Go Green…
If you would like to receive your invoices via email, rather than regular mail, please contact Betsy at 203-834-2813 x 11 or via email at braftery@ihealthnow.org

“Like” us on: Search: Center for Autism and Integrative Health or go to: http://www.facebook.com/pages/Center-for-Autism-and-Integrative-Health/180479918655655

Check out our BLOG at:
www.ihealthnow.org
or
http://ihealthblog.blogspot.com/

Hard Chamber HBOT available at a reduced rate
In office hard chamber HBOT is available at a reduced rate Monday thru Thursday 9am – 2pm and available at other times and days at locally competitive rates.
Please contact Dr. O’Hara or Dr. Szakacs for more information on HBOT availability.

Are you struggling with medical claims reimbursements?
Come meet the MedClaims Liaison (MCL) team at our office on Wednesday, June 20th, any time between 6:00 and 8:00pm. MCL’s specialists advocate on your behalf to ensure you recover all the money that you deserve on your insurance claims - saving you time and money and reducing stress. An Evite invitation will follow, but mark your calendar to pop in on Wednesday, June 20th for refreshments and to learn more.
To find out more about MCL, visit: www.medclaimsliaison.com

Save the date: Meet and Greet with MedClaims Wednesday, June 20th @ 6:00-8:00pm

HBOT for Sale
Gently used Vitaris 320
$9,000
For more information, please contact Tracy at 917-6897-993 or christracy@optonline.net

Please visit our website: www.ihealthnow.org
Free MedClaims Webinars
5/22/12 at 1pm EST or 6/5/12 at 7:30pm EST

Navigating the Insurance Maze: "Tips and tricks" for successful interactions with insurers

Topics will include:
- "How to understand the limitations of your policy"
- "Ensuring appropriate coding for maximizing benefits"
- "The best questions to ask your insurance company"
- "Do the state mandates apply to my insurance benefits?"
- "Addressing common customer service pitfalls" and more

To register: https://medclaimsliaison.webex.com/mw0307l/mywebex/default.do?siteurl=medclaimsliaison

THE CONCIERGE MENTAL HEALTH COLLABORATIVE:

The Concierge Mental Health Collaborative provides coordinated legal, clinical, care management, and home care services for psychiatric, substance abuse, autism spectrum and geriatric clients in the New York Tri-State Region, Southeast Florida, and California. It is a joint initiative of Carolyn Reinach Wolf, Esq., a Senior Partner of the Abrams Fenstermann law firm, and Steven R. Horen, Founder and CEO of Koved Care.

Ms. Wolf is a mental health attorney with expertise relating to all aspects of psychiatric legal matters, including confidentiality, involuntary treatment, capacity, and mental health aspects of criminal, matrimonial and other areas of legal practice.

Koved Care provides specialized Care Management and in-home care for psychiatric clients of all ages and geriatric clients. For further information, please contact:
Steven R. Horen, CEO
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Carolyn Reinach Wolf, Esq.
Abrams Fenstermann
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Highlights from 5.18.12 Concussion Conference at Harvard Medical School (Boston, MA)

- Chronic Traumatic Encephalopathy (CTE) – progressive neurodegenerative disease associated with mild traumatic brain injury (in athletes, military veterans, etc)
  o Brain dysfunction in the setting of a ‘normal’ brain
  o The longer the person lives after the exposure (trauma), the worse the symptoms
  o Damage is cumulative (multiple hits in sports practices and games, etc)
  o Second impact syndrome is a major concern (second exposure when not healed from first concussion – returning to play too soon)
- 90% of concussions go undiagnosed or untreated
- Most common symptom – headache
- First symptoms – personality or behavioral changes (impulse control, aggression, etc)
- Neurometabolic element – accumulation of 2 main abnormal proteins (Tau and TDP-43) in brain
- Concussions require cognitive (no ipad, homework, etc) and physical rest (no practice or other physical activities)
- Can reduce injury by approximately 50% if reduce hitting in practice (impact from game hits worse, but practice occurs more frequently and damage is cumulative)
- Helmets attenuate focal impacts/accelerations (help prevent skull fractures, etc), but don’t do a good job with rotational blows
- Emerging research and case reports suggesting improvement post-concussion/CTE and other traumatic brain injury with Hyperbaric Oxygen Therapy (HBOT) – benefit in acute or longer-term injury
- Factors that can affect recovery from concussion/CTE
  o Gender (females have more deficits on neuropsychology testing post concussion), Exertion level post exposure, Prior history of concussions, Age, Learning differences or ADD, Headache history
Antonio Harden, MD (Stanford Univ) - Randomized controlled pilot trial of NAC

