BM T TEST study guide

BM Research Unit

Understand the following points discussed in class over the past 8 days:

Science definition: Knowledge

Scientific Method

* Theory (question to be tested)
* Hypothesis
* Experiment (data collection)
* Analysis
* Conclusion

Biomedical Research definition

* Three Categories of BM research
  + In Vitro means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Basic
  + Clinical Trials (know who the volunteers are, how many volunteers, what information is being sought, and how long each phase lasts
    - Phase I
    - Phase II
    - Phase III
  + Review the ACRONYMS associated with Clinical trial process
    - FDA
    - IND
    - NDA
    - IRB (Informed consent)
  + Average # of years to bring drug to market
* Epidemiological studies definition and be able to define the three types
* Experimental
* Descriptive
* Observational

\*\*Be able to identify the strengths and weaknesses of each type of BM research

Diseases and medications addressed by the advances in BM research:

* Polio virus that attacks the nervous system, destroying nerve cells crucial for movement
* Diabetes deficiency in insulin or decrease of the body to use insulin; readily available med
* AIDS Autoimmune deficiency Syndrome diagnosis and treatment advances
* Tooth Decay fluoride added to water (as a result of epidemiological studies)
* Heart disease Pacemakers, stents
* Organ transplantation
* Animal health vaccines (rabies, parvovirus, distemper, etc)
* Vaccines :
  + Smallpox,
  + DPT : Diphtheria, pertussis and Tetanus
  + Cholera
  + MMR: Mumps, Measles, Rubella,
  + Influenza
  + Meningitis
  + Pneumonia
  + Polio
  + Hepatitis A/B,
* Monoclonal Antibodies: powerful defense against infection; used to develop treatment Aids
* Cyclosporine: Drug that prevents organ rejection

BM Scientists:

* Jonas Salk Polio vaccine
* Louis Pastuer developed vaccine against Cholera, anthrax and rabies
* Edward Jenner Small Pox Vaccine
* John Snow Discovered Cholera outbreak source – contaminated water pump
* Alexander Fleming Penicillin