



Primary Resource

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Introduction

- consists of research studies published in biomedical journal
- the most current resource for information.
- provides details research methodology and scientific results that lead to therapeutic conclusions.
- to determine whether the study are sound based on the strength of the research techniques and scientific results of the study.



Introduction

- The primary literature is growing at an exponential rate.
- Over 20,000 biomedical journals are published annually.
- An abbreviated list of journals useful to the practice pharmacy is provided below.



Introduction

- Most of these journals publish a combination of primary research studies and secondary review articles.
- The journals available in a particular practice setting will depend on the focus of the practice and the interests of the practitioner .



Journal Contents

- Clinical Trials
- Editorials
- Letter to the editor
- Meta-Analysis (systemic review)
- Practice Guideline(s)
- Randomized Controlled Trials
- Review articles
- Comments
- Comparative Studies
- News
- Addresses
- Bibliography
- Case Reports
- Clinical Trial, Phase I, II, III&IV
- Controlled Clinical Trial
- Corrected and Republished Article
- Evaluation Studies
- Government Publications



The Basic Structure of an article

- ❑ **Abstract/ Summary**
 - Overview or summary of the work highlighting of results
 - General statement of significance
- ❑ **Introduction**
 - Background information: history, pathophysiology ,clinical presentation
 - Review of the work of others
 - Rationale for present study
 - Objectives of the study
- ❑ **Methods/materials & methods/patients & methods**
 - Study design
 - Subject selection procedures
 - Methods of measurement
 - Description of analytic techniques
- ❑ **Results**
 - What happened ?
 - Graphics-tables , charts, figures –that summarize findings



The Basic Structure of an article

□ Discussion/comment/conclusion

- Meanings, significance of work
- critique of study: discussion of limitations as well as strengths, further analysis
- Comparison with work of others
- Disclaimers, equivocation apologies, chest thumping, speculation, instruction, fantasy, and so on

□ References/bibliography

- Evidence that work of others has been considered
- Leads to further exploration of the subject



Basic Study Designs

- **Two basic study designs:**
 1. Descriptive.
 2. Explanatory.

DESCRIPTIVE

- Document and communicate experience: share ideas, programs, treatments, unusual events, and observations being search for explanations

EXPLANATORY

- Examine etiology, cause, efficacy, using the strategy of complications

EXPERIMENTAL

- Evaluate efficacy of therapeutic, educational administrative interventions
- Investigator controls allocation

OBSERVATIONAL

- Seek causes, etiologies, predictors, better diagnosis
- Investigator observe nature



Descriptive Studies

- Studies that record events, observations, and activities.
- They provide no detailed explanations or evidence.
- They serve as invaluable documentations lead to exciting discoveries.



Types of Descriptive Studies

1. Case Reports
 2. Case Series
- } (alert, complications,...etc).
3. Clinical Series (describe outcomes and record for others experience).
 4. Population (prevalence).
 5. Program or course.



Explanatory Studies

- They are studies seek for an answer for a question.



Types of Explanatory Studies

- They can be either:
 1. Experimental.
 2. Observational.



Types of Experimental Studies

1. Controlled trials (active intervention from the researcher).
2. Clinical trials.
3. Health-care trials.
4. Intervention trials.



Observational Studies

- They are studies utilizing comparisons to examine and explain medical mysteries.



Types of Observational Studies

1. Case control design (begin with outcome and search for factors).
2. Follow-up design (begin with people who have not experience the outcome yet).
3. Cross-sectional design (mix design).

DESCRIPTIVE

- Case Reports
- Case Series
- Clinical Series

EXPLANATORY

EXPERIMENTAL

Controlled Trial:

- Clinical Trial
- Health-care Trial
- Intervention

OBSERVATIONAL

Case Control:

- Retrospective
- Case-referent
- Case-compare

Follow-up:

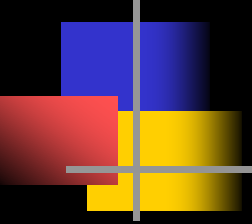
- Cohort
- Incidence
- Prospective
- Longitudinal

Retrospective Follow-up:

