Benign infant and toddler spells can be challenging to differentiate from seizures. It’s critical to recognize the red flags that point to a possible infant seizure, particularly infantile spasms, which need to be urgently treated.

Examples of benign, non-epileptic infant and toddler spells include benign shuddering attacks, breath-holding spells, infantile gratification, neonatal sleep myoclonus, non-epileptic staring spells, normal newborn ankle clonus, stereotypies (repetitive movements and sounds) and tremors while breastfeeding. Examples of infant and toddler seizures include atypical absence seizures, focal seizures, generalized seizures and infantile spasms.

**ASSESSMENT**

Ask parent to bring videos to PCP appointment. Observe video(s) and gather a detailed history from family. Helpful questions include:

- Do episodes occur when the child is asleep or awake?
- If asleep, does the child stay asleep during the spell (suggestive of neonatal sleep myoclonus)? Or does the episode waken the child (more likely to be a seizure)? Episodes that occur during the wake-to-sleep transition may point to seizure.
- If episodes only occur when asleep, what happens if a parent rapidly wakens the child? Episodes that quickly resolve when child is wakened are more likely to be benign.
- Is the movement rhythmic (suggestive of seizure) or non-rhythmic?
- Can parents interrupt the episode/distract the child from doing it? If yes, episode is less likely to be epileptic. Parents should try physical interventions (such as pinching the baby or lightly touch the eyelashes), not just calling a name or waving a hand.
- Do episodes only occur in one situation? For example, infantile gratification may only occur in a car seat or highchair; breath-holding spells may occur only when child is upset.
- Spells that are <10 seconds are more likely to be benign. Seizures tend to last >10 seconds.

**RED FLAGS FOR BENIGN INFANT AND TODDLER SPELLS**

Make a referral if one or more of these statements is true.

- Spells occur in a cluster as child is waking up or falling asleep
- Spells occur during wake-to-sleep transition
- Spells occur with baby’s eyes open and staring
- Spells cannot be interrupted by physical stimuli
- Spells are followed by a period of altered mental status or sleepiness (post-ictal behavior)
- Spells that lasts >10 seconds
- Sustained (>10) beats of ankle clonus, particularly if asymmetric

**WHEN TO REFER**

If concerned for **infantile spasms** (see above list), call Physician Priority Link® (PPL) and ask for the pediatric neurologist on call.

If red flags for **infant or toddler seizure**, refer to pediatric neurology and order a routine EEG. EEG results will be available within a week. If EEG shows seizures, call PPL to discuss options. When making referral, include detailed description of the episodes. Encourage family to share videos with neurology before the appointment (have them call pediatric neurology at 513-636-4222 for instructions) or bring videos to the appointment.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

For urgent issues or to speak with a pediatric neurologist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.

To refer a patient to pediatric neurology, call 513-636-4222.
# Benign Infant And Toddler Spells Versus Seizures

## Patient Presents

Gather a detailed history and observe video(s) with parent. Helpful questions include:

- Do episodes only occur in one situation?
- Do episodes occur when the child is asleep or awake?
- If asleep, does the child stay asleep during the spell (suggestive of neonatal sleep myoclonus)? Or does the episode waken the child (more likely to be a seizure)?

Episodes that occur during the wake-to-sleep transition may point to seizure.

## Assessment

### History, Neurological and Physical Exam Red Flags for Infant or Toddler Seizure

- Spells occur in a cluster as child is waking up or falling asleep
- Spells occur during wake-to-sleep transition
- Spells occur with baby’s eyes open and staring
- Spells cannot be interrupted by physical stimuli

- Spells are followed by a period of altered mental status or sleepiness (post-ictal behavior)
- Sustained (>10) beats of ankle clonus, particularly if asymmetric
- Spells that last >10 seconds

### Any Red Flags?

- Yes

Refer to pediatric neurology and order a routine EEG (30-minute outpatient EEG). EEG results will be available within a week. If EEG shows seizures, call Physician Priority Link to talk through options.

- When making the referral, include detailed description of the episodes to assist with triage.
- Encourage family to take multiple videos to share with the pediatric neurologist.

- No

Concerns for Infantile Spasms Based on Assessment?

- Call Physician Priority Link and ask for the pediatric neurologist on call.

- No concerns for Infantile Spasms?

Typical onset for infantile spasms is 6–12 months old. Risk factors are hypoxic-ischemic encephalopathy, brain malformations and some genetic syndromes. But a large number of cases are idiopathic.

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For urgent issues or to speak with a pediatric neurologist on call 24/7, call the Physician Priority Link at 1-888-987-7997.