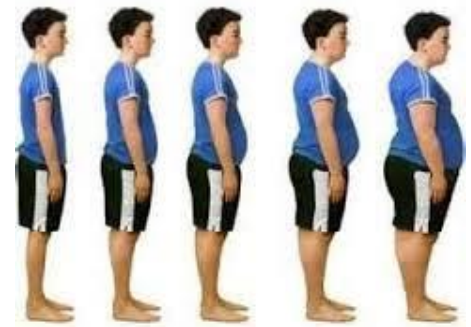
- Organic
  - Esophagitis (endoscopy)
  - Dysphagia (pharyngogram)
  - Constipation (cleanout)
  - Oral/dental (exam)
  - Gastric (endoscopy)
- Psychogenic
  - formula overfeeding (wean formula)
  - Oral aversion (feeding therapy)

# Feeding Refusal Treatment

- First look for underlying cause
  - If the child has esophagitis then you are wasting your time.
- If not constipation, esophagitis, dysphagia
- If not over feeding with formulas
- Then feeding therapy



# Obesity



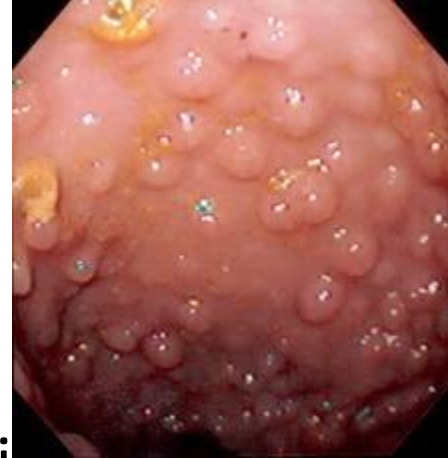
- About 20% of ASD kids 13% for other kids
- Problems : ortho, DM2, fatty liver
- Weight = (calories in–calories out)
- Unknown factors include genes, intestinal flora
- Calories in = carbs and portion size and snacks
- Calories out = TV, ipad, absorption, metabolism, exercise
- Autistic kids spend 2x as much time on TV and video games as their siblings. [J Autism Dev Disord.](#) 2013 Jun;43(6):1258-71

# Obesity Treatment

- Cut the calories in – limit carbs, portion sizes
- Increase calories out – cut screen time to 1hr
- Weigh every month
- Whole family
- Outside



# “Autistic Enterocolitis”



Pioneer medicine or quackery?

Proposed by Andrew Wakefield and Arthur Krigsman

The study included only 12 children

Lymphonodular hyperplasia –we see this in most kids

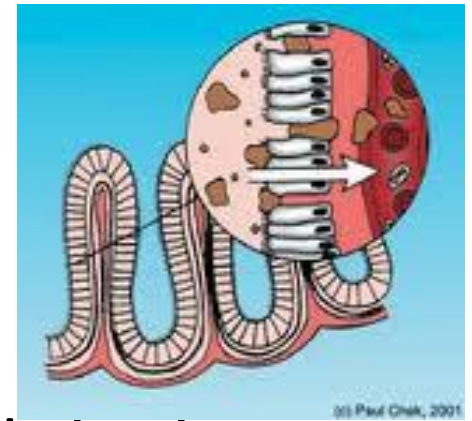
Ileitis or colitis – the biopsies results were later falsified

Measles in the tissue – not reproduced

3 never had autism, 5 had developmental problems before the MMR

Wakefield was personally paid \$600K by the plaintiffs lawyers and applied for a single vaccine patent before releasing the paper

# “Leaky Gut”



- Long on theory, short on evidence.
- One paper showed 36% of autistic kids had a positive IPT, 21% of family members, and 5% of controls [J Pediatr Gastroenterol Nutr.](#) 2010 Oct;51(4):418-24
- Association? Interesting. Cause/effect is unknown. Theories abound about LPS, casein, gluten, etc.
- Interventions need to be harmless for now
- Leaky gut is not unique to ASD
- Most ASD kids DO NOT have a leaky gut

# Diets Demystified

- Coincidence, Association, Causation
- Gluten-free
  - Celiac, wheat allergy, constipation, gluten intolerance
- Casein-free
  - Milk allergy, constipation, lactose intolerance
- Beware Over-restriction





Questions?