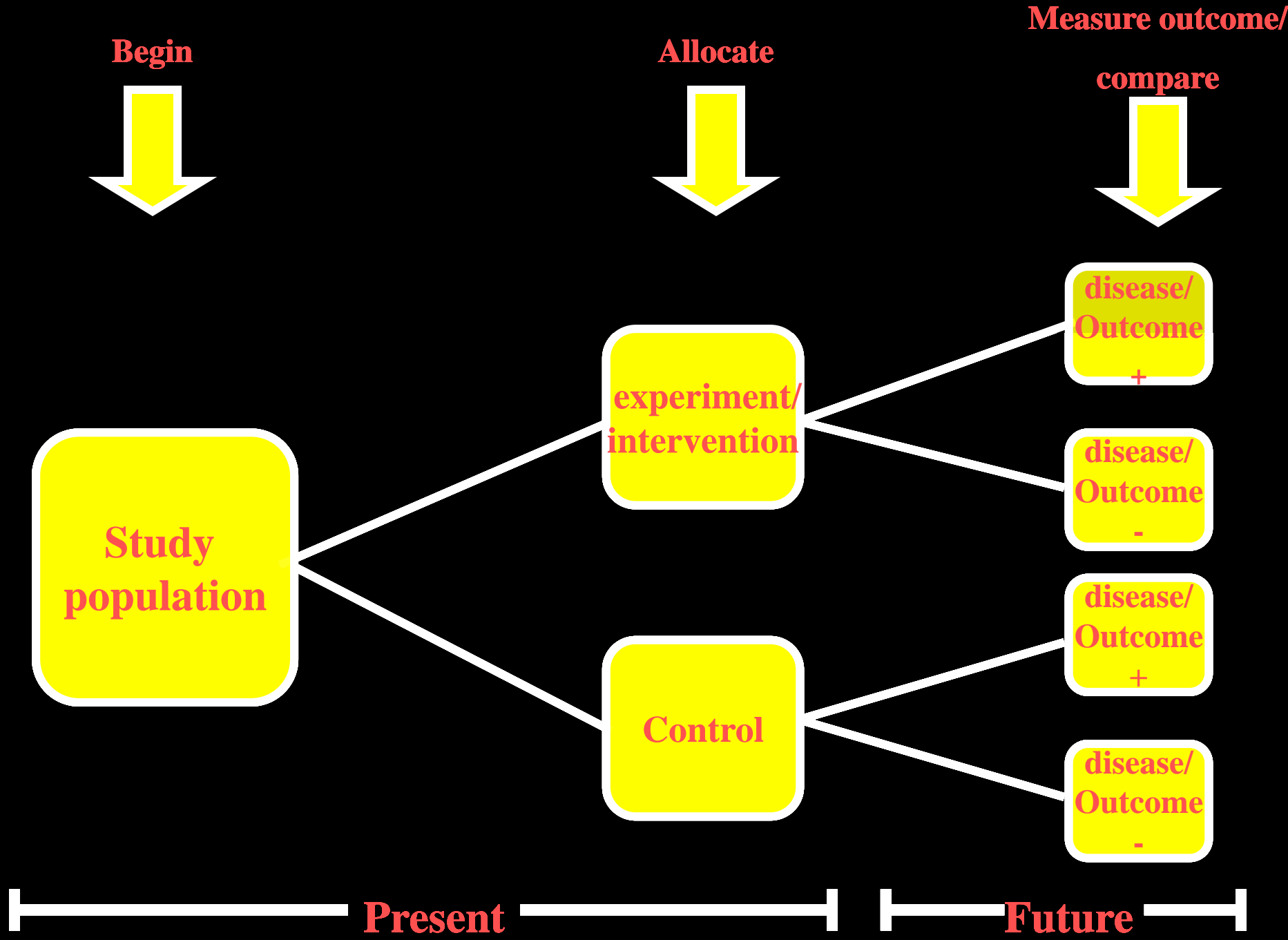
- Historical prospective
- Retrospective cohort
- Nonconcurrent follow-up