- Previous trials with Ariprazole (Abilify) and Risperdone (Risperdal) in Autism and Memantine (Namenda; noncompetitive NMDA receptor antagonist used to treat dementia)
- NAC (N Acetyl Cysteine) – anti inflammatory, antioxidant, modulates glutamate, increases glutathione (GSH consists of glutamate, cysteine, and glycine; formation aided by NAC)
- At baseline, children with higher rate of irritability had higher glutamic acid levels and lower GABA levels
- Double blind 12 week trial of oral NAC and its effect on behavior in ASD (irritability, aggression, tantrums, self-injury) – 900 mg x 4 wks, 900 mg 2x/day x 4 wks, 900 mg 3x/day x 4 wks
- NAC from BioAdvantex packaged separately (prevents oxidation once bottle opened) – brand is very important
- NAC – decreased irritability, stereotypy (statistically significant improvement over placebo group)
- No difference in social responsiveness scale
- Side effects – constipation, diarrhea, nausea and increased appetite
- Multicenter study will look at Glutathione (GSH) and cytokines

Sue Ming, MD PhD – UMDNJ – Autonomic Nervous System (ANS) Dysfunction in ASD

- Vagus nerve (Cranial Nerve 10) – afferent sensory from stimulation in stomach, duodenum, pancreas into nucleus of solitary tract leading to reciprocal interaction between hypothalamus (change in hormones), limbic (change in personality) and preganglionic nuclei (changes in heart rate, blood pressure, cough, vomit)
- With dysfunction – dysmotility, cold hands/feet, blotching, drooling, dark/light intolerance, large pupils, breath holding, sensory defensiveness, altered pain perception, emotional lability, anxiety and sleep disturbances
- Pupillometry (Abnormal Transient Pupillary Light Reflex in Children with ASD, Fan et al, J ADD 2009) – lack of constriction and light response
- Ming et al, Brain and Dev, 2005 (3 groups – ASD with ANS dysfunction, ASD without clinical evidence of ANS dysfunction and age matched control group) – significant difference in cardiovascular tone between ASD with symptoms group and control group
- Ming et al, J Child Neuro, 2010 – children with ASD more problems with ANS than controls
- Parasympathetic underfunction is underlying problem in some children with ASD; confusion arousal during sleep and reduced REM sleep in most significant in these children
- Galantamine (used to treat dementia), amantadine (antiviral used to treat Parkinson’s),bethanechol (parasympathetic urecholine stimulates muscarinic receptors), phosphatidylcholine can enhance parasympathetic function and help these children

David Beversdorf, MD - Effect of Propranolol on neuropsychological and imaging markers in ASD

- Assessed Propranolol on problem solving to help performance anxiety in unaffected people (reversed public speaking stress) (Alexander and Beversdorf, 2007)
- Propranolol in 9 with ASD and 9 controls – changes in problem solving in ASD but not controls (Beversdorf et al, 2008)
- Improved sequence fluency in ASD with Propranolol (Beversdorf et al 2011)
- Propranolol central and peripheral beta blocker and also acts on functional connectivity; compared this to nadolol which is only a peripheral blocker to see if there was difference between both these groups and controls – greater connectivity with propranolol across all areas than nadolol so that effects not attributable to just peripheral general hemodynamic effects
- Proposing to do clinical trial of sustained doses of propranolol on anxiety, word fluency, socialization and learning (10 mg/kg)
- Tenex (Guanfacine; alpha adrenergic agonist) has presynaptic effect on norepinephrine; propranolol (Inderal; beta adrenergic) postsynaptic

