

BCEMP Essential Topics

Calculations - EM Essentials

- Calculations - Introduction
- Calculations - Basic Principles - Unit Conversions
- Calculations - Basic Principles - Numbers, Percents
- Calculations - Basic Principles - Ratios & Proportions
- Calculations - Body Weight Calculations & Adjustments
- Calculations - Preparing Solutions - Dilutions Concentrations
- Calculations - Preparing Solutions - Milliequivalents, Moles, Milliosmoles
- Calculations - Acid Base - Anion Gap & Henderson-Hasselbach
- Calculations - Acid Base - Electrolyte & Corrections
- Calculations - ANC, Liver, & Renal Calculations
- Calculations - ANC, Liver, & Renal - CrCl & GFR
- Calculations - Therapeutic Drug Monitoring - PK & PD Calculations

Cardiovascular Pharmacology - EM Essential

- ACEi and ARBs
- Beta Blockers
- Calcium Channel Blockers
- Loop Diuretics
- Nitrates and Vasodilators
- Direct Xa Inhibitors
- Direct Thrombin Inhibitors
- Heparin & LMWH
- Aspirin
- ADP Inhibitors
- GPIIb/IIIa Receptor Blockers
- Thrombolytics
- Antiarrhythmics Parts 1 & 2
- Inotropes
- Vasopressors - Drug Review
- Vasopressors Clinical Application

Cardiovascular Diseases - EM Essential

- Acute Coronary Syndrome
- Aortic Valve Disorders
- Heart Failure - Acute
- Heart Failure - Chronic
- Hypertension Part 1 - Review on Regulators of Blood Pressure
- Hypertension Part 2 - Evaluation and Management per Guidelines
- HTN Emergency - Background
- HTN Emergency - CV
- HTN Emergency - Renal
- HTN Emergency - OB GYN
- HTN Emergency - Sympathetics
- HTN Emergency - Cases
- Kawasaki Disease
- Peripheral Arterial Disease

Cardiovascular Diseases - EM Essential - Diving Deeper

- Amiodarone and QT Prolongation
- IV Lasix in HF
- Sulfa Allergy and Lasix
- Nitrates and PDE-5 Interaction

Electrolyte Disorders - EM Essential

- Calcium and Parathyroid Disorders
- Potassium Disorders
- Sodium Disorders

Endocrine Pharmacology - EM Essentials

- Corticosteroids Review - Pharmacology
- Corticosteroids Review - Application

Endocrine Disorders - EM Essentials

- Adrenal Disorders
- General Diabetes Disease State Review
- Glycemic Evaluation & Monitoring
- Type 2 Diabetes Mellitus
- Type 1 Diabetes Mellitus



Insulin Therapy Review
Hypoglycemia
Hyperglycemia DKA HHS
Thyroid Function Review
Hyperthyroidism
Hypothyroidism

Gastrointestinal Pharmacology - EM Essentials

Antacids
Antidiarrheal Drugs

Antiemetics
Fiber, Laxatives, & Stool Softeners

Gastrointestinal Disorders - EM Essentials

Cirrhosis - Overview
Cirrhosis - Ascites
Cirrhosis - Encephalopathy
Cirrhosis - Hepatorenal Syndrome
Cirrhosis - SBP
Cirrhosis - Variceal Bleeding
Constipation
Acute Diarrhea
GERD
IBD - Inflammatory Bowel Disease
Nausea and Vomiting
Opioid Induced Constipation
Acute & Chronic Pancreatitis
PUD - Peptic Ulcer Disease

Hematologic Disorders - EM Essential

General Review of Anemia
Anemia of Chronic Disease and CKD

Macrocytic Anemia - Vit B12 & Folate Deficiency
Microcytic Anemia - Iron Deficiency Anemia
Hemolytic Anemias
Blood Transfusions
Sickle Cell Disease



Overview of Coagulation
Bleeding Disorders
Clotting Disorders
Deep Vein Thrombosis
Pulmonary Embolism
Overview of Platelets & Physiology
Platelet Disorders
Uremic Platelet Dysfunction

Immunologic Disorders - EM Essential

Hypersensitivity Reactions
Angioedema
Immunizations and Vaccines
Immunosuppressants for Transplantation

Infectious Diseases Pharmacology - EM Essentials

Penicillin Agents
Cephalosporins
Carbapenems & Monobactams
Glycopeptides
Fosfomycin
Macrolides & Ketolide
Tetracyclines
Oxazolidinones and Streptogramins
Aminoglycosides
Fluoroquinolones

Infectious Disease Disorders - EM Essentials

Bacterial Tracheitis
Bronchiolitis
Bronchitis
C Diff Infection
Croup
Diabetic Foot Infections
Endocarditis
Epiglottitis



Helminth Infections
HIV Infection
Intraabdominal Infections
Meningitis
Opportunistic Infections
Otitis Media
Pelvic Inflammatory Disease
Pharyngitis
Pneumonia - Adults
Pneumonia - Pediatrics
HAP and VAP
Prostatitis
Protozoal Infections
Sepsis - Pediatric
Sepsis - Adult
Sinusitis
Soft Tissue Infections
UTI
Basics of Virology
Influenza - Antiviral Review
Herpes Virus Infections
Hepatitis C Infection

Infectious Disease - EM Antimicrobial Stewardship

AS - Watch First - Intro
AS - Antibiotic Patient Safety
AS - Antibiotic Resistance & Stewardship
AS - Inappropriate Antibiotic Use & Barriers
AS - Gram Neg Resistance - ESBLs
AS - Gram Neg Resistance - CRE
AS - Gram Neg Resistance - DTR Pseudomonas
AS - Setting - Emergency Department
AS - Setting - Hospitals
AS - Diagnoses - Acute Otitis Media
AS - Diagnoses - Bronchitis, Asthma, COPD
AS - Diagnoses - Pharyngitis
AS - Diagnoses - Skin & Soft Tissue Infections



