How do I work up the syncope patient?

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Cost of Syncope

• Recently lost beloved member of the medical community in car accident due to syncope
The Significance of Syncope

- More than 1 million patients in the U.S.¹
- More than 500,000 new patients per year¹
- 1–6% of admissions²,³,⁴
- 3% of emergency room visits per year³

¹ National Disease and Therapeutic Index on Syncope and Collapse, ICD-9-CM 780.2, IMS America, 1997
Red Flags of Syncope

- Syncope during exercise
- Abnormal ECG or structural heart disease
- Syncope resulting in injury
- Syncope in the supine position
- Family history of sudden death
- Patient with a pacer or ICD
- Frequent episodes
1. The surgeon makes a 5mm incision in the chest, above the heart.

2. Using a specially designed plunger, the device is inserted in place.

The miniature heart rate monitor records the rhythm of the heart 24 hours a day.

Monitor transmits to the portable base station.

The heart data is then sent to the hospital.
56 yo woman with syncope accompanied with seizures. Infra-Hisian AV Block: Dual chamber pacemaker

65 yo man with syncope accompanied with brief retrograde amnesia. VT and VF: ICD and meds

*Medtronic data on file
Why Implantable Loop Recorders?

- **Advantages**: now fairly noninvasive, great for patients with unpredictable events, generally great quality tracings
- **Disadvantages**: Relatively costly, still with some risk
Competing technologies

- History, physical, Family history
- EKG
- ATM monitors
- Holter monitors
- Cell phone Apps
- Imaging studies- Echo, MRI
- Stress Testing
- Invasive EP Testing
- Tilt Table Testing
Cell Phone Apps
47 year old male with recurrent syncope with exercise

- EKG showed LBBB
- Echo with low normal EF
- Event monitor was unremarkable
- EP study was done and was normal
Please Report to the Stress Test Suite
21 year old with syncope- broken wrist from fight
Echo showed Dilated CM - EF 30
EPS showed inducible VT
Conclusions

• Syncope is a common problem
• Let’s never miss a findable cardiac diagnosis-
• Keep the differential in mind
• Do appropriate and efficient work ups