Bob Hendron, DO - Novel Models for Understanding and Treating Autism

- Environmental stressor and interaction between stressors and genetic neurodevelopmental vulnerability (Hallmayer et al N Arch Gen Psych 2011)
- Fecal chymotrypsin predicts which children with ASD will respond to pancreatic enzymes (Curemark pending FDA)
- Methyl B12 (Bertoglio et al, *J Alt Comp Med*, 2010) – 30% of subjects demonstrated clinically significant improvement on CGIS and at least 2 additional behavioral measures; responders exhibited significantly increased plasma concentrations GSH
- In follow-up study of 40 subjects, 50% of active treatment group and 30% of placebo group improved
- Vitamin D (Becker et al *Acta Psych Scand*, 2011) – Hendron doing study of vitamin D, loading dose of 6000 iu and then 300 iu/kg/day to get target level of 90 ng/ml (measuring 25 OH vitamin D, calcium, symptoms of tremors, diarrhea)

**Dr Shetreat-Klein**

- **Autonomic dysregulation in ASD**
  - blunted autonomic arousal responses to visual and auditory social stimuli
  - less flexible in autonomic adaptation to attention-demanding tasks and demonstrate less decrease in heart rate variability during task performance
  - abnormal neurotransmitter levels (dopamine, serotonin, etc)
  - secretin and oxytocin are polypeptide neurotransmitters that cross blood brain barrier and have improved various symptoms in subsets of patients with Autism

- **Microbiome and behavior**
  - Single commensal bacterium can activate subset of enteric neurons
  - Bacteria can trigger anxiety-type behaviors in mice
  - Bifido-treated mice had more dopamine and serotonin precursors

- **Epilepsy and ASD**
  - *Br J Psychiatry*, 2011 April – most epilepsy develops in ASD children after 10 years old and is associated with female gender, less intellectual and verbal abilities
  - *Brain Dev*, 2010 Nov – 1014 kids with ASD; 37% with epilepsy; 86% with epileptiform discharges; 66% of abnormal discharges in frontal lobe (where much executive functioning takes place)
  - Have a very low threshold of suspicion for seizures in kids with ASD

- **Some factors that disrupt neurophysiological balance**
  - Increased glutamate or low GABA
  - Low magnesium, P-5-P or zinc/copper ratio
  - Increased heavy metal and other toxic burden

- **Diets can play crucial role in causing seizures**
- Certain restricted diets can have a profoundly positive impact on seizure activity
  - Modified Atkins similar to success of traditional ketogenic, 45% with 50-90% seizure reduction and 28% with >90% seizure reduction (*Epilepsy*, 2008)

- **Correct balance of essential fatty acid supplementation has been shown to positively impact sudden unexplained death in epilepsy (SUDEP)**
- **Cerebral folate deficiency can be associated with seizures**
- **Magnesium tends to be lower in patients with epilepsy**
- Children with febrile seizures tend to have low zinc levels (Ann Trop Paediatr, 2011)
- Lower selenium levels in kids with febrile seizures (*Pediatr Neurol*, 2010 Nov)
- Lower selenium and glutathione peroxidase in children with epilepsy (*Epilepsia*, 2007 Sep)
- Carnosine has been shown to decrease seizure stage, prolong latency for myclonic jerks, and increase seizure threshold

- **Many studies to support botanical medicine use in treating kids with seizures**
  - Skullcap, Passionflower, Gotu Kola, Bacopa Monnieri, Black cumin seed
  - Anti-epileptic medications reported most effective in ASD -- Valproic acid, Lamotrigone, Leviracetam, Ethosuxamide