Cross-sectional

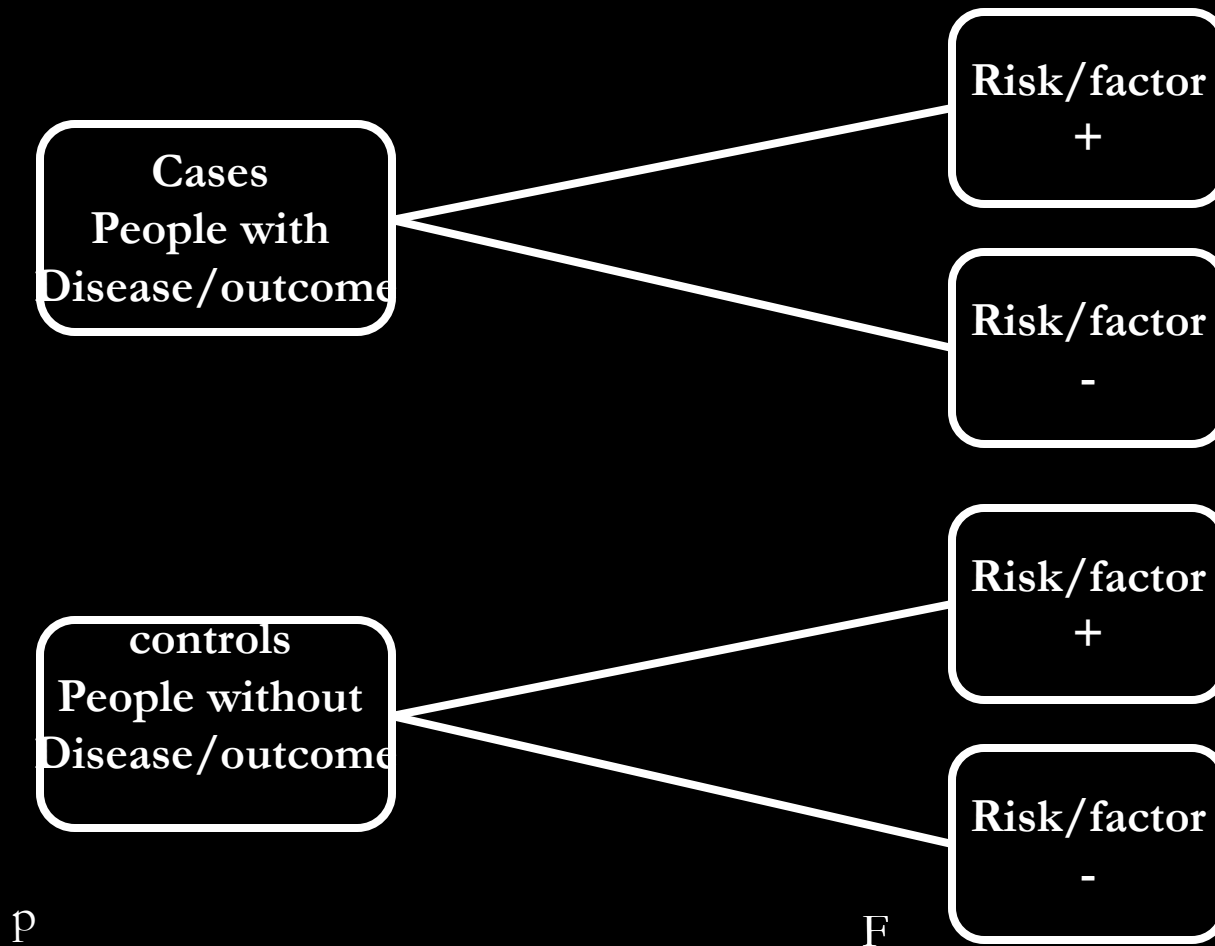
- Prevalence

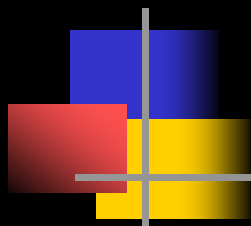


Experimental or controlled trial design

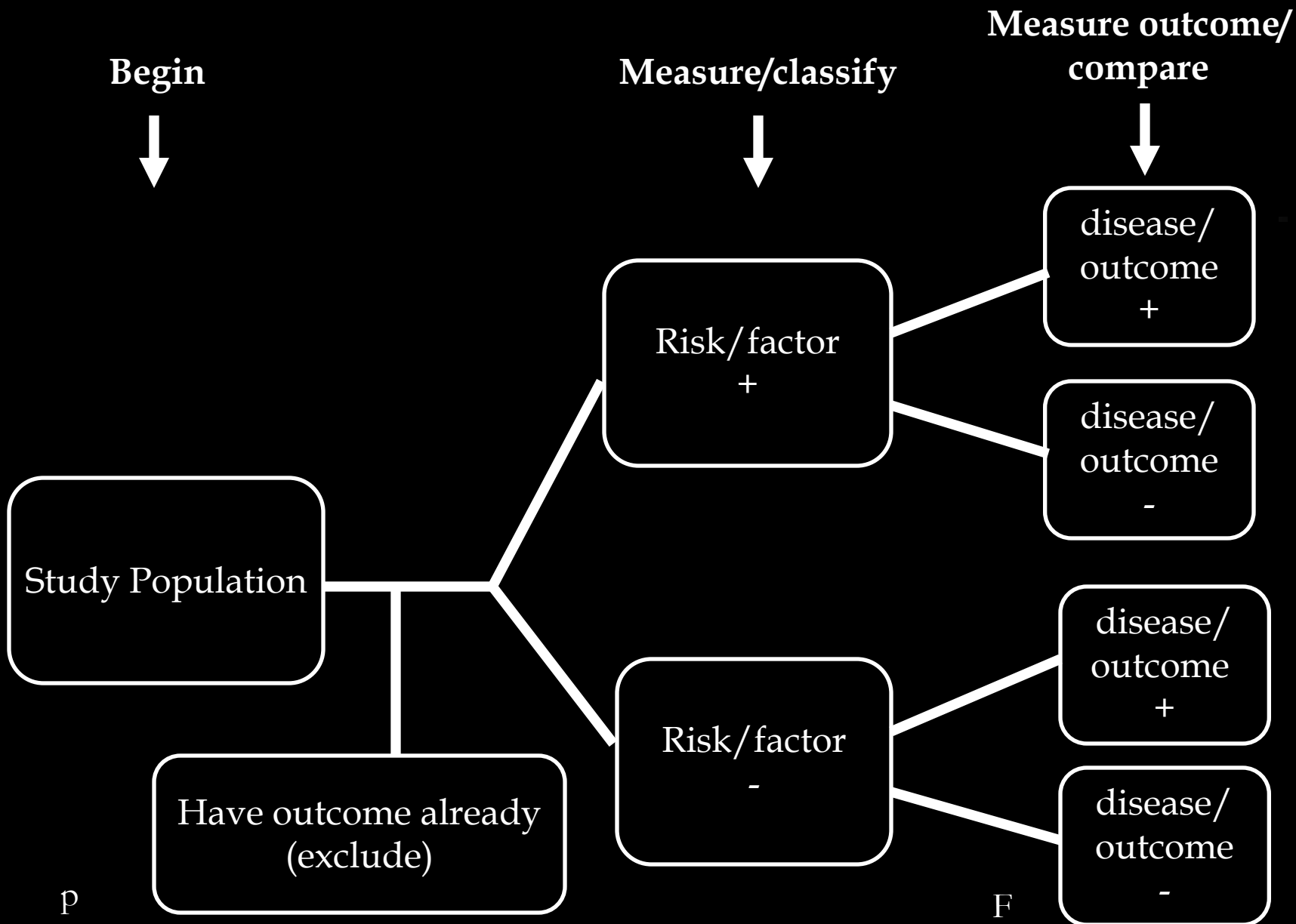


Case-Control design



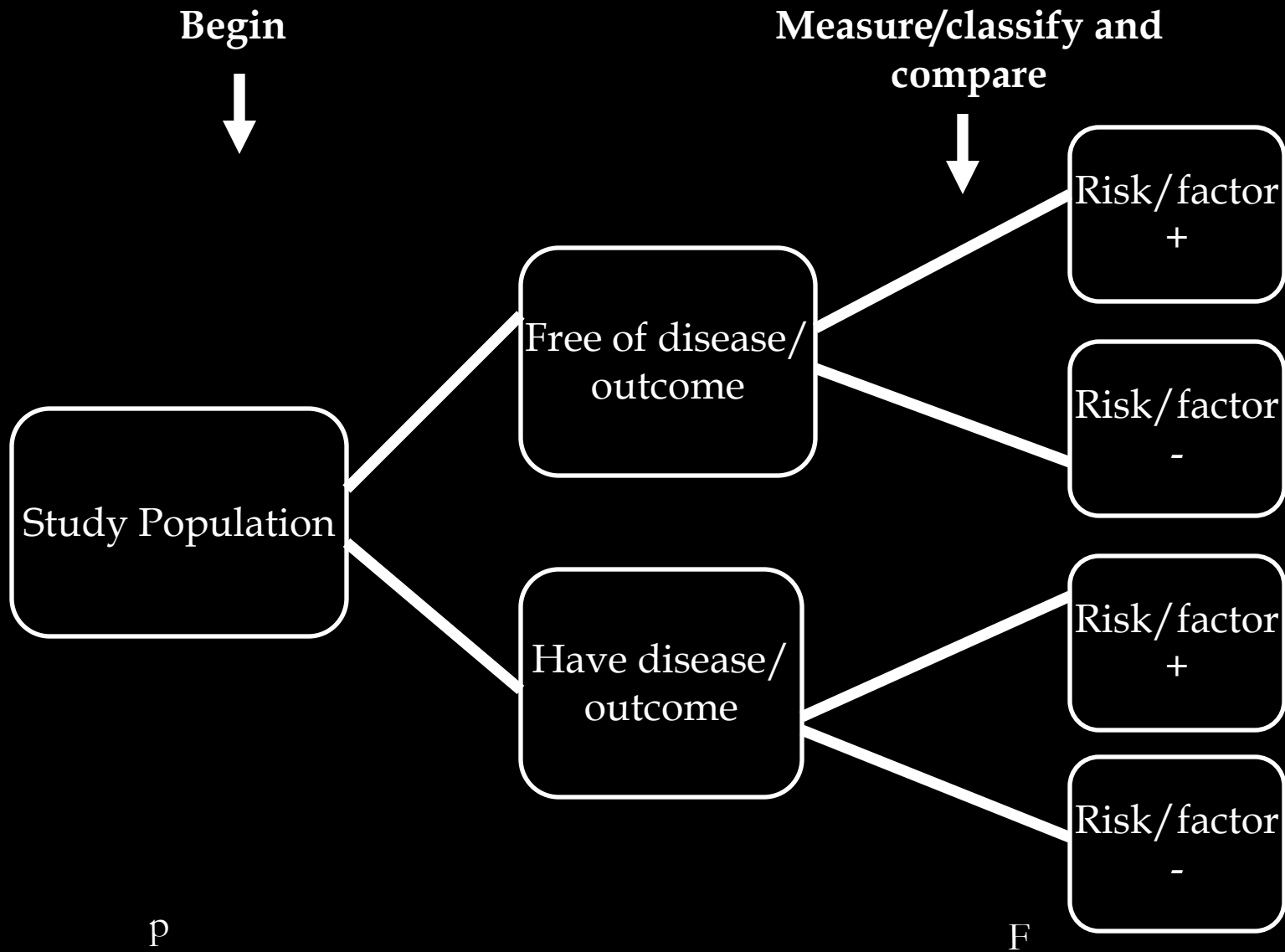


Follow-up study design





Cross-sectional study design





Definition

□ Randomization:

- It is an and important aspect of study design
- It is equivalent to flipping a coin and helps ensure that treatment group are similar in regard to clinical and socioeconomic factors that may affect treatment outcome
- Diminish bias



Types of Blinding

- **Single-blind**

Either subjects or investigators are unaware of assignment of subjects to active or control groups.

