

ICDs & Other Medical Devices

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Activity allowances

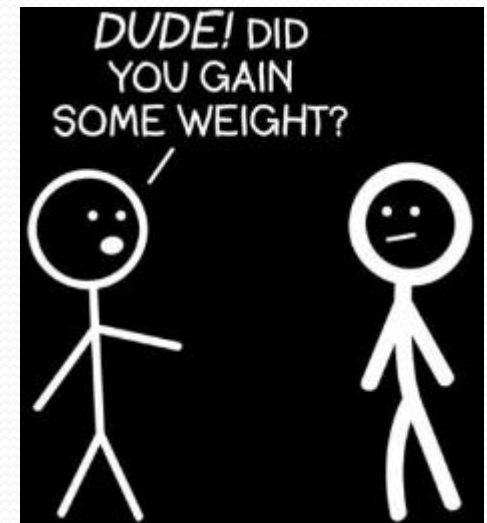
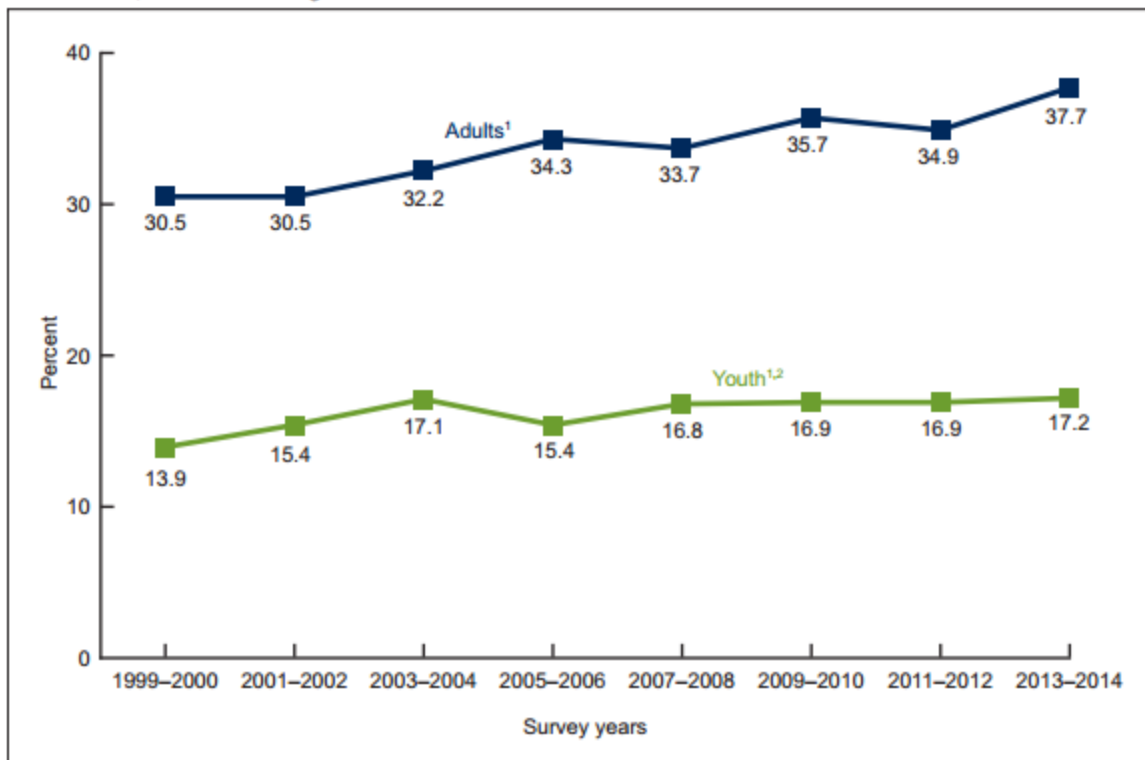
- Sports
 - Patients wish to lead active lives
 - Sports restrictions?
 - Recent evidence suggests a lower risk of exercise-related arrhythmias in treated patients than was previously assumed¹
 - Patient and MD
 - Shared decision making
 - Monitored medical therapy
 - Precautions and emergency response awareness



Trends in adult and child obesity 1999-2014¹

Obesity²

From 1999 through 2014, obesity prevalence increased among adults and youth.



Activity allowances

- Amusement parks
 - Roller coaster and thrill rides
 - Restraint systems in seats
 - Potential trauma to transvenous systems
 - Radio-frequency identification (RFID)
 - Wrist bands
 - Readers
- Scuba diving
 - Newer generations of ICD's
 - Safe down to 100 feet below sea level



Activity allowances

- Goal is normalcy as much as possible
 - Shock delivery during activities
 - Contact your MD
 - Determine cause and possibly reprogram device
 - Shock delivery during intimacy
 - Contact MD
 - May be felt by partner but not harmful to partner



Electromagnetic interference (EMI)

- EMI guide provided by device company³
 - Keep electronic items >6 inches from device
 - Cell phones
 - iPad, laptop, large headphones, etc.



- Special circumstances may require more distance
 - Blow torch, chain saw, car engines
 - Discuss with your doctor

Electromagnetic interference (EMI)

- Anti-theft detectors
 - Libraries, stores
 - Significant effects are *unlikely*
 - Walk “normally” through the detectors
 - Don’t linger near the detector
 - Airports, courthouses, jails
 - Significant effects are *unlikely*
 - Metal detectors, full-body imaging scanners (wave scanners and 3D imaging scanners)
 - Metal case of the ICD could set off a metal detector



Electromagnetic interference (EMI)

- Surgery on other body parts
 - Electrocautery is used to make an incision and to stop bleeding
 - Electrical signals can be misinterpreted by the ICD
 - Inform care providers you have an ICD
 - Reprogramming may be necessary
- Contact with other people with pacemakers or ICD's
 - Ok to hug!
 - Interference very unlikely between devices



Replacement timing/reasons

- ICD battery (generator) life
 - How much is the ICD used to pace?
 - How often does the ICD deliver therapy/shocks?
 - 5-10 years approximately
- ICD safety precautions
 - Strong enough to stop a bullet, but....
 - Avoid repeated pressure over the device
 - Protective pad over shoulder seatbelt strap
 - Backpacks/handbags



Replacement timing/reasons

- Leads
 - Can last a long time with proper care
 - Precautions
 - Avoid extreme stretching with adjacent arm
 - Avoid contact sports which could traumatize the leads
 - Regular ICD/cardiology clinic check-ups



References

1. Can J Cardiol. 2016 Apr;32(4):452-8. doi: 10.1016/j.cjca.2016.01.007. Epub 2016 Jan 14. Exercise and Inherited Arrhythmias. Cheung CC¹, Laksman ZW¹, Mellor G¹, Sanatani S², Krahn AD³
2. Prevalence of Obesity Among Adults and Youth: United States, 2011–2014 Cynthia L. Ogden, Ph.D.; Margaret D. Carroll, M.S.P.H.; Cheryl D. Fryar, M.S.P.H.; and Katherine M. Flegal, Ph.D. November 2015
3. Answers to Questions About Implantable Cardiac Devices. UC201103391eEN ©Medtronic 2016. Minneapolis, MN.