**Additional testing to consider for patients with seizures:**
- Folate receptor antibodies, RBC fatty acids, RBC minerals, Toxic evaluation
**Dr. Chandra – Lyme**

Underlying pathophysiology similar and overlapping in ASD and Lyme
Gestational Lyme co-infections (specifically ehrlichia) decreases mitochondrial function leading to hypotonia

Points about Lyme and co-infections:
- In NJ, some percentages of Lyme spirochetes are:
  - Borrelia 33%
  - Bartonella 34%
  - Babesia 8%
- Bartonella rashes look like striae, but harder and persist
- Babesia Symptoms- Air hunger, Numbness, tingling, palpitations
- Serum starvation of Borrelia by Antibiotic ceftriaxone and breaking up biofilm
- Herbals to consider:
  - Minimum treatment for at least 1 year
  - Better in uncertain diagnosis of Lyme
  - Pulse or cycle treatment
  - Andrographis, cats claw, Japanese knotweed, astragalus, similax, Cumanda, banderol, samento, lakato
  - Particularly samento and banderol more effective than doxycycline
    - Combo best when treating in conjunction with biofilm protocol

**S. Jill James, PhD – Pregnancy Planning**

- Many articles now discuss the environmental factors associated with increased risk of having a child with ASD
- Risk factors that effect fetal DNA methylation and increased risk of ASD: Folate, B12 deficiency, viral infection, depakote, alcohol, mercury, arsenic, obesity, high homocysteine and advanced parental age
- James et al, *Med Genetics*, 2010 showed there was no difference in MTHFR c677t, a1298c gene alleles among mom, dad, cases, controls
- However, mother with decreased methionine, increased SAH (product inhibitor of methylation), increased homocysteine, decreased folate, increased levels oxidized glutathione had increased risk of having a child with ASD
- Of note, homocysteine should be measured fasting. If abnormal, can normalize with folate, B12, B6, riboflavin, and choline
- Please refer to the following articles for more information on factors associated with an increased risk of ASD:
  - *Archives gen psych*, 2011 Hallmayer et al
    Genetic component 38% and environmental component 58% in twins with ASD
  - *Archives gen psych*, 2011 Croen et al
    SSRI in pregnancy increased risk ASD
  - *Pediatrics*, Ozonoff et al 2011
    Recurrence rate ASD in second sib 19%
  - *Epidemiology*, 2011 Zerbo et al
    Winter months increase risk ASD
  - *Epidemiology*, 2011 Schmidt et al
    Prenatal reduce risk ASD
  - *J autism and dev disorders* Melnyk et al
    Metabolic imbalance associated with methylation dysregulation and oxidative damage
Dr. Chandra – Anxiety

- Manifestations of Anxiety in > 50% children with ASD:
  - OCD
  - Temper tantrums
  - Avoiding eye contact
  - Clinging
  - Difficulty sleeping
  - Standing motionless or expressionless

- Possible causes:
  - Mitochondrial dysfunction
  - Chronic infections (up regulates inflammation and causes tryptophan to be converted to quinoilic acid rather than 5htp and serotonin)
  - Germ overgrowth - yeast, clostridia, Lyme
  - Autoimmune - pandas, pitands
  - PANS (Pediatric Acute Onset Neuropsychiatric Syndrome) - metabolic deficiencies in magnesium, GABA, zinc, chromium, B6, folate
  - EMF (Electromagnetic fields)

- Treatment:
  - Anti glutamates
  - Homeopathic, herbal and essential oils (rosemary, lavender)
  - Mitochondrial support
  - Treat germs and gut inflammation
  - Treat nutrient deficiencies and metabolic imbalances