- **Double-blind**

Both subjects and investigators are unaware of assignment of subjects to active or control groups.



Meta-Analysis (systemic review)

- A statistical technique used to combine the results from different studies to obtain a quantitative estimate of the overall effect of a particular intervention or exposure on a defined outcome.



Definition

□ Editorial

- an article in a newspaper or other periodical presenting the opinion of the publisher, editor, or editors.



Definition

□ Bibliography

- It is a list of resources about a particular topic.
- Bibliographies are often found at the ends of scholarly books and journal articles.
- An entire book can be a bibliography, too.



Definition

□ Guideline

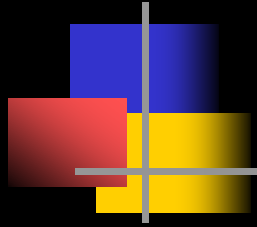
- A statement or other indication of policy or procedure by which to determine a course of action: *guidelines for the completion of tax returns*
- Guidance relative to setting standards or determining a course of action



Definition

□ Letter to the Editor

- It is statement that represent new results, likely to stimulate further research and be of interest to the wider range of knowledge all the results should be sufficiently new and important to merit rapid publication as a Letter, which implies accelerated refereeing procedures.
- This should be made clear either in the body of the Letter, if appropriate, or with a supporting cover letter from the author on submission to the journal.



Sources



Alternative Medicine Alert

- American Health Consultants, Atlanta, GA.
- A newsletter dealing with alternative medicines.
- Published monthly.



American Druggist

- The Hearst Corporation, New York.
- A pharmacy magazine with a community pharmacy focus that provides information on issues relevant to this practice setting.
- Rarely are primary research articles published in this journal.
- Published monthly.



American Journal of Cardiology

- Excerpta Medica, Inc., Riverton, NJ.
- A journal dedicated to the specialty of cardiology.
- Published weekly.

<<<http://www.cardiosource.com>>>



American Journal of Health- System Pharmacy

- American Society of Health-System Pharmacists, Bethesda, MD.
- A journal focused on clinical and managerial aspects of pharmacy practice in health systems.
- Published twice monthly.

<<<http://www.ashp.org>>>



American Journal of Pharmaceutical Education

- American Association of Colleges of Pharmacy, Alexandria, VA.
- The official publication of the American Association of Colleges of Pharmacy that is dedicated to the documentation and advancement of pharmaceutical education.
- Published quarterly.



American Journal of Therapeutics

- Lippincott Williams & Wilkins, Philadelphia.
- A journal that provides clinical and pharmacoeconomic perspectives on pharmacotherapeutic advances.



American's Pharmacist

- National Community Pharmacists Association, Alexandria, VA.
- The official journal of the National Community Pharmacists Association
- Published monthly.



Annals of Internal Medicine

- American College of Physicians, Philadelphia.
- A highly regarded medical journal of the American College of Physicians that focuses on internal medicine, including pharmacotherapeutic
- management of disease states.
- Published twice monthly

<http://www.acponline.org/journals/annaltoc.htm?wni>



The Annals of Pharmacotherapy

- Harvey Whitney Books Company, Cincinnati, OH.
- A well-respected journal pertaining to safe, effective, and economical use of pharmacotherapeutic agents.
- Published monthly.



Archives of Internal Medicine

- American Medical Association, Chicago.
- A journal specializing in the practice of internal medicine, including diagnosis and treatment of diseases.
- Published monthly.

<<<http://www.ama-assn.org/>>>



BioDrugs

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on clinical immunotherapeutics, biopharmaceutjals, and gene therapy
- Published monthly.



Cancer

- An Interdisciplinary International Journal of the American Cancer Society. John Wiley & Sons, Inc., New York
- A journal that publishes research and information from all disciplines of oncology and supports the mission of the American Cancer Society.
- Published 30 times a year.

<<<http://www.cancer.org>>>



Chest. The Cardiopulmonary and Critical Care Journal

- The American College of Chest Physicians, Northbrook, IL.
- The official publication of The American College of Chest Physicians that focuses on pulmonology, cardiology, critical care, and other related areas.
- Published monthly.



Clinical Drug Investigation

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes primary literature related to pharmacoeconomic and outcomes research.
- Published monthly.



Clinical Infectious Diseases

- The University of Chicago Press, Chicago.
- The official publication of the Infectious Diseases Society of America
- Published monthly.



Clinical Pharmacokinetics

- Adjs International, Ltd., Auckland, New Zealand.
- A journal that provides review articles relating to the following areas of clinical pharmacokinetics:
 - pharmacokinetic—pharmacodynamic relationships,
 - pharmacokinetic properties of drugs
 - therapeutic drug monitoring
 - the effect of age and disease states on pharmacokinetics,
 - pharmacokinetic optimization of drug therapy,
 - pharmacokinetic principles of drug interactions, bio availability
 - regulatory aspects of pharmacokinetics.