AS - Diagnoses - Urinary Tract Infections

AS - Diagnoses - Viral URI & Sinusitis

Musculoskeletal Disorders - EM Essentials

Gout & Hyperuricemia

Osteoarthritis

Osteoporosis

Rheumatoid Arthritis

Lupus - SLE

Neuro Pharmacology - EM Essentials

Non-Opioid Analgesics Review

Opioid Analgesics Review

Opioid Induced Side Effects

Opioid Dose Equivalency

Anticonvulsants Review Pt 1

Anticonvulsants Review Pt 2

Neuromuscular Blockers Review

Sedative Hypnotics Review

Neurologic Disorders - EM Essentials

Low Back Pain

Migraine Headache

Seizures - Review

Status Epilepticus

Bells Palsy

Acute Ischemic Stroke and tPA

Ophthalmologic Pharmacology & Disorders – EM Essentials

Ophthalmic Anesthetic Agents

Bacterial Eye Infections

Glaucoma

Iritis and Uveitis



Pharmacology - Special Topics for EM

Penicillin Allergy and Cross Reaction

Sulfa Allergy and Cross Reaction

Drugs to Avoid in G6PD

Drugs Induced Gout

Unique Medications Review

Drug Food Interactions

Drug Gastric Acid Interactions

Drug Lab Interactions

Drug Sunlight Interactions

IV Drug Administration

Core Dose Equivalence

Core Adverse Drug Reactions

IV Drugs Needing Premedication

Medication Appropriateness Criteria

Drugs Needing Protection from Light

Psychiatric Pharmacology – EM Essentials

Antipsychotics Drug Review

Anxiolytics

Psychiatric Disorders – EM Essentials

Anxiety Disorder

Bipolar Disorder

Alcohol Withdrawal and DTs

Major Depressive Disorder

Obsessive Compulsive Disorder

Psychotic Disorders

Pulmonary Pharmacology – EM Essentials

Bronchodilator Review

Pulmonary Disorders – EM Essentials

Asthma - Acute

Asthma - Chronic

COPD - Acute



COPD - Chronic
Pulmonary Hypertension

Toxicology – EM Essentials

Rapid Review
Acetaminophen Toxicity
Alcohols Toxicity
Beta Blockers Toxicity
Calcium Channel Blockers Toxicity
Carbon Monoxide Toxicity
Cyanide Toxicity
Digoxin Toxicity
Isoniazid Toxicity
Lithium Toxicity
Organophosphate Toxicity
Salicylate and Aspirin Toxicity
Serotonin Syndrome
Sulfonylureas and Metformin Toxicity
TCAs Toxicity

Pharmacokinetics and Pharmacodynamics

Drug Interactions
Pharmacogenetics in Practice
Pharmacokinetics Parts 1, 2 & 3
Special Populations

Practice Management - EM Applicable

Accreditation & Certifications
Controlled Substance
HIPAA
Narrow Therapeutic Index Drugs
Parenteral Drug Therapy
Therapeutic Equivalence & Generic Substitution



BCEMP Background Topic Reviews

Cardiovascular Pharmacology

Aldosterone Antagonists
Potassium Sparing Diuretics
Thiazides Diuretics

Cardiovascular Pharmacology - Antithrombotics

VKOR Inhibitors
PAR-1 Inhibitors

Endocrine Pharmacology

Sulfonylurea & Meglitinides Review
Alpha Glucosidase Inhibitors Review
Biguanides (Metformin) Review
TZDs Review
DPP-4 Inhibitors Review
SGLT2 Inhibitors Review
GLP-1 Receptor Agonists Review
Amylin Analogs Review
Special Topic - GLP-1 Agonists & SGLT2 Inhibitors in CKD
Special Topic - GLP-1 Agonists & SGLT2 Inhibitors in CVD
Special Topic - GLP-1 Agonists & SGLT2 Inhibitors in HF

Infectious Diseases Pharmacology

Antimycobacterial Agents for TB
Anaerobic Agents
Other Antibiotics
Antifungals

Oncology Pharmacology

Traditional Chemo - Rapid Review
Monoclonal Antibodies - Rapid Review
Tyrosine Kinase Inhibitors - Rapid Review



Psychiatric Pharmacology

Antidepressants

Pulmonary Pharmacology

Inhaled Steroids Review

Other Drug Therapy



EBM, Biostatistics, & Literature Evaluation Review

Topic List

Intro to Clinical Research & the Course

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Study Design & Development

Hypothesis Testing

Study Design

Types of Bias in Research

Internal & External Validity

Biostatistics - Part 1

General Overview - The Endpoint

Measure of Central Tendency

Types of Study Groups

Nominal, Ordinal, or Continuous Data Variables

Parametric vs Nonparametric Tests

Biostatistics - Part 2

Power Analysis

Alpha

Confidence Intervals

P-values

Relative Risk & Odds Ratios

Correlations

Regression Analysis

Diagnostic Tests

Overview of Diagnostic Studies & Tests

Precision and Accuracy

Sensitivity & Specificity

ROC Curves

Positive & Negative Predictive Values

Likelihood Ratios

Systematic Reviews and Meta-Analysis

What is the Difference?

Key Steps Involved

Reporting the Results - Forest Plot

The GRADE Assessment

Reporting Guidelines for Systematic Reviews



Literature Reporting & Appraisal

- Reporting Guidelines for all Study Types
- Critical Appraisal Tools
- Assessment of Bias in Publications

Special Topics

- Pharmacoeconomic Analysis
- FDA Approval Process

Note: More topics coming soon.

