

agonist and antagonist ib psychology

Agonist and Antagonist in IB Psychology: Understanding Neurotransmission

Author: Dr. Anya Sharma, PhD in Neuroscience, specializing in neuropharmacology and IB Psychology curriculum development. Dr. Sharma has over 15 years of experience teaching IB Psychology and has published numerous articles on the application of neuroscience principles to psychological understanding.

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Introduction to Agonist and Antagonist in IB Psychology

Understanding the processes of neurotransmission is a cornerstone of the IB Psychology curriculum. A significant part of this understanding involves grasping the concepts of agonist and antagonist IB psychology. These terms refer to the ways in which drugs and other chemicals can interact with neurotransmitters at the synapse, impacting brain function and subsequently, behavior. This article will delve into the mechanisms of agonist and antagonist action, exploring various methodologies and approaches used to study them within the context of the IB Psychology syllabus.

What are Agonists and Antagonists?

Neurotransmitters are chemical messengers that transmit signals across synapses, the gaps between neurons. An agonist and antagonist IB psychology perspective focuses on how exogenous substances (external to the body) interact with this process.

Agonists: Agonists mimic the action of neurotransmitters. They bind to receptor sites on the postsynaptic neuron, thereby increasing the likelihood of that neuron firing. This can be achieved through various mechanisms, including:

- Directly activating receptor sites.

- Increasing the release of neurotransmitters.

- Inhibiting the reuptake of neurotransmitters. This leads to a higher concentration of neurotransmitters in the synapse for a longer duration.

Antagonists: Antagonists, conversely, block the action of neurotransmitters. They bind to receptor sites, preventing the neurotransmitter from binding and thus inhibiting the postsynaptic neuron from firing. This can significantly impact neural pathways and subsequent behaviour.

Methodologies for Studying Agonists and Antagonists in IB Psychology

The IB Psychology syllabus encourages a multi-faceted approach to understanding the impact of agonists and antagonists. Several methodologies are relevant:

1. **Experimental Studies:** Laboratory experiments are crucial for establishing cause-and-effect relationships. Researchers can manipulate the introduction of agonists or antagonists in animal models (e.g., rats, mice) and observe the behavioural effects. Ethical considerations are paramount, and studies must adhere to strict guidelines. For example, researchers might measure changes in motor activity, learning ability, or emotional responses after administering a specific agonist or antagonist.
1. **Case Studies:** Case studies offer detailed insights into the effects of agonists and antagonists in humans. For instance, studying individuals with specific neurological conditions or those who have accidentally or intentionally ingested substances with agonistic or antagonistic properties can provide valuable qualitative data. However, generalizations from case studies should be made cautiously.
1. **Neuroimaging Techniques:** Techniques like fMRI (functional magnetic resonance imaging) and PET (positron emission tomography) scans allow researchers to visualize brain activity in response to agonist or antagonist administration. This provides a more objective measure of the impact of these substances on neural pathways and activity in different brain regions.
1. **Observational Studies:** Observing naturally occurring behaviour in groups exposed to agonists or antagonists (e.g., comparing the behaviour of people who regularly consume caffeine – an adenosine antagonist – with those who don't) can reveal correlations, though not necessarily causal relationships.

Examples of Agonists and Antagonists and their effects

Numerous examples illustrate the principles of agonist and antagonist IB psychology:

Acetylcholine: Nicotine acts as an agonist, binding to acetylcholine receptors and increasing activity, while curare acts as an antagonist, blocking those same receptors.

Dopamine: Cocaine acts as a dopamine reuptake inhibitor (agonist), while some antipsychotic medications are dopamine antagonists, blocking dopamine receptors.

Serotonin: SSRIs (Selective Serotonin Reuptake Inhibitors), commonly used to treat depression, are agonists as they increase serotonin levels in the synapse. Certain anti-emetic drugs are serotonin antagonists, used to combat nausea and vomiting.

The specific effects of agonists and antagonists depend on a variety of factors including the type of neurotransmitter involved, the location of receptor sites, the dosage administered, and individual differences in receptor density and sensitivity.

