Nocturnal Enuresis: What a Nightmare!

Pediatric Urology
Melissa Young, CPNP

Objectives

- Learner will be able to recognize factors contributing to nocturnal enuresis
- Learner will be able to describe the behavior modifications needed to treat nocturnal enuresis
- Learner will be able to explain how to utilize the nocturnal enuresis alarm
- Learner will be able to apply the nocturnal enuresis plan of care to their patient populations

Nocturnal Enuresis

- Approximately 500 nocturnal enuresis referrals per year
- 3-4 month wait for a new patient appointment
  - Family dissatisfaction
  - PCP dissatisfaction
  - Delay in treatment
PEES Clinic

- Pediatric Enuresis Education Session
  - 1 evening per month
  - 6pm-8pm in the Riley Outpatient Center Ruth Lilly Auditorium
  - Led by pediatric urology NPs
  - NO COST
  - Receive the same information that they would receive at their first visit-PLUS!
  - When referral received, family is offered the next PEES clinic
    * If cannot/will not attend, appointment with provider is made
  - If no success after instituting plan of care, can call for an appointment with a provider

PEES Clinic

- 7 sessions conducted last year
- 225 patients signed up for PEES
- 111 patients/families attended
  - Opened up 53 hours in our provider schedules
- Patient ages: 3-16 years old
  - Majority 5-12 years old
- Information sent out to all pediatricians to encourage referrals
  - Receive a note that their patient attended
- Physician liaisons supported and advertised

Pediatric Enuresis Education

Pediatric Urology
Shelly King, CPNP & Melissa Young, CPNP
Thank you

• Busy
• Frustrated
• Worried child exposure
• Health issue
• Psychological impact
• Financial impact
• Stressed

YOUR NOT ALONE

Goals

• Create awareness that bed wetting is a common medical condition that should be treated
• Change perception around bed wetting to remove the stigma
• Provide accurate information/education for patients and families about enuresis
• Discuss common challenges related to enuresis
• Provide patients and families with a behavior modification plan to accelerate the resolution of enuresis

Nocturnal Enuresis - What do we know?

• Nocturnal enuresis – uncontrollable loss of urine at night in people over age 5
• Runs in families (genetic)
• May resolve at same age as parent
• More males than females
• More common in ADHD kids
• Serious impact on emotional well-being

How Common is it?

6 million in U.S.

• 15% of 5 yr. olds,
• 10% of 6-7 yr. olds
• 5% of 10 yr. olds
• 1% of 18 yr. olds
• Resolves at a rate of 15% per year
Myths

- Poor parenting
- Child lazy or bad
- Wants to irritate parents, rebellion, attention
- Not deliberate
- Deep sleeper
- Punishment will stop wetting
- Waiting as long as possible to treat is best

Etiology (Causes)

- Constipation
- Small bladder-daytime frequency
- Hormone imbalance (ADH)
- Sleep arousal disturbance—doesn’t sense full bladder
- Early toilet trainers – holders
- Stress; move, divorce, death, illness, abuse
- Diabetes
- Sleep apnea — snoring
- Urinary tract infection
- Structural problem - rare

Treatment – Five Necessary Steps

- Treat Constipation !!!!!
- Fluid Shifting (6-8oz q 60-90min)
- Improve daytime voiding habits
- Avoid 6 Cs (caffeine, carbonation, citric acid, chocolate, colored dyes, and constipation) ALSO Avoid dairy products in evening (milk, ice cream)
- Void/Double void at bedtime
Constipation

- Infrequent BM
- Frequent (>2x/day)
- Hard small stools
- Abnormally large stool
- Painful, blood streaks
- Stool accidents (streaks, smears)
- Retentive behavior (hides)
- Sits, strains for a long time

Constipation

- Squishes bladder—decreases capacity
- Over-stretched colon decreases sensation
- Tummy aches common
- Snowball effect—problem just keeps getting worse
- Can lead to daytime problems
**Constipation Management**

- Increase fluid (15ml/lb/day – minimum) water bottle at school
- Increase fiber (age plus 5 grams/day)
- Timed toilet/gastrocolic reflex - sit 10-15 min.
- Toilet posture
- Exercise
- Medications/bowel clean out
- Severe/GI referral

