Managing Common Medical Co-Morbidities in Autism: Sleep, Feeding, and Behavior

Jeffrey P Baker MD PhD
Division of General Pediatrics
Primary Care Faculty; Duke Center for Autism and Brain Development
July 2018
Autism is bigger than any of us
The Primary Care Doctor’s Role in Autism

- Identification/Basic Management/Referral of Common Medical Co-Morbidities
  - Sleep
  - Feeding
  - GI issues

- Behavior
  - Meltdowns
  - Surviving the doctor’s office
Starting Point

Some Tricks of the Trade
Visual Supports in Autism

- Can be very helpful for children who have trouble communicating or using language

- Can be used to:
  - Help parents and children communicate—which can decrease frustration and lead to improved behavior
  - Help with learning new tasks or handling changes in routine

- Nice handout: Autism Speaks parent toolkit
  - https://www.autismspeaks.org/family-services/tool-kit
Picture Communication

PECS System
First/Then Boards

- Helps child to follow directions and learn new skills
- Two pictures: the desired activity, followed by the motivator
- Try first with an “easy” request, then attend to harder ones
Visual Timers

Useful for teaching children to wait before a preferred activity
Widely available
Visual Schedules

- After child understands concept of sequencing through First-Then Board, can develop more complex schedule
- Can be done for the whole day.
Visual Schedules.. For a particular task

Going to the Dentist

- visit
- hi
- wait
- Hi Doctor!
- sit in special
- take pictures
- Say AAHHH
- Keep mouth OPEN
- brush teeth
- rinse mouth
- all done
- goodbye
- present
- Time to go home
Social Stories

Simple stories created to teach children who can understand narrative, how to negotiate unfamiliar or new social situations; see [www.carolgreysocialstories.com](http://www.carolgreysocialstories.com)
Making Your Office Autism Friendly
Start by talking to the parents

- Have they tried to do anything to prepare their child?
  - Social story, acting out the visit

- Do they have any advice on how to make the visit successful? Are there strategies they use to handle challenging situations at home?
  - Effective rewards
  - First/then boards and visual schedules
  - Any rituals to follow
Visual schedule for the visit
What you can do

- Have some tools ready, such as visual schedules, first/then boards, and better rewards than stickers. State autism society may help

- Try what parent suggests
  - First/then board for blood pressure or vaccines
  - Visual schedule for exam

- Praise and reward if visit is successful

- For future visits: talk about preparation—practice, social story, bringing rewards or distracting toys
Problems
My Child Won’t Fall Asleep
Why kids with autism have sleep problems

- There do seem to be biological differences in homeostatic sleep drive
- Going to sleep marks a major transition--- and transitions are hard for these kids
- Many kids have trouble with self calming-- and need particular attention to sensory processing
Addressing sleep problems: Bedtime

- Set up a calming sleep environment
  - Bedroom should be dark, quiet, cool
  - Many children like a night light
  - White noise may be helpful

- Have a regular bedtime routine with several steps— a picture schedule is often helpful
  - Initially start this within an hour of the child’s “actual” bedtime- and then move earlier
Visual Bedtime Schedules

My Bedtime Schedule

1. Go to the bathroom.
2. Wash hands.
4. Wash face.
5. Put on pajamas.
6. Get into bed.
7. Read a story.
8. Good night hugs and kisses.
9. Turn off light.
10. Go to sleep.
Melatonin

- Can be effective for sleep-onset disturbances (not later awakening); supported by RCTs
- Side effects: overall benign; ?lower seizure threshold
- Initially give 1-3 mg 30 minutes before bedtime
- Can titrated by 1-3 mg every 1-2 weeks to max of 6 mg
Iron

- Iron is required as co-factor for dopamine-opiate system, which helps regular sleep-wake cycle
  - Many ASD kids at risk for iron deficiency
- Supported by 8-week open label study of 30 patients using 6 mg/kg/day
- Side effects: palatability, constipation
Clonidine

- Effective for both sleep-onset and later sleep disturbances
- FDA approved age 6+; Supported by open-label pilot studies in children age 4-16 years
- Side effects: hypotension (overdose can be dangerous!); rebound hypertension if discontinued abruptly
Clonidine: Dosing

- Available as 0.1 mg, 0.2 mg tablets and compounded solution (0.1 mg/ml)
- Children over 6: Start with .05 mg, raised by 0.05 mg every 1-2 weeks to max of 0.2 mg if under 40 kg, 0.3 mg if more than 40 kg
- Children 4-6 years: 2-3 mcg/kg/dose for younger children; titrate by 5-10 mcg/kg/day to max of 5-10 mcg/kg/dose
Late Night Awakening

- Often requires addressing behavioral reinforcers: parent co-sleeping, turning on TV
- Medications to consider:
  - Clonidine
  - Some neurologists use neurontin
My Kid Eats Eats Five Foods
Why do kids with autism get so picky?

