

## Simple Febrile Seizure Clinical Practice Guidelines

This clinical guideline has been developed to ensure appropriate diagnosis, evaluation, and treatment of otherwise healthy patients presenting within twelve hours of a simple febrile seizure. Please direct any questions to Dr. Jennifer Jewell, BBCH Pediatric Hospitalist, 662-2541.

### CRITERIA FOR THE DIAGNOSIS OF SIMPLE FEBRILE SEIZURE

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| Between 6 months and 5 years of age                           | Seizure lasting less than 15 minutes                             |
| Non-focal, generalized seizure, involving all limbs           | No severe metabolic disturbance                                  |
| No more than a single seizure per 24-hour period              | No evidence of intracranial infection                            |
| No other neurologic diagnoses or history of afebrile seizures | Fever ( $\geq 38^{\circ}\text{C}$ ) present prior to the seizure |

### Evaluation and Treatment

The laboratory, radiographic, and neurologic evaluation should be aimed at diagnosing the etiology of fever as outlined below. Although the majority of simple febrile seizures are associated with viral illnesses, consider serious bacterial infections when appropriate, especially in children less than 36 months of age. Treatment should be directed at proven or presumed causes of the fever and not directed at the etiology of the seizure activity.

### LUMBAR PUNCTURE (for CSF glucose, protein, cells, culture, Gram stain, and potentially, herpes PCR)

- Perform if the patient has a history or physical exam suggestive of meningitis or intracranial infection
- Perform if the patient has fever, seizure, and meningeal signs or symptoms
- Consider if the patient is between 6 and 12 months of age and has not received the recommended doses of HIB or *Streptococcus pneumoniae* vaccines OR if the immunization status cannot be accurately determined
- Consider if the patient has fever, seizure, and antibiotic pretreatment

EEG is not indicated. NEUROIMAGING is not indicated unless focal abnormalities on physical exam are identified.

LABORATORY EVALUATION should not be performed routinely for the sole purpose of identifying the etiology of the simple febrile seizure, but maybe indicated if the source of fever is uncertain or if the diagnosis is unclear.

Consider CBC, blood culture, serum glucose, electrolytes, magnesium, calcium, phosphorous, urinalysis, and urine culture.

### Parental Education

- The risk of febrile seizure in the general population is between 2% and 5%. Simple febrile seizures are benign, and the long-term prognosis is excellent.
- There is no evidence that treating simple febrile seizures with anti-epileptic drugs decreases the incidence of epilepsy later in life or results in improved cognitive outcomes.
- If a patient is less than 12 months of age at the time of the first simple febrile seizure, the risk of a second simple febrile seizure is 50%. If a patient is over 12 months of age at the time of the first simple febrile seizure, the risk of a second simple febrile seizure is 30%. Following a second simple febrile seizure, the risk of future simple febrile seizures is 50%, regardless of the age of the initial simple febrile seizure.
- The risk of epilepsy is minimally increased from 1% to 2.4% in patients who have a simple febrile seizure and is highest in patients with recurrent simple febrile seizures whose initial simple febrile seizure occurred prior to 12 months of age.
- In rare situations, extreme parental anxiety about recurrent, severe simple febrile seizures warrants prophylaxis at the beginning of each febrile illness. This is not routinely recommended. Oral diazepam (0.33 mg/kg Q8 hours at the beginning of a febrile illness) is the only medication recommended in such circumstances. Antipyretics and anti-epileptics have not been recommended for prevention of simple febrile seizures.
- Rectal diazepam can be prescribed for use during prolonged (over 5 minutes) febrile seizures in selected cases.

This clinical guideline is based upon AAP Clinical Practice Guidelines: *Pediatrics* (2008) 121:1281-6 and *Pediatrics* (2011) 127:389-94.

Algorithms are not intended to replace providers' clinical judgement or to establish a single protocol. Some clinical problems may not be adequately addressed in this guideline. As always, clinicians are urged to document management strategies. Last revised February 2011 - JJ.

