



## Brief

The observer reports a **sudden, brief episode** (< 1 minute)

## Resolved

The episode is **now resolved**

Unremarkable physical exam

## Unexplained

**Diagnosis of exclusion**

No explanation after conducting history and physical exam

## Event

≥ 1 of the following:

- **Central cyanosis or pallor**
- Absent, decreased, or irregular **breathing**
- Change in **tone** (hyper- or hypotonia)
- Altered **level of responsiveness**



**< 1 YEAR OLD**

Must meet **all the criteria** to diagnose a BRUE

If an **explanation is found**, then it's **NOT** a BRUE



### LOW RISK

- Well child
- No red flags
- Recurrence is unlikely

### HIGH RISK

- **Red flags present**
- Requires further investigations



### RED FLAGS

- Young age (< 60 days old)
- > 1 episode
- Event lasting > 1 minute
- Unwell child
- History of prematurity
- Family history of sudden cardiac death
- History of feeding or respiratory problems
- Social concerns
- Required CPR by medical professional
- Abnormal physical exam



### DIFFERENTIAL DIAGNOSES

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▪ Airway obstruction</li> <li>▪ Laryngospasm</li> <li>▪ Gastroesophageal reflux (GER)</li> <li>▪ Apnea (eg. central, apnea of prematurity)</li> <li>▪ Congenital heart disease</li> <li>▪ Arrhythmia</li> </ul> | <ul style="list-style-type: none"> <li>▪ Hypoglycemia</li> <li>▪ Infection (eg. sepsis, bronchiolitis, pertussis, etc.)</li> <li>▪ Seizures</li> <li>▪ Inborn errors of metabolism</li> <li>▪ Toxic ingestion</li> <li>▪ Non-accidental injury</li> </ul> |
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### PRESENTATION

- **Event Hx:** duration, color change, change in tone, respiratory effort, relation to feeds, symptoms pre-event, symptoms post-event, resuscitative measures used, sick contacts
- **PMHx:** prematurity, NMS results, development, seizures, reflux
- **FHx:** unexplained deaths, seizures, arrhythmias, family member's immunization status
- **SHx:** who lives in the home, who cares for the child, stressors

### PHYSICAL EXAM

- **Thorough head to toe physical exam**
- **R/O NAI** – evidence of neglect, bruises to the pinna, neck or abdomen, any injury to the genitalia, fundoscopy, palpation of ribs and long bones

### MANAGEMENT OF LOW RISK BRUE

SHOULD	SHOULD NOT	MAY	NEED NOT
<ul style="list-style-type: none"> <li>▪ Educate caregivers</li> <li>▪ Shared decision-making with parents</li> <li>▪ Resources for caregiver including CPR training</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lab work, lumbar puncture, cultures, CXR, EEG, ECHO, GER studies</li> <li>▪ Home cardiorespiratory monitoring</li> <li>▪ Acid suppression or AED</li> </ul>	<ul style="list-style-type: none"> <li>▪ 12-lead ECG</li> <li>▪ Pertussis testing</li> <li>▪ Brief monitoring with continuous pulse oximetry and serial observations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Viral respiratory panel</li> <li>▪ Urinalysis, glucose, bicarb, lactate</li> <li>▪ Neuroimaging</li> <li>▪ Admit to hospital solely for cardiorespiratory monitoring</li> </ul>

If there is an explanation or risk factors for a high-risk event, then **investigate accordingly!**

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