Agonist and Antagonist in the IB Psychology Syllabus

The topic of agonists and antagonists falls under the biological level of analysis within the IB Psychology syllabus. Both Standard Level (SL) and Higher Level (HL) students will encounter this topic, although the depth of coverage differs. SL students will gain a foundational understanding of the mechanisms of action, while HL students will explore more complex interactions and research methodologies. Exam questions can involve application to case studies, experimental designs, ethical considerations, and the evaluation of research findings.

Conclusion

The study of agonist and antagonist IB psychology is crucial for understanding the intricate workings of the nervous system and its influence on behavior. By applying diverse methodologies, researchers can gain insights into the impact of these substances, paving the way for the development of more effective treatments for neurological and psychological disorders. The IB Psychology curriculum effectively incorporates this knowledge, equipping students with a comprehensive understanding of the biological basis of behavior and the ethical considerations involved in research in this area.

FAQs

1. What is the difference between a competitive and non-competitive antagonist? A competitive antagonist competes with the neurotransmitter for the same binding site, while a non-competitive antagonist binds to a different site, altering the receptor's shape and preventing neurotransmitter binding.
1. How can agonists and antagonists be used in treating mental illnesses? Many medications for mental illnesses act as agonists or antagonists, targeting specific neurotransmitter systems to alleviate symptoms.

1. What are the ethical considerations in research involving agonists and antagonists? Animal welfare, informed consent (in human studies), potential side effects, and the potential for misuse are crucial ethical considerations.
1. How does the dosage of an agonist or antagonist influence its effects? The dosage can significantly impact the intensity and type of effects; low doses might have minimal impact, while high doses could lead to severe side effects.
1. Can agonists and antagonists have both agonistic and antagonistic effects depending on the context? Yes, some substances can act as both agonists and antagonists depending on the concentration, receptor subtypes, and other factors.
1. What role does the blood-brain barrier play in the action of agonists and antagonists? The blood-brain barrier regulates the passage of substances into the brain, impacting the effectiveness of agonists and antagonists.
1. How are agonists and antagonists involved in addiction? Many addictive substances act as agonists or indirectly affect neurotransmitter systems involved in reward and reinforcement.
1. What is the role of receptor downregulation in the context of agonist use? Prolonged agonist exposure can lead to receptor downregulation, reducing the effectiveness of the agonist over time.
1. How do agonists and antagonists relate to the concept of synaptic plasticity? The effects of agonists and antagonists can influence synaptic strength and contribute to the processes of long-term potentiation (LTP) and long-term depression (LTD).

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agonist and antagonist ib psychology: IB Psychology - A Student's Guide Travis Dixon, 2017 Full chapters on the IA and exam preparation; EE advice and guidance; Lesson-by-lesson layout for easy planning; Guiding questions, critical thinking extensions and interesting activity suggestions for every lesson; Full colour design with images and graphics; Topics covered in-depth to increase IB marks for students; Clear language and explanations for easy comprehension for EAL (and all) students; Complete glossary with definitions of over 400 key terms; Interesting topics not included in other books, like Love and Marriage; Free support through our blog and Facebook groups--Publisher's website.

agonist and antagonist ib psychology: Marijuana and Medicine Institute of Medicine, 1999-07-10 The medical use of marijuana is surrounded by a cloud of social, political, and religious controversy, which obscures the facts that should be considered in the debate. This book summarizes what we know about marijuana from evidence-based medicine—the harm it may do and the relief it may bring to patients. The book helps the reader understand not only what science has to say about medical marijuana but also the logic behind the scientific conclusions. Marijuana and Medicine addresses the science base and the therapeutic effects of marijuana use for medical conditions such as glaucoma and multiple sclerosis. It covers marijuana's mechanism of action, acute and chronic effects on health and behavior, potential adverse effects, efficacy of different delivery systems, analysis of the data about marijuana as a gateway drug, and the prospects for developing cannabinoid drugs. The book evaluates how well marijuana meets accepted standards for medicine and considers the conclusions of other blue-ribbon panels. Full of useful facts, this volume will be important to anyone interested in informed debate about the medical use of marijuana: advocates and opponents as well as policymakers, regulators, and health care providers.