**Constipation Management - Breaking up is hard to do!!!!**

- Holding stool very hard habit to break (can take up to a year)
- Miralax (safe in healthy kids, not habit forming)
- >4 yr. old 17gms or 1 capful/8oz fluid (Gatorade)
- Clean out requires several doses, 4-7 caps over 1-2 days
- Clean out may require laxative, enema or suppository initially (these are habit forming)
- Stay on maintenance miralax (or any generic)
- Stool should be pudding like consistency, before weaning off slowly

**Fluid Shifting**

- Not enough to drink less at night
- Drink 6-8 oz. every 2 hours (day)
- Eliminate bladder irritants after 4pm (caffeine, carbonation, citric acid, chocolate, red and purple dyes, and dairy products)
- From 4pm to dinner – 12 oz. total
- Sips at bedtime if medications taken
- What about sports, practices in evening
Bad Bladder Habits = Wetting Accidents

Lack of coordination between bladder contraction and sphincter relaxation results in incomplete emptying, and overactive bladder.

Healthy Bladder Habits

- Pee every 2 hours NO WAITING till last second
- Stop pre-occupation with playing, work, video games, whatever causes delayed urination
- Relax, slow down, empty to completion, use proper toileting posture
- Anxiety in public bathrooms (nurses office)
- Note to school
- Charts, computerized recording, watches

Proper Toilet Posture

- Child should sit on toilet without holding self up, shouldn’t feel like they might fall in
- Legs apart, pants at ankles
- Feet flat on floor or foot stool
- Sit until full strong stream that tapers off (empties to completion)
- Relax, slow down, count to 10 and do it again
**Avoid Bladder Irritants**

<table>
<thead>
<tr>
<th>OK to Drink</th>
<th>NOT OK to Drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Water - Non carbonated</td>
<td>• Caffeine</td>
</tr>
<tr>
<td>• Clear flavored sports drinks</td>
<td>- Soda (Coke, Pepsi etc.)</td>
</tr>
<tr>
<td>• All natural juice (no artificial colors)</td>
<td>- Tea</td>
</tr>
<tr>
<td>- Apple, white grape</td>
<td>- Chocolate</td>
</tr>
<tr>
<td>• Nectars: peach, pear, apricot</td>
<td>- Carbonation (any drink with bubbles)</td>
</tr>
<tr>
<td>• Decaffeinated iced tea</td>
<td>- Artificial colors</td>
</tr>
<tr>
<td>• Ovaltine powder to make</td>
<td>- Red, Blue &amp; Purple</td>
</tr>
<tr>
<td>chocolate flavored milk</td>
<td>- Kool-Aid, Hawaiian Punch, Gatorade</td>
</tr>
<tr>
<td><strong>no dairy at bedtime</strong></td>
<td>- Citric acid</td>
</tr>
<tr>
<td></td>
<td>- Orange juice, Lemonade &amp; Grapefruit juice</td>
</tr>
<tr>
<td></td>
<td>- Vitamin C &amp; Vitamins with artificial colors</td>
</tr>
</tbody>
</table>

**Double Pee at Bedtime**

- Pee wait 10-15 minutes pee again.
- Make sure your going to bed with empty bladder
- Particularly important in kids who have abnormal daytime voiding habits
- Relaxation exercises – open the pelvic floor to improve emptying

**Exercises**

1. Partial squats
2. Invisible chair
3. Cobra
### Enuresis Alarm

- Most effective at changing behavior
- Works well with sleep arousal disturbance
- Success long lasting
- Requires strong commitment for parent and child
- No risk (as with some medications)
- Can use parent's voice for kids with high anxiety
- Can be vibrating for hearing impaired
- Highly variable pricing ($20-$200)
- Insurance unlikely to cover but flex spending accounts typically accept

### Desmopressin - DDAVP

- Anti-diuretic hormone
- Taken at bedtime with a sip of water
- Stop fluids 2 hours before and 8 hours after
- Maximum dose is 3 tabs (0.6mg) usually start at 0.4mg and increase after one week if wetting persists. Decrease to 0.2mg if dry at one week.
- Works in 50-60% patients
- Water intoxication

Side effect: related to excess fluid intake resulting in water toxicity (hyponatremia) signs headache, nausea, vomiting and seizures, nasal spray not recommended

### Bladder Relaxants

- Increase capacity, decrease over activity
- Works best in patients with daytime frequency
- Often adjunctive therapy to DDAVP or alarm
- Longer acting or timed released versions maybe more effective (last longer)