Clinical Pharmacokinetics

- Published monthly.
- Internet access available for a fee.

Clinical Pharmacology and Therapeutics

- Mosby, St. Louis, MO.
- The official publication of the American Society for Clinical Pharmacology and Therapeutics and the American Society for Pharmacology and Experimental Therapeutics that publishes articles describing actions of drugs on the human body.
- published monthly.



Clinical Therapeutics

- Elsevier Science, New York.
- An international journal of drug therapy including review articles, new drug therapy, clinical studies, and pharmaceutical economics and health policy.
- Published six times per year.



CNS Drugs

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on pharmacotherapeutic aspects in the management of psychiatric and neurological disease.
- Published monthly.



Community Pharmacist

- E.L.F. Publications, Inc. Lakewood, CO.
- A journal published to meet the professional and educational needs of today's practitioner.
- Published bimonthly.
- Internet access available for a fee.



The Consultant Pharmacist

- American Society of Consultant Pharmacists (ASCP), Alexandria, VA.
- The official journal of the ASCP devoted to pharmacists who provide consultative services in various environments, including nursing home facilities.
- Published monthly.

<<<http://www.ascp.com>>>



Critical Care Medicine

- Lippincott Williams & Wilkins, Philadelphia.
- The official journal of the Society of Critical Care Medicine.
- Published monthly.



Current Therapeutic Research

- Elsevier Science, New York.
- This journal provides rapid publication of original reports of recent developments in drug therapy.
- Published monthly.

Disease Management & Health Outcomes



- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on optimizing clinical outcomes and their economic consequences.
- Published monthly.
- Internet access available for a fee.



Drug Information Journal

- Drug Information Association, Inc., Fort Washington, PA.
- The official publication of the Drug Information Association that focuses on technology related to information dissemination and data processing.
- The journal promotes cooperation between academia, pharmaceutical industry, and government.
- Published quarterly.

<<<http://www.diahome.org>>>



Drugs

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on pharmacotherapeutic aspects of both new and established drugs.
- Published monthly.
- Internet access available for a fee.



Drugs and Aging

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on pharmacotherapeutic aspects as it relates to the elderly.
- Published monthly.
- Internet access available for a fee.



Drugs in R & D

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on the therapeutic potential and impact of pharmaceutical compounds in development.
- Published monthly.
- Internet access available for a fee.



Drug Safety

- Adis International, Ltd., Auckland, New Zealand.
- A journal that provides review articles related to epidemiology, diagnosis, management, and prevention of acute poisonings and adverse drug reactions.
- Published monthly.
- Internet access available for a fee.



Drug Topics

- Medical Economics, Co., Montvale, NJ.
- A pharmacy news magazine with a community pharmacy focus useful for keeping up on new drug therapies and issues relevant to community pharmacy practice.
- Rarely are primary research articles published in this journal.
- Published twice a month.

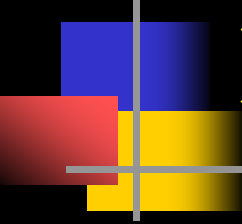
<<<http://www.drugtopics.com>>>



FDA Medical Bulletin

- Department of Health, Education and Welfare, Public Health Service, Food and Drug Administration, Rockville, MD.
- A publication of the Food and Drug Administration (FDA) that provides information on the safe and effective use of drugs and summarizes FDA rulings concerning drug products.
- Published irregularly.

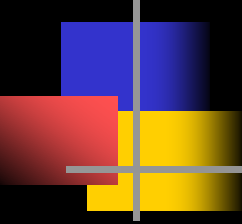
<<<http://www.fda.gov>>>



F-D-C Reports (“The Pink Sheet”)

- F-D-C Reports, Inc., Chevy Chase, MD.
- A newsletter aimed at executives in the pharmaceutical industry that provides information pertinent to the pharmaceutical industry such as FDA rulings, new drug approvals, drug withdrawals, ongoing clinical trials and financial information.
- Published weekly.

<<<http://www.fdc-reports.com>>>



F-D-C Reports (“The Tan Sheet”)

- F-D-C Reports, Inc., Chevy Chase, MD.
- A newsletter aimed at executives in the pharmaceutical industry that provides information pertinent to the over-the-counter and herbal products.
- Published weekly.

<<<http://www.fdcreports.com>>>



Food and Drug Law Journal

- The Food and Drug Law Institute, Washington D.C.
- A journal dedicated to legislative, regulatory, legal, and public policy issues regarding the use of foods, drugs, biologics, cosmetics, and medical devices.
- Published quarterly.



Formulary

- (Formerly known as Hospital Formulary). Advanstar Communications, Inc., Cleveland, OH.
- A journal directed at hospital and managed care decision makers that focuses on current issues in pharmacotherapy and drug policy management.
- Published monthly.



HerbalGram

- American Botanical Council, Austin, TX.
- The official journal of the American Botanical Council and the Herb Research Foundation, which is published quarterly.
- The mission is to educate the public on the use of herbs and phytomedicines.

<<<http://www.healthy.net/hwlibraryjournals/HerbalGram/index.html>>>.