Brent Williams, PhD – Microbes

- Sutterella (gram negative anaerobic bacteria) found on ileal and cecal biopsies in ASD but not controls. Also Found in intestinal biopsies in inflammatory bowel disease (IBD)
- With decreased microbiota in infants, increase in atopy later in life
- Suboptimal disaccharide digestion and monosaccharide transport are related to transcriptional regulation
- This leads to composition changes of microbiota and increased incidence of allergies and atopic disease later in life
- Changes in microbiota effected by:
  - C section vs. vaginal birth (c section associated with increase incidence of celiac disease)
  - Formula vs. breast feeding
  - Diet high fat vs. plant based vs. animal based
  - Exposure to antibiotics (kids given antibiotics 3x more likely to develop Chrons and IBD)

Sym Rankin, CRNA, APN at NAA (NYC, April 2012) - Anesthesia in children with mitochondrial dysfunction

- Mitochondria are the energy cells of our body. Due to genetic or acquired (environmental) reasons these cells may not function as they should.
- This dysfunction can lead to low tone, drooling, constipation, speech regression, seizures plus many other mild and severe complications.
- There is no definitive medicine or course of therapy for this dysfunction, but many experts agree that a "cocktail" of vitamins, minerals and amino acids can lead to improved speech, cognition and function.
- In children with mitochondrial dysfunction, anesthesia can often lead to cognitive and behavioral regression.
- A mitochondrial "cocktail" and advanced preparation can make anesthesia and surgical procedures more successful.

Continued on next page
Anesthetics act on GABA/glutamate pathways and deplete folate. Nitrous oxide (with prolonged length of exposure) inactivates methionine synthase. With propofol, as a phospholipid, it can increase oxidative stress and can be a problem with soy or egg allergies.

In children with mitochondrial dysfunction, consider early surgery time, extra hydration, avoid lactated ringers, special care with blood sugar, temperature, acid base balance, use caution with muscle relaxants, propofol and nitrous oxide.

For more information on anesthesia refer to the following articles:
- Journal of Immunotoxicology, 2011, Helen Ratasjzak
- When Nitrous Oxide is No Laughing Matter, *Pediatric Anesthesia*, 2007, Baum

**PATIENT REQUIREMENTS**
- To remain an active patient of the practice, it is a requirement that each patient must be examined by one of the physicians at least once a year in the CT office.
- To be in compliance with federal and state laws regarding identity theft, a copy of the parent’s photo ID must be on file. We will be requesting this at your next office visit.
- Patient consent and HIPAA forms must be updated annually.

News from Lauren Stone at Cornerstone Integrative Care

It’s springtime again, and hand in hand with the lovely weather and abundance of spring flowers, comes spring allergies. For millions of sufferers, the change of season means debilitating headaches, chronic sinusitis, and bronchial issues. For kids on the spectrum, spring allergies also mean an increase in attention issues, negative behaviors, stimming, and illnesses. Because most ASD children have compromised immune systems, immune stressors like pollen in the spring, or molds and fungus in the fall, increase the load on an already overloaded system causing spikes in inflammation and, consequently, augmented immune dysfunction. How then, can we safely and effectively lessen the inflammatory load for our sensitive ADS children? Many families turn to traditional allergists who prescribe a cocktail of steroids and antihistamines, which, while effective, cause a host of secondary issues in the body. BioSET, by contrast, is a safe, effective, and totally non-invasive means of reducing or eliminating food intolerances and environmental sensitivities. BioSET is based on the principle of the energetic body as taught in Chinese medicine, and utilizes acupressure and muscle testing, as well as the latest in computer technology to screen and treat patients. BioSET helps to remodulate the body’s immune response by clearing energy blockages in the body caused by allergic reactivity. BioSET corrects the body’s energy flow thereby releasing the blockage and resetting the immune system. This process is called “clearing.” Clearing for a specific sensitivity helps to normalize the immune response resulting in a marked decrease in symptoms. Similarly, Zyto technology is a quick, safe, and non-invasive way to assess which foods or environmental stresses the immune system (no more blood work!). Utilizing the results of the Zyto scan, Lauren can also create customized homeopathic remedies based on your body’s specific needs to help strengthen appropriate immune responses while desensitizing the body to targeted allergens.

