Goals of Presentation

- Evidence Based Medicine
- Evaluation of Information
- Strength of Studies
- Number Needed to Treat
- How Do I Make it Useful to Me
- Web Sites that Can Help

For the General Public

- In the past, source of treatment
  - Always been that way (Grandmother)
  - Custom
  - Infomercials
  - Fellow Worker
  - Internet
  - Health Care Provider

Past Validation of Treatment by Medical

- Historically it was done this way
  - Observation and assumptions
- Always did it this way
- Observation
- Worked before (anecdotal)
- Koch's Postulates
- Experimentation

Evidence Based Medicine

- **EBM** is taking all the available data on a particular question, synthesizing it, reviewing it, putting it into the context of what it really means, and then taking it and applying it to the patient

EBM
Studies

- Types
  - Historical
  - Anecdotal
  - Observation
  - Cohort
  - Random
  - Random Controller
  - Random Controlled Double Blind

EBM
What to Look For

- Size of the study
- Composition of the two groups
- Number that drop out of the study
- Side effects of both drug and control inert parts of pill
- Confidence Level
  - What are they testing?
  - Do conclusions fit the test?

EBM

- Test 98% accurate
- Test 98% sensitive
- Occurrence of disease in population 10%
- A positive screening test has a 50/50 chance of being correct

EBM

- From the general to the specific
  - We are all different
  - Drug Effects
  - Placebo
  - Unknowns

Problems with EBM

- Time to publish
- Need for funding
- Someone has to think results will be valuable
- Have to ask the correct question
- Has to be published

Number Needed to Treat

- **Calculation**
- To calculate the NNT, you need to know the Absolute Risk Reduction (ARR); the NNT is the inverse of the ARR:
- **NNT = 1/ARR**
- Where ARR = CER (Control Event Rate) - EER (Experimental Event Rate).
  NNTs are always rounded up to the nearest whole number.
- The time is the length of the study

Number Needed to Treat

- Example Statin
- Treat 660 people for 5 years to prevent one event (event defined in the study)
- Reference

http://en.wikipedia.org/wiki/Number_needed_to_treat

WHAT ELSE SHOULD YOU KNOW

- Size of the study
- Composition of the two groups
- Number that drop out of the study
- Side effects of both drug and control
  - Inert parts of pill

WHAT ELSE SHOULD YOU KNOW

- Be an active team member
  - get involved
  - ask questions
- Does it occur in my family
- What else am I doing to protect my health
- What you think your personal risk is
- Is it worth it
- What if I do nothing

Websites That Can Help

- Sources for forms for Health Directives
- Search Engines
- Health Information Sites
- Other Health Databases
- Government Agencies
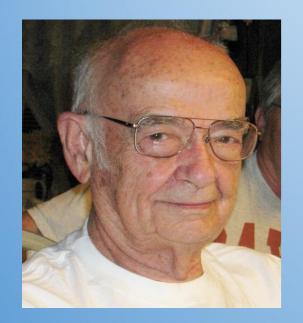- Free Patient Information

Websites That Can Help

- Information about Osteoporosis Treatment
- Alternative Medicine
- Drug Interactions
- Find Cost / Fair price search
- Information about a Doctor
- Information on Hospital Performance
- Contact for possible help with cost of medication

Websites That Can Help

- Contact for possible help with cost of medication
- Veteran health care benefits
- Buying drugs from Canada
- Buying drugs from Mexico
- Drugs that interact with grapefruit juice
- Medicine that interacts with calcium