The Herb and Dietary Supplement Report



- Interpretive Medicine Communications, Newton, MA.
- A newsletter that provides news and commentary on herbs and supplements.
- Published monthly.



Hospital Pharmacy

- Facts and Comparisons, St. Louis, MO.
- A journal devoted to the practice of pharmacy in institutional settings.
- Published monthly.



International Journal of Pharmaceutical Compounding

- IFPC, Edmond, OK.
- The official journal of the International Federation of Pharmaceutical Compounding.
- Published bimonthly.



JAMA.

- The Journal of the American Medical Association
American Medical Association, Chicago.
- One of the premier medical journals that publishes investigations and review information of key importance to health care.
- Published weekly.

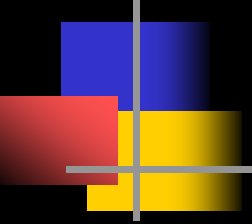
<<<http://jama.ama-assn.org>>>



Journal of the American Medical Informatics Association (JAMIA)

- Hanley & Belfus, Inc., Philadelphia.
- The official publication of the American Medical Informatics Association that covers electronic management of medical information.
- Published every 2 months.

<<<http://www.amia.org/pubs/jamia/default.html>>>



Journal of the American Pharmaceutical Association

- (Formerly known as American Pharmacy). American Pharmaceutical Association, Washington, DC, The official journal of the American Pharmaceutical Association that publishes news, information, and research in the areas of pharmacotherapeutic management of diseases, trends in pharmacy practice, and the provision of pharmaceutical care.
- Published monthly.



Journal of Applied Therapeutic Research

- Harwood Academic Publishers, Gardia and Breach Publishing Group, Newark, NJ
- A journal that focuses on the efficacy, safety, and rational use of drugs following approval by regulatory authorities for general marketing.
- Published monthly.



Journal of Clinical Oncology

- Lippincott Williams & Wilkins, Philadelphia.
- The official journal of the American Society of Clinical Oncology.
- Published monthly.

The Journal of Clinical Pharmacology

- Sage Science Press, Thousand Oaks, CA.
- The official journal of the American College of Clinical Pharmacology.
- Published monthly.



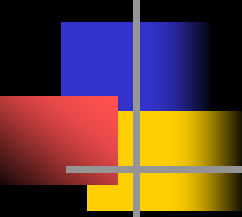
Journal of Herbs, Spices, & Medicinal Plants

- Haworth Food Products Press, Binghamton, NY.
- Information on medicinal uses of plants.
- Published quarterly.

Journal of Managed Care Pharmacy

- Academy of Managed Care Pharmacy, Alexandria, VA.
- The official journal of the Academy of Managed Care Pharmacy.
- published bimonthly.

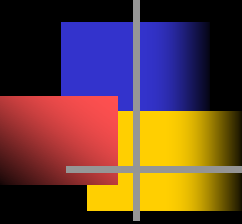
<<<http://www.amcp.org>>>



The Journal of the National Cancer Institute

- Oxford University Press, New York.
- A journal that publishes news, information, and research pertaining to cancer treatment, prevention, and control.
- Published twice monthly.

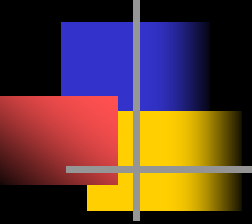
<<<http://www.jnci.oupjournals.org>>>



Journal of Parenteral and Enteral Nutrition

- ASPEN, Silver Spring, MD.
- The official journal of the American Society for Parenteral and Enteral Nutrition.
- Published bimonthly.

The Journal of Pediatric Pharmacy Practice



- Pediatric Pharmacy Concepts, Inc., St. Petersburg, FL.
- The official bimonthly journal of the Pediatric Pharmacy Advocacy Group, Inc.



Journal of Pharmaceutical Care in Pain & Symptom Control

- Pharmaceutical Products Press, The Haworth Press, Inc., Binghamton, NY.
- This journal is an interdisciplinary publication focusing on rational drug therapy in the management of pain and related symptoms.
- Published quarterly.



Journal of Pharmaceutical Sciences

- John Wiley & Sons, Inc. and American Pharmaceutical Association, Washington, D.C.
- A journal that focuses on the application of physical and analytical chemistry to the pharmaceutical sciences and technologies.
- Published monthly.

<<<http://www.interscience.wiley.com/jpages/0022-3549/>>>.



Journal of Pharmacy Practice

- Technomic Publishing Company, Inc. Lancaster, PA.
- A journal dedicated to providing practicing pharmacists with topical, important, and useful information to support pharmacy practice and pharmaceutical care, and to expand the pharmacist's professional horizons.



Journal of Pharmacy Teaching

- Pharmaceutical Products Press, Binghamton, NY.
- A journal dedicated to issues relevant to pharmaceutical education.
- Published quarterly.

The Journal of Pharmacy Technology

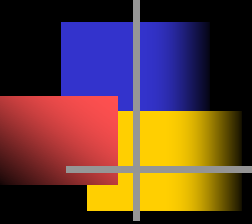
- Harvey Whitney Books Company, Cincinnati, OH.
- A journal that accepts publications related to pharmacy practice and pharmacy technology.
- Published bimonthly.