For more information or to make an appointment please contact Lauren@cornerstoneicare.com or 203-761-9700

Please visit our website: www.ihealthnow.org
**From the Desk of Lori Coda……**

Did you know that there is brain exercise that you can do to retrain your brain to produce new brainwave patterns? It’s called Neurofeedback.

Children on the Spectrum of Autism tend to have diffuse slowing of brainwave patterns. Simply put, this results in slowed processing. This has nothing to do with intelligence but rather the rate at which we process information. When we retrain the brain wave patterns we see positive results such as: increased attention; decreased anxiety; improved language; improved word find and improved conversational flow; self regulation and organization of sensory input; improved theory of mind; improved social skills and social relationships; increased overall processing and much more.

In addition, the change is measurable. The basic assessment is called a QEEG Brain Map. This is a non-invasive assessment that measures the electrical activity that occurs in the brain. The exciting thing is that after completing the recommended Neurofeedback protocols you can re-do the QEEG Brain Map and you will see actual measurable differences! To top it off, Neurofeedback is also non-invasive and fun.

Please feel free to read about some of my previous client’s experiences on my website: www.loricoda.com

Currently I have limited spaces available and I am booking for the summer as well.

If you are interested in scheduling a QEEG Brain Map and/or Neurofeedback or if you have any questions, please feel free to contact me at loricoda@gmail.com or by phone at 203 529-3300. I look forward to hearing from you,

Lori Coda

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**Nutrition News from Vicki Kobliner at Holcare Nutrition**

Check out our newly updated website at [www.holcarenutrition.com](http://www.holcarenutrition.com), and like us on Facebook. You can also sign up to receive our email newsletter featuring health topics, Question of the Month, and new Product Spotlight.

I recently returned from the Autism Research Institute’s Spring Conference where I was honored to give three lectures, as well as share a panel with some amazing nutrition experts.

First, I got to share the podium with Missy Olive, PhD for a discussion on Getting Picky Eaters to Eat. I talked about the nutrient deficiencies that can impact appetite, the role of food sensitivities, as well as the effect of tastes, textures, temperatures and seasonings on intake. Missy offered some wonderful insights as to how she works with even the most particular children using a behavior modification approach. Missy is a gifted therapist and she gets results! We often work together first to define food sensitivities and then plan a behavioral eating program around the new, safe food we want the children to learn to eat.

I also addressed the topic of **How to Choose the Right Interventions When the Choices Seem Overwhelming**, a primer on examining popular interventions, the research behind each and its application to an individual child. At the Nutrition session, I presented information about the ever growing array of special diets being utilized with kids on the spectrum. In addition to GFCF, SCD, GAPS and Low Oxalate, which many of you are familiar with, there are some new options to consider.

- The FODMAPs elimination protocol is currently being used for IBS sufferers with good success. It stands for Fermentable Oligosaccharides, Disaccharides, Monosaccharaides and Polyols, which are carbohydrates that ferment easily in the gut and cause bowel distress. Interestingly, pears and honey are high FODMAPs food, so some kids who don’t tolerate SCD may be reacting to these compounds and are good candidates for a FODMAPs trial.

- The Modified Atkins Diet or MADE (Modified Atkins Diet for Epilepsy) is gaining traction for kids with frequent or intractable seizures. It is a high protein, extremely low carbohydrate diet, which should only be implemented under professional supervision. MADE is based on the Ketogenic diet, but is more palatable, does not require hospitalization to begin, yet is equally effective in most cases. Any child with chronic seizures is a candidate.

- At the nutrition panel, we fielded many questions, and also offered sample of SCD legal and GFCF foods that were absolutely delicious. A company called BackOnTract supplied the samples, and they sell their products on line.

If you have seen increases in negative behaviors in the last month, allergies may be the cause. Consider Quercetin, Bromelain and/or Stinging Nettle to reduce inflammation and the histamine response.

For questions, to schedule an appointment or order supplements, call 203 834-9949 or email Traci@holcarenutrition.com