- Sensory aversions
  - (ask about food textures, how child responds to face being wiped, hair combed, etc)
- “Insistence on sameness”: want to do the SAME foods over and over
- Emotions: Anxiety, Disgust
- Unrecognized GI Sx (constipation, reflux)
Autism Restricted Feeding: Prevention

- Even before picky feeding becomes significant—warn parent of the danger of being drawn into a downward spiral of ever more restricted eating
- Having regular mealtime routines at the table is even more important than in other young children
  - Offer 3 foods per meal, one can be a “favorite”
  - Avoid grazing
  - Try not to prepare solid foods the same way (ie, cut up chicken nuggets differently)
Introducing New Foods in the Extremely Restricted Feeder

- Choose new foods by matching color, texture
- Set up a time to expose and habituate child to new foods APART from mealtime and the table
  - Can be while food is being prepared
  - Encourage child to touch, handle, lick, and bite foods
  - Reward with praise or stimulation (ie, bubbles)
- Once child seems close to accepting a new foods, place on small plate near child’s own plate
What else can we do?

- Nutritional assessment (including hgb, ferritin, Vit D) and Vitamins, supplements if needed
- Treat associated constipation
- Periactin 0.1 mg/dose bid; give 2 weeks on and 2 weeks off
Feeding Therapy

- Feeding therapists include both speech and occupational therapists
  - Speech therapists
    - Tend to have stronger behavioral emphasis in therapy
    - Strong background in oral/motor disorders (issues with chewing, swallowing, holding food in mouth)
  - Occupational therapists
    - More emphasis on sensory processing (may be preferred by Medicaid for this reason)
- High functioning and older children: Consider psychologist, Eating Disorders Program
When is GI evaluation indicated?

- Keep eosinophilic esophagitis in the back of your mind
  - Signs of esophagitis
  - Failure to improve with 3-6 months feeding therapy
  - Severe feeding aversions (ie, not taking any solids)
- And refer if there are signs pointing to other GI pathologies (blood in stool, chronic diarrhea, etc)
Meltdowns and Problem Behaviors
Example

- 6 year old boy with minimally verbal autism
- Attends EC class in public school
- For past two months has had escalation in “tantrums”: 2-3 times a day will seemingly lose control, scream, hit or scratch others
- These take place at home and at school
- What would you like to know?
What caused the escalation?

- **Socio-environmental causes**
  - Changes in school, including teacher turnover
  - Stress or challenges at home

- **Medical causes or co-morbidities**
  - Anything causing pain: look for signs suggesting constipation, reflux, dental pain, etc
  - Poor sleep
  - Other medications that might cause irritability—especially stimulants, SSRIIs
Analyze the behavior

- Remember that disruptive behaviors, even if they seem random, always serve a purpose.

- Take a brief “ABC” behavioral history
  - Antecedents: What precedes the behavior?
  - Behavior: What happens? How severe, long?
  - Consequences: What follows the behavior? How do caretakers respond?

- You might get some real insights; if not, refer to a behavioral specialist (who will likely have parents complete an ABC log).
Some General Points

- Try to distract if warning signs are appearing
- Ignore negative behavior if minor
- Try if at all possible not to reward the behavior
- If behavior escalates into full tantrum, use time out as a “cool down.” Place child in safe area. Don’t escalate, use loud voice.
- If behavior is creating safety concerns, consider emergency intervention options
Medication Options

- Risperidone and aripiprazole have strongest evidence support for improving irritability and problem behaviors— but significant side effects
  - Sedation, constipation
  - Weight gain, insulin resistance, dyslipidemia, hyperproactinemia (most with risperidone)
  - Extrapyramidal symptoms— tremor, dyskinesia, akathisia, rigidity
Other Medication Options for Irritability
(Not FDA approved; Over 6 years old)

- **Alpha-adrenergic agonists:**
  - Guanfacine Clonidine: more sedating but may be more effective
- **Amantadine often used by psychiatrists**
  - 50 mg bid for one week, then 100 mg bid in children over six
- **Treat other psych co-morbidities if present**
Autism and ADHD

- Significant overlap with ASD—may be associated with bigger behavior issues, later Dx of ASD

- Stimulants more likely to be poorly tolerated—yet can be quickly assessed.
  - Start with low dose, short acting!

- Sometimes Sx seem better described as poor attention regulation and reactivity—which may be better treated with guanfacine
Autism and Anxiety/OC

- Again, there is significant overlap
- SSRIs can sometimes significantly relieve severe fears or obsessive worries
- But side effects more common
  - “Activation” symptoms: irritability, poor sleep, hyperkinesia
  - Try CBT and counseling for higher functioning kids
  - With meds: Start with low doses and increment slowly
Resources for Problem Behavior

Keep the Big Perspective