Evaluation Process and Checklist

History of Circumstances Surrounding Symptoms

Syncope

• What was patient doing at time of episode?

• When did it occur?
  - With exercise
  - While driving
  - In hot environment (e.g., shower)
  - After prolonged standing
  - With identifiable trigger (e.g., sight of blood)
  - During emotional stress

• Patient’s position at time of episode
  - Lying down
  - Sitting
  - Standing

• How long was patient unconscious?

• How often is patient experiencing the symptoms?

• Associated symptoms
  - Dizziness
  - Pallor
  - Cold sweat
  - Nausea
  - Loss of bladder or bowel control
  - Seizure

Dietary

• Amount of food and beverage consumed prior to episode

Breakfast consumed on day of episode?
  - Yes
  - No

• Amount of fluid consumed per day (teens target 50 – 70 oz. per day)

Caffeine consumed regularly and/or on day of episode?
  - Yes
  - No

• Amount of salt present in diet

Number of times patient urinates per day

Color of urine

Palpitations

• With syncope?
  - Yes
  - No

• With exercise?
  - Yes
  - No

• Rate
  - Mild (<100 bpm)
  - Moderate (100 – 150 bpm)
  - Racing (>150 bpm)

• Can patient tap out rate?
  - Yes
  - No

• How long did palpitations last?

• How often is patient experiencing palpitations?

Family History

- Sudden cardiac death/SIDS
- Deafness
- Cardiomyopathy
- Long QT Syndrome
- Implantable defibrillator or pacemaker
- Brugada Syndrome
- Syncope

Physical Examination

- Normal
- Abnormal

Electrocardiogram

- Read by pediatric cardiologist or pediatric electrophysiologist

Physician-to-Physician Consultation Line

216-UH4-ADOC (216-844-2362)

Physician Access Line

(Patient transfers, admissions referrals, emergency department referrals, appointments)

216-UH4-PEDS (216-844-7337)

Rainbow.org
**The Congenital Heart Collaborative**

University Hospitals Rainbow Babies & Children's Hospital and Nationwide Children's Hospital have formed an innovative affiliation for the care of patients with congenital heart disease from the fetus through adulthood. The innovative collaboration provides families with access to one of the most extensive and experienced heart teams – highly skilled in the delivery of quality clinical services, novel therapies and a seamless continuum of care.

**Syncope and Palpitations**

Syncope and palpitations are common complaints in the pediatric and adolescent age groups. Initial workup for patients presenting with palpitations is often aimed at ruling out an arrhythmia. Palpitations may be due to autonomic nervous system dysfunction that is the cause of dizziness and syncope; therefore, the workup for these symptoms (palpitations, dizziness and syncope) is along a continuum. The diagnostic and therapeutic modalities that are most appropriate for the individual patient can be determined after completing a patient history, physical examination, family history and ECG.

**Guidelines and Management**

If physical examination, ECG and family history are negative, the following algorithm can be used:

### Syncope, Palpitations and Dizziness (Pediatric/Adolescent)

<table>
<thead>
<tr>
<th>History of Symptoms</th>
<th>Palpitations Occur</th>
<th>Recommended Therapy</th>
</tr>
</thead>
</table>
| Syncope Occurs      | • With exercise
• While driving
• Age 6 or under
(not related to breath holding)
• With startle or during an argument/intense emotional state |
|                     | • Associated with syncope
• Caused by exercise
• >2 episodes per month and/or lasts longer than 15 minutes |
| Refer to Cardiology |

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| Palpitations Occur  | • With urination or defecation
• With hair brushing
• With identifiable trigger (e.g., sight of blood) |
|                     | • Occurs less than once per month and lasts less than 15 minutes |
| Educate as indicated: |
| • Avoid the trigger
• Dietary changes |

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</tr>
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| Syncope Occurs      | • With hot environment (e.g., shower)
• With prolonged standing
• <2 episodes |
|                     | • Presuming the physical exam and ECG are normal and the family history is negative for sudden death and cardiomyopathy, no need to be referred, unless palpitations become more frequent or last longer |
| Refer to Cardiology |