agonist and antagonist ib psychology: Anatomy & Physiology Lindsay Biga, Devon Quick, Sierra Dawson, Amy Harwell, Robin Hopkins, Joel Kaufmann, Mike LeMaster, Philip Matern, Katie Morrison-Graham, Jon Runyeon, 2019-09-26 A version of the OpenStax text

agonist and antagonist ib psychology: Advances in Psychology Research Alexandra Columbus, 2005 Presents original research results on the leading edge of psychology. This book attempts to present substantial advances across a spectrum.

agonist and antagonist ib psychology: Master Introductory Psychology Michael Corayer, 2016-07-22 Master Introductory Psychology gives you all the information you need for any introductory psychology class or for self-study. This book breaks down all the key concepts in psychology and provides an engaging and memorable guide for each unit. Clear explanations and examples are combined with helpful memory strategies so content can stick in your head after a single reading. It's a step-by-step guide through all of the ideas you need to know. Each unit also includes a chapter summary, a list of key terms for review, and extensive references and recommendations for exploring subjects in more detail. Don't settle for dry definitions or endless multiple-choice questions that don't develop true understanding. Instead get the guide that builds a solid foundation and helps you master introductory psychology. This complete edition covers 16 units: History and Approaches Research Methods Biological Bases of Behavior Sensation & Perception Learning Memory Language & Cognition States of Consciousness Intelligence Personality Motivation & Emotion Development Social Psychology Stress & Health Psychological Disorders Treatment

agonist and antagonist ib psychology: *Behavioral Pharmacology of 5-HT* Paul Bevan,

2013-05-13 This volume reviews the current state of research within the behavioral pharmacology of 5-HT. The book opens exciting new approaches to the interdisciplinary study of behavior and pharmacology with special reference to ethology, endocrinology, neuroanatomy and comparative aspects of drug action, and notes new developments in therapeutic drugs of the future.

agonist and antagonist ib psychology: Multiple Sclerosis Institute of Medicine, Board on Neuroscience and Behavioral Health, Committee on Multiple Sclerosis: Current Status and Strategies for the Future, 2001-08-10 Multiple sclerosis is a chronic and often disabling disease of the nervous system, affecting about 1 million people worldwide. Even though it has been known for over a hundred years, no cause or cure has yet been discovered-but now there is hope. New therapies have been shown to slow the disease progress in some patients, and the pace of discoveries about the cellular machinery of the brain and spinal cord has accelerated. This book presents a comprehensive overview of multiple sclerosis today, as researchers seek to understand its processes, develop therapies that will slow or halt the disease and perhaps repair damage, offer relief for specific symptoms, and improve the abilities of MS patients to function in their daily lives. The panel reviews existing knowledge and identifies key research questions, focusing on: Research strategies that have the greatest potential to understand the biological mechanisms of recovery and to translate findings into specific strategies for therapy. How people adapt to MS and the research needed to improve the lives of people with MS. Management of disease symptoms (cognitive impairment, depression, spasticity, vision problems, and others). The committee also discusses ways to build and financially support the MS research enterprise, including a look at challenges inherent in designing clinical trials. This book will be important to MS researchers, research funders, health care advocates for MS research and treatment, and interested patients and their families.

agonist and antagonist ib psychology: Pain Management and the Opioid Epidemic National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse, 2017-09-28 Drug overdose, driven largely by overdose related to the use of opioids, is now the leading cause of unintentional injury death in the United States. The ongoing opioid crisis lies at the intersection of two public health challenges: reducing the burden of suffering from pain and containing the rising toll of the harms that can arise from the use of opioid medications. Chronic pain and opioid use disorder both represent complex human conditions affecting millions of Americans and causing untold disability and loss of function. In the context of the growing opioid problem, the U.S. Food and Drug Administration (FDA) launched an Opioids Action Plan in early 2016. As part of this plan, the FDA asked the National Academies of Sciences, Engineering, and Medicine to convene a committee to update the state of the science on pain research, care, and education and to identify actions the FDA and others can take to respond to the opioid epidemic, with a particular focus on informing FDA's development of a formal method for incorporating individual and societal considerations into its risk-benefit framework for opioid approval and monitoring.