Side effects: dry mouth, restless, constipation, drowsiness, flushing of skin
Imipramine

- Antidepressant
- Alters sleep and waking pattern
- Improves ability to hold urine (increases capacity)
- Not for first line therapy, older patients
- Don’t use with anticholinergics, antidepressants, ADHD or other behavioral meds
- Monitor closely – increase or decrease dose slowly
- Not for patients with cardiac history

SIDE EFFECTS: tachycardia, arrhythmia, HTN, orthostatic hypotension, personality changes

Keep out of reach of children. Overdose lethal

Nocturnal Enuresis

- Physical cause unlikely: no wetting when awake, and no UTI (urinary tract infection).
- Non-medical doesn’t mean no treatment
- Physical cause possible: wetting during the day and at night, recurrent UTIs, significant stool incontinence and constipation

NEEDS APPOINTMENT

Remember……..

- No one wants to be wet at night
- Be sensitive allow child to express feelings - regular pep talks needed
- Track progress (chart, calendar, computer)
- Reward hard work and consistent effort (key)
- Celebrate progress (wetting is involuntary)
- Minimize stress - NO negative reinforcement
- Engage patient in decision to treat
- Simplify clean up
- Give child age appropriate responsibility
Putting it All into Action!

- Following the recommended diet changes, fluid restricting, using correct toileting posture, and managing constipation are the **KEY** to nighttime dryness
- These things need to be in place long before you consider any other management
- More than 50% of kids stop wetting with these behaviors alone
- No one gets better if these tips aren't followed
- Now we'll talk about how to use the alarm and give you tools to use at home to help you and your child to become successful!

Enuresis Alarm

- Bedwetting alarms are made for children who are “deep sleepers”
  - Makes it easier for the child to wake up to the urge to pee
- Parents MUST be available during the first week or two of training to make sure the child wakes up when the alarm goes off
  - Use a wet washcloth, turn lights on, stand them up, etc.
  - Must go to the bathroom immediately
  - Give your child a code word when they wake up and ask them if they remember the code word in the morning

https://www.youtube.com/watch?v=S-gGcEjpcJ8
Enuresis Alarm

- Always direct your child to go pee just before going to bed
- Have your child repeat: “I will wake up and go to the bathroom when my alarm goes off” 15 times
- Talk with your child about the importance of stopping their pee as soon as they hear the alarm
- DO NOT turn off the alarm for your child
- DO turn on lights, gently move your child or use a cold washcloth to help them wake up

Enuresis Alarm

- Child should finish peeing, change any wet clothing or bedding, and put the alarm back on
- May take 4-6 weeks for the child to awaken on their own with the alarm and up to 12 weeks to no longer need the alarm
- Continue using the alarm for 4 weeks after wetting has stopped
- If the child starts wetting again (which does not happen often), then begin using the alarm again

Enuresis Alarm

- May help to have an earlier bedtime to avoid being overtired and help them to respond to the alarm more quickly
- Use a night light to help the child wake up and eliminate any fear of the dark
- Praise your child for any progress
  - Keep track of their progress on a calendar
## Avoid Bladder Irritants

**OK to Drink**
- Water - Non carbonated
- Clear flavored sports drinks
- All natural juice (no artificial colors)
  - Apple, white grape
- Nectars: peach, pear, apricot
- Decaffeinated iced tea
- Ovaltine powder to make chocolate flavored milk
  - **no dairy at bedtime**

**NOT OK to Drink**
- Caffeine
  - Soda (Coke, Pepsi etc.)
  - Tea
  - Chocolate
- Carbonation (any drink with bubbles)
- Artificial colors
  - Red, Blue & Purple
  - Kool-Aid, Hawaiian Punch, Gatorade
- Citric acid
  - Orange juice, Lemonade & Grapefruit juice
- Vitamin C & Vitamins with artificial colors

## Fluids
### How Much to Drink and When to Stop

- Drink 6-8 ounces of fluid every 1-2 hours until 4pm
  - Follow elimination diet
- Between 4pm and 6pm, limit drinking to 4-6 ounces
  - Popsicles, watermelon, milk with cereal, Jell-O and other high water content foods count
- Drink no more than 4-6 ounces of fluids with dinner
- Do NOT drink anything else after dinner
  - Stop drinking at least 2 hours before bedtime
    - If bedtime is 9pm, the last drink should be with dinner or no later than 7pm