Journal of Social and Administrative Pharmacy

- Swedish Pharmaceutical Press, Stockholm, Sweden.
- A publication focusing on issues of importance to pharmacy practice in all settings.
- Published quarterly.

The Medical Letter on Drugs and Therapeutics



- The Medical Letter, Inc., New Rochelle, NY.
- A newsletter that provides review information on new drug therapies and lists drugs of choice for various disease states.
- Published biweekly.
- available as part of STAT!-Ref CD-ROM.
<<<http://www.medletter.com>>>

Morbidity and Mortality Weekly Report



- U.S. Department of Health and Human Services, Centers for Disease Control, Atlanta, GA.
- A publication of the Centers for Disease Control (CDC) that provides statistics and recommendations for treatment of infectious diseases.

<<<http://www2.cdc.gov/mmwr>>>

The New England Journal of Medicine

- Massachusetts Medical Society, Boston.
- One of the premier medical journals that publishes original investigations and review information considered of significant importance to physicians and other health care professionals.
- Published weekly.

<<<http://www.nejm.org>>>



Paediatric Drugs

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes review articles on the evaluation of drug therapy and disease management in children.
- Published quarterly
- Internet access available for a fee.



Pediatrics

- American Academy of Pediatrics, Elk Grove Village, IL.
- Official publication of the American Academy of Pediatrics. Published monthly.

<<<http://www.pediatrics.org>>>



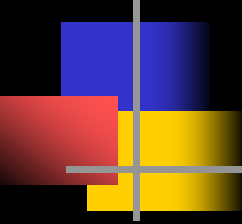
Pharmacist's Letter

- Pharmacist's Letter, Stockton, CA.
- A newsletter that briefly covers a number of new therapeutic issues that may be of interest to pharmacists.
- Published monthly.



PharmacoEconomics

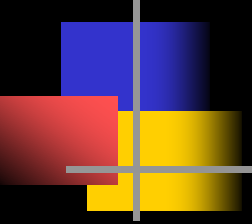
- Adis International Limited, Auckland, New Zealand.
- A publication focused on economic aspects of rational drug therapy and drug development.
- Internet access available for a fee.
- Published monthly.



Pharmacotherapy. The Journal of Human Pharmacology and Drug Therapy

- Pharmacotherapy Publications, Inc., Boston.
- A publication of the American College of Clinical Pharmacy focused on pharmacotherapeutic aspects of disease state management including pharmacokinetics, bioavailability, drug interactions, clinical trials, and pharmacology.
- Published every 2 months.

Pharmacy Practice Management Quarterly



- (Formerly called Topics in Hospital Pharmacy Management).
- Aspen Publishers, Frederick, MD.
- A journal focused on management issues pertinent to pharmacy departments in hospitals.
- Published quarterly.



Pharmacy Times

- Romaine Pierson Publishers, Inc., Jamesburg, NJ.
- A pharmacy magazine with a community practice focus that provides information on new drug therapies, patient counseling and management, and issues relevant to pharmacy practice.
- Original investigations are not commonly published in this journal
- Published monthly.

<<<http://www.pharmacytimes.com>>>



Psychopharmacology Bulletin

- Division of Clinical and Treatment Research,
- National Institute of Mental Health, Rockville, MD.
- A journal dedicated to dissemination of research and information related to pharmacotherapy of mental illnesses.
- Published quarterly.

The Scientific Review of Alternative Medicine

- Prometheus Books, Amherst, NY.
- A journal dedicated to the scientific review of alternative medical practices
- Published biannually.



Scrip. World Pharmaceutical News

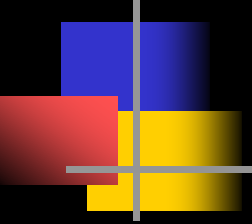
- PJB Publications, Ltd., Richmond, Surrey, England.
- A newsletter that provides updates on worldwide news regarding the pharmaceutical industry.
- Published twice weekly.

<<<http://www.pjbpubs.co.uk/scrip/>>>



Sports Medicine

- Adis International, Ltd., Auckland, New Zealand.
- A journal that publishes practical reviews of exercise science and sports medicine.
- Published monthly.
- Internet access available for a fee.



Therapeutic Drug Monitoring: A Journal Devoted to Therapeutic Drug Monitoring and

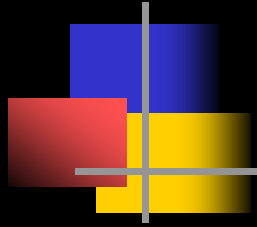
- Clinical Drug Toxicology Lippincott Williams & Wilkins, Philadelphia.
- An official journal of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology.



U.S. Pharmacist

- Jobson Publishing L.L.C., New York.
- A pharmacy magazine focused on the practice of community pharmacy and issues pertinent to this setting.
- Original investigations are not commonly published in this journal.
- Published monthly.

<<<http://www.uspharmacist.com>>>



Thank You