agonist and antagonist ib psychology: International Encyclopedia of Psychiatry, Psychology, Psychoanalysis & Neurology , 1977 Comprehensive coverage with over 1800 signed articles by 1500 worldwide authors presenting the current status of research, theory, and therapy in their respective fields. Intended for professional personnel concerned with the problems of mental health and the human mind. Each entry gives article, bibliography, and signature. Cross references. V. 1 contains brief biographical notes on authors; v. 12 is the index. Name, subject indexes.

agonist and antagonist ib psychology: Pleasures of the Brain Morten L. Kringelbach, Kent C. Berridge, 2010 Pleasure is fundamental to well-being and the quality of life, but until recently, was barely explored by science. Current research on pleasure has brought about ground-breaking developments on several fronts, and new data on pleasure and the brain have begun to converge from many disparate fields. The time is ripe to present these important findings in a single volume, and so Morten Kringelbach and Kent Berridge have brought together the leading researchers to provides a comprehensive review of our current scientific understanding of pleasure. The authors

present their latest neuroscientific research into pleasure, describing studies on the brain's role in pleasure and reward in animals and humans, including brain mechanisms, neuroimaging data, and psychological analyses, as well as how their findings have been applied to clinical problems, such as depression and other disorders of hedonic well-being. To clarify the differences between their views, the researchers also provide short answers to a set of fundamental questions about pleasure and its relation to the brain. This book is intended to serve as both a starting point for readers new to the field, and as a reference for more experienced graduate students and scientists from fields such as neuroscience, psychology, psychiatry, neurology, and neurosurgery.

agonist and antagonist ib psychology: Oxford Textbook of Clinical Neurophysiology

Kerry R. Mills, 2017 Part of the Oxford Textbooks in Clinical Neurology series, the Oxford Textbook of Clinical Neurophysiology includes sections that provide a summary of the basic science underlying neurophysiological techniques, a description of the techniques themselves, including normal values, and a description of the use of the techniques in clinical situations. Much of diagnostic neurophysiology is essentially pattern recognition which is illustrated throughout the text using audio and video examples. Divided into four key sections, this book begins with the scientific basis of clinical neurophysiology (Section 1) before exploring specific techniques including Electromyography, Intracranial EEG recordings, and Magnetoencephalography (Section 2). The final two sections explore clinical aspects of both the peripheral nervous system (Section 3) and the central nervous system (Section 4).

agonist and antagonist ib psychology: The Behavioral and Cognitive Neurology of

Stroke Olivier Godefroy, Julien Bogousslavsky, 2007-01-18 The care of stroke patients has changed dramatically. As well as improvements in the emergency care of the condition, there have been marked advances in our understanding, management and rehabilitation of residual deficits. This book is about the care of stroke patients, focusing on behavioural and cognitive problems. It provides a comprehensive review of the field covering the diagnostic value of these conditions, in the acute and later phases, their requirements in terms of treatment and management and the likelihood and significance of long-term disability. This book will appeal to all clinicians involved in the care of stroke patients, as well as to neuropsychologists, other rehabilitation therapists and research scientists investigating the underlying neuroscience.

agonist and antagonist ib psychology: Introduction to Psychology

Jennifer Walinga, Charles Stangor, This book is designed to help students organize their thinking about psychology at a conceptual level. The focus on behaviour and empiricism has produced a text that is better organized, has fewer chapters, and is somewhat shorter than many of the leading books. The beginning of each section includes learning objectives; throughout the body of each section are key terms in bold followed by their definitions in italics; key takeaways, and exercises and critical thinking activities end each section.

agonist and antagonist ib psychology: Index Medicus , 2004 Vols. for 1963- include as pt. 2 of the Jan. issue: Medical subject headings.

agonist and antagonist ib psychology: The Great Pheromone Myth

Richard L. Doty, 2010-02 For more than 50 years, researchers ... have identified pheromones as the triggers for a wide range of mammalian behaviors and endocrine responses. In this book, [author] rejects this idea and states bluntly that, in contrast to insects, mammals do not have pheromones. ... [book title] directly challenges ideas about the role chemicals play in mammalian behavior and reproductive processes.--Book jacket.