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| Palpitations Occur  | • Consume breakfast regularly
• Increase fluid intake to 60–90 oz.
• Decrease/eliminate caffeine
• Increase dietary salt intake |
|                     | • Symptoms improve after 1 week |
| Educate as indicated: |
| • Avoid the trigger
• Dietary changes |

### Why Children Faint

**Autonomic (Automatic) Nervous System**

- Things you think about doing: walking, writing, chewing
- Things your body does on its own without thinking: breathing, blinking, maintaining blood pressure

**Comparison: Normal vs. Abnormal Autonomic Nervous System**

- Child stands up
- Blood redistributes to the legs
- Autonomic nervous system constricts blood vessels
- Sends blood to heart
- Blood pressure maintained
- Nonautonomic
- Things you think about doing: walking, writing, chewing

**Additional Reasons Children Faint**

- Child more susceptible to fainting with:
  - Prolonged standing or kneeling
  - Heat
  - Intercurrent illness

**Symptoms**

<table>
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<tr>
<th>YES</th>
<th>NO</th>
</tr>
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<tbody>
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<td>NO</td>
<td>Symptoms improve after 1 week</td>
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| YES | Educate as indicated:
• Avoid the trigger
• Dietary changes |

**Recommended Therapy**

If physical examination, ECG and family history are negative, the following algorithm can be used:
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Guidelines and Management
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**History of Symptoms**
- **Syncope Occurs**
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- **Palpitations Occur**
  - Associated with syncope
  - Caused by exercise
  - >2 episodes per month and/or lasts longer than 15 minutes

**Recommended Therapy**
- **Refer to Cardiology**
- **Educate as indicated:**
  - Avoid the trigger
  - Dietary changes

**Address dietary concerns:**
- Consume breakfast regularly
- Increase fluid intake to 60–90 oz.
- Decrease/eliminate caffeine
- Increase dietary salt intake

**Yes**
- Symptoms improve after 1 week

**No**
- Presuming the physical exam and ECG are normal and the family history is negative for sudden death and cardiomyopathy, no need to be referred, unless palpitations become more frequent or last longer

**History of Symptoms**
- **With urination or defecation**
- **With hair brushing**
- **With identifiable trigger** (e.g., sight of blood)

- **With hot environment** (e.g., shower)
- **With prolonged standing**
- <2 episodes

- **Occurs less than once per month and lasts less than 15 minutes**

**Refer to Cardiology**

**Educate as indicated:**
- Avoid the trigger
- Dietary changes

**Address dietary concerns:**
- **Consume breakfast regularly**
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**Symptoms improve after 1 week**

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**Why Children Faint**

**Autonomic (Automatic) Nervous System**
- Things you think about doing:
  - Walking, writing, chewing

**Nonautonomic**
- Things your body does on its own without thinking:
  - Breathing, blinking, maintaining blood pressure

**Comparison: Normal vs. Abnormal Autonomic Nervous System**
- **Child stands up**
  - Blood redistributes to the legs

- **Autonomic nervous system slow to respond**
- **Autonomic nervous system constricts blood vessels**
- **Blood pools in the legs**
- **Sends blood to heart**
- **Blood pressure drops**
- **Blood pressure maintained**
- **Brain sends message to heart to speed up**
- **Heart sends message to brain to speed up; however, heart cannot pump blood it does not have**
- **Brain sends message to brain to slow heart down and open vessels**
- **Brain pressure drops**
- **Child faints**
- **Child is now flat and blood is redistributed to brain**

**Syncope and Palpitations**
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Syncope and Palpitation Evaluation and Guidelines

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  Amount of food and beverage consumed prior to episode ____________________________
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Palpitations

• With syncope? □ Yes □ No
• Rate □ Mild (<100 bpm) □ Moderate (100 – 150 bpm) □ Racing (>150 bpm)
• Can patient tap out rate? □ Yes □ No
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