## Fluid Measurement

<table>
<thead>
<tr>
<th>Fluid Measurement</th>
<th>mL</th>
<th>Oz</th>
<th>ml</th>
<th>Oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 cup</td>
<td>8</td>
<td>1/4</td>
<td>12</td>
<td>1/2</td>
</tr>
<tr>
<td>1/4 cup</td>
<td>4</td>
<td>1/8</td>
<td>6</td>
<td>3/8</td>
</tr>
<tr>
<td>1/8 cup</td>
<td>2</td>
<td>1/16</td>
<td>3</td>
<td>1/8</td>
</tr>
<tr>
<td>1/16 cup</td>
<td>0.5</td>
<td>1/32</td>
<td>1</td>
<td>1/16</td>
</tr>
</tbody>
</table>
Changing How Your Child Goes to the Bathroom

- MUST go to the bathroom every 2 hours
- Use sticker charts or a reward system to help remind the child
  • Children respond well to rewards and recognition
- Consider using a watch to remind child to go
  • Can be set to alarm/vibrate every two hours
  • Eliminates embarrassment of being reminded in front of peers
  • Allows child to take responsibility for voiding

Changing How Your Child Goes to the Bathroom

- MUST follow these steps each and every time
- If sitting, make sure child can sit without needing to hold self up
  • Use stool or insert
  • Make sure feet are flat on the floor
  • Legs should be spread WIDE with pants pulled all the way down to ankles
- If standing, make sure pants are pulled down enough to direct stream down into toilet
- Take a few deep breaths and RELAX
  • Listen for waterfall
  • Relax until child empties completely
- Double Void
  • Have child try to go one more time

Correct!
How Pooping Affects Peeing

- Constipation
  - Not pooping often enough
  - Large, hard, or difficult to pass poop
  - Not emptying poop completely
- Leads to
  - Not emptying the bladder all the way
  - Difficulty knowing when to go pee
- Frequency & Urgency
  - Having to pee often
  - Day and/or night time accidents
  - Frequency & Urgency
  - Having to rush to the bathroom or attempt to hold to avoid accidents
  - Urinary tract infections

Prevent and Treat Constipation

- Make sure your child drinks plenty of fluid—mostly water—during the day
  - Follow Elimination Diet
- Eat a high fiber diet
  - Fruits, vegetables, grains
  - See guidelines in folder
- Establish a routine
  - Timed sitting (5-10) minutes after a meal
  - Sit with feet supported, pants down around ankles and in a relaxed position
  - May need a toilet insert

Prevent and Treat Constipation

- Stool Softeners
  - Miralax and Docusate Sodium
  - Use if your child does not have a soft, mushy, daily bowel movement
  - May slowly decrease dose once child reaches this point, until the lowest dose is found to keep poop soft & mushy on a daily basis
- If constipation continues to be an issue
  - May need a bowel cleanout
  - May need to see a Gastroenterologist
Diaries

- Help to keep track of
  - exactly how/ how often your child is going to the bathroom to pee & poop
  - How much fluid is taken in
  - Any trends or relationships
  - Any other symptoms
- Should complete diaries over a 1 month period
Diary - Week Four Overnight

Next Steps

- Get started!
- Elimination diet
- Correct toileting posture
- Constipation prevention and management
- Fluid management
- Enuresis alarm

- Complete diaries
- Contact the pediatric urology office for an appointment if there has been no success after:
  - Making all of the changes discussed
  - Completing all of the diaries

PEES Feedback

- Easy to understand
- Given in an interesting way
- Not the same as what they've heard before
- Over half felt the time/location was convenient
- Wished PCPs had given them this information sooner
- Had not implemented behavior modifications or constipation management
- Had no previous knowledge of the alarm
- Alarm had been recommended but did not know how to actually use it
PEES Plans for the Future

- Hope to include more sessions at satellite locations
- Implement telemedicine
- Increase referrals from PCP offices/get increased PCP support
- Continue to provide quality information in a timely manner for these patients

2017 PEES Dates

- March 2
- April 6
- May 25
- June 1
- July 6
- August 3
- September 7
- October 5
- November 2
- December 7

Questions & Referrals

Riley Hospital for Children
Pediatric Urology

Phone (317) 944-8966
Fax (317) 948-3773