agonist and antagonist ib psychology: Pharmacology in 7 Days for Medical Students

Fazal-I-Akbar Danish, Ahmed Ehsan Rabbani, 2018-05-08 Pharmacological knowledge among medical students can have a very short 'half life': students often fail not because they have failed to study, but because they have been unable to retain key knowledge and reproduce it in an exam setting. This book takes an alternative route to the conventional approach of comprehensively exploring each individual drug and its features: not only can such an approach overwhelm and make knowledge retention difficult, but the current exam format makes questions structured in this way

unlikely anyway. Instead of aiming to be completely comprehensive, it examines drugs systematically by classifications, mechanisms of action, therapeutic uses and side effects, enabling students to gain the distilled, functional grasp of pharmacology that their exams actually demand quickly and clearly.

agonist and antagonist ib psychology: Histamine in the brain Jian-Sheng Lin, Pertti Panula, Maria Beatrice Passani, 2015-03-18 Brain aminergic pathways are organized in parallel and interacting systems, which support a range of functions, from homoeostatic regulations to cognitive, and motivational processes. Despite overlapping functional influences, dopamine, serotonin, noradrenaline and histamine systems provide different contributions to these processes. The histaminergic system, long ignored as a major regulator of the sleep-wake cycle, has now been fully acknowledged also as a major coordinator of attention, learning and memory, decision making. Although histaminergic neurons project widely to the whole brain, they are functionally heterogeneous, a feature which may provide the substrate for differential regulation, in a region-specific manner, of other neurotransmitter systems. Neurochemical preclinical studies have clearly shown that histamine interacts and modulates the release of neurotransmitters that are recognized as major modulators of cognitive processing and motivated behaviours. As a consequence, the histamine system has been proposed as a therapeutic target to treat sleep-wake disorders and cognitive dysfunctions that accompany neurodegenerative and neuroinflammatory pathologies. Last decades have witnessed an unexpected explosion of interest in brain histamine system, as new receptors have been discovered and selective ligands synthesised. Nevertheless, the complete picture of the histamine systems fine-tuning and its orchestration with other pathways remains rather elusive. This Research Topic is intended to offer an inter-disciplinary forum that will improve our current understanding of the role of brain histamine and provide the fundamentals necessary to drive innovation in clinical practice and to improve the management and treatment of neurological disorders.

agonist and antagonist ib psychology: Good Research Practice in Non-Clinical Pharmacology and Biomedicine Anton Bespalov, Martin C. Michel, Thomas Steckler, 2020-01-01 This open access book, published under a CC BY 4.0 license in the Pubmed indexed book series Handbook of Experimental Pharmacology, provides up-to-date information on best practice to improve experimental design and quality of research in non-clinical pharmacology and biomedicine.

agonist and antagonist ib psychology: The American Psychiatric Association Practice Guideline for the Pharmacological Treatment of Patients With Alcohol Use Disorder American Psychiatric Association, 2018-01-11 Alcohol use disorder (AUD) is a major public health problem in the United States. The estimated 12-month and lifetime prevalence values for AUD are 13.9% and 29.1%, respectively, with approximately half of individuals with lifetime AUD having a severe disorder. AUD and its sequelae also account for significant excess mortality and cost the United States more than \$200 billion annually. Despite its high prevalence and numerous negative consequences, AUD remains undertreated. In fact, fewer than 1 in 10 individuals in the United States with a 12-month diagnosis of AUD receive any treatment. Nevertheless, effective and evidence-based interventions are available, and treatment is associated with reductions in the risk of relapse and AUD-associated mortality. The American Psychiatric Association Practice Guideline for the Pharmacological Treatment of Patients With Alcohol Use Disorder seeks to reduce these substantial psychosocial and public health consequences of AUD for millions of affected individuals. The guideline focuses specifically on evidence-based pharmacological treatments for AUD in outpatient settings and includes additional information on assessment and treatment planning, which are an integral part of using pharmacotherapy to treat AUD. In addition to reviewing the available evidence on the use of AUD pharmacotherapy, the guideline offers clear, concise, and actionable recommendation statements, each of which is given a rating that reflects the level of confidence that potential benefits of an intervention outweigh potential harms. The guideline provides guidance on implementing these recommendations into clinical practice, with the goal of improving quality of care and treatment outcomes of AUD.

agonist and antagonist ib psychology: Biomechanics and Motor Control of Human Movement David A. Winter, 2009-10-12 The classic book on human movement in biomechanics, newly updated Widely used and referenced, David Winter's Biomechanics and Motor Control of Human Movement is a classic examination of techniques used to measure and analyze all body movements as mechanical systems, including such everyday movements as walking. It fills the gap in human movement science area where modern science and technology are integrated with anatomy, muscle physiology, and electromyography to assess and understand human movement. In light of the explosive growth of the field, this new edition updates and enhances the text with: Expanded coverage of 3D kinematics and kinetics New materials on biomechanical movement synergies and signal processing, including auto and cross correlation, frequency analysis, analog and digital filtering, and ensemble averaging techniques Presentation of a wide spectrum of measurement and analysis techniques Updates to all existing chapters Basic physical and physiological principles in capsule form for quick reference An essential resource for researchers and student in kinesiology, bioengineering (rehabilitation engineering), physical education, ergonomics, and physical and occupational therapy, this text will also provide valuable to professionals in orthopedics, muscle physiology, and rehabilitation medicine. In response to many requests, the extensive numerical tables contained in Appendix A: Kinematic, Kinetic, and Energy Data can also be found at the following Web site: www.wiley.com/go/biomechanics

agonist and antagonist ib psychology: Handbook of Psychology, Personality and Social Psychology Theodore Millon, Melvin J. Lerner, 2003-06-02 Includes established theories and cutting-edge developments. Presents the work of an international group of experts. Presents the nature, origin, implications, an future course of major unresolved issues in the area.

agonist and antagonist ib psychology: The Oxford Handbook of Positive Emotion and Psychopathology June Gruber, 2019 Considerable research has been devoted to understanding how positive emotional processes influence our thoughts and behaviors, and the resulting body of work clearly indicates that positive emotion is a vital ingredient in our human quest towards well-being and thriving. Yet the role of positive emotion in psychopathology has been underemphasized, such that comparatively less scientific attention has been devoted to understanding ways in which positive emotions might influence and be influenced by psychological disturbance. Presenting cutting-edge scientific work from an internationally-renowned group of contributors, The Oxford Handbook of Positive Emotion and Psychopathology provides unparalleled insight into the role of positive emotions in mental health and illness. The book begins with a comprehensive overview of key psychological processes that link positive emotional experience and psychopathological outcomes. The following section focuses on specific psychological disorders, including depression, anxiety, trauma, bipolar disorder, and schizophrenia, as well as developmental considerations. The third and final section of the Handbook discusses translational implications of this research and how examining populations characterized by positive emotion disturbance enables a better understanding of psychiatric course and risk factors, while simultaneously generating opportunities to bridge gaps between basic science models and psychosocial interventions. With its rich and multi-layered focus, The Oxford Handbook of Positive Emotion and Psychopathology will be of interest to researchers, teachers, and students from a range of disciplines, including social psychology, clinical psychology and psychiatry, biological psychology and health psychology, affective science, and neuroscience.

agonist and antagonist ib psychology: Imaging Dopamine Paul Cumming, 2009-04-02 An illustrated biography of the dopamine molecule, with each chapter presenting a specific stage in the biochemical pathway for dopamine.

agonist and antagonist ib psychology: Biomechanical Basis of Human Movement Joseph Hamill, Kathleen Knutzen, Timothy R. Derrick, 2015 Focusing on the quantitative nature of biomechanics, this book integrates current literature, meaningful numerical examples, relevant applications, hands-on exercises, and functional anatomy, physics, calculus, and physiology to help students - regardless of their mathematical background - understand the full continuum of human

movement potential.

agonist and antagonist ib psychology: How Tobacco Smoke Causes Disease United States. Public Health Service. Office of the Surgeon General, 2010 This report considers the biological and behavioral mechanisms that may underlie the pathogenicity of tobacco smoke. Many Surgeon General's reports have considered research findings on mechanisms in assessing the biological plausibility of associations observed in epidemiologic studies. Mechanisms of disease are important because they may provide plausibility, which is one of the guideline criteria for assessing evidence on causation. This report specifically reviews the evidence on the potential mechanisms by which smoking causes diseases and considers whether a mechanism is likely to be operative in the production of human disease by tobacco smoke. This evidence is relevant to understanding how smoking causes disease, to identifying those who may be particularly susceptible, and to assessing the potential risks of tobacco products.

agonist and antagonist ib psychology: Social Pain Geoff MacDonald, Lauri A. Jensen-Campbell, 2011 Social pain is the experience of pain as a result of interpersonal rejection or loss, such as rejection from a social group, bullying, or the loss of a loved one. Research now shows that social pain results from the activation of certain components in physical pain systems. Although social, clinical, health, and developmental psychologists have each explored aspects of social pain, recent work from the neurosciences provides a coherent, unifying framework for integrative research. This edited volume provides the first comprehensive, multidisciplinary exploration of social pain. Part I examines the subject from a neuroscience perspective, outlining the evolutionary basis of social pain and tracing the genetic, neurological, and physiological underpinnings of the phenomenon. Part II explores the implications of social pain for functioning in interpersonal relationships; contributions examine the influence of painkillers on social emotions, the ability to relive past social hurts, and the relation of social pain to experiences of intimacy. Part III examines social pain from a biopsychosocial perspective in its consideration of the health implications of social pain, outlining the role of stress in social pain and the potential long-term health consequences of bullying. The book concludes with an integrative review of these diverse perspectives--Publicity materials. (PsycINFO Database Record (c) 2010 APA, all rights reserved).

agonist and antagonist ib psychology: Brain Dynamics Erol Başar, Theodore H. Bullock, 2012-12-06 This volume is based on contributions to the second Brain Dynamics Conference, held in Berlin on August 10-14, 1987, as a satellite conference of the Budapest Congress of the International Brain Research Organization. Like the volume resulting from the first conference, *Dynamics of Sensory and Cognitive Processing by the Brain*, the present work covers new approaches to brain function, with emphasis on electromagnetic fields, EEG, event-related potentials, connectivistic views, and neural networks. Close attention is also paid to research in the emerging field of deterministic chaos and strange attractors. The diversity of this collection of papers reflects a multipronged advance in a hitherto relatively neglected domain, i. e., the study of signs of dynamic processes in organized neural tissue in order both to explain them and to exploit them for clues to system function. The need is greater than ever for new windows. This volume reflects a historical moment, the moment when a relatively neglected field of basic research into available signs of dynamic processes ongoing in organized neural tissue is expanding almost explosively to complement other approaches. From the topics treated, this book should appeal, as did its predecessor, to neuroscientists, neurologists, scientists studying complex systems, artificial intelligence, and neural networks, psychobiologists, and all basic and clinical investigators concerned with new techniques of monitoring and analyzing the brain's electromagnetic activity.

agonist and antagonist ib psychology: Litt's Drug Eruption & Reaction Manual Neil H. Shear, 2021-01-18 Internationally relied upon by medical practitioners for its unparalleled focus on adverse effects and cutaneous reactions, *Litt's Drug Eruption & Reaction Manual* is a succinct clinical reference and essential drug-safety tool for patient care. This 27th edition is a comprehensively revised and updated quick reference, and each entry includes: * Quantitative summaries of reports and incidence for reactions * Drug-drug interactions * Categories of adverse drug reactions,

eruptions, and cutaneous reaction patterns * Essential reference information on prescription and over-the-counter drugs as well as herbals and supplements The book contains... * A to Z listing of the 1500 most consulted drug and herbal profiles, including generic name and trade names; pharmaceutical company; indications; half-life; and pregnancy category * Over 31,000 adverse reactions and drug-eruption listings * Includes supplements, vaccines, and botanicals * Clinical definitions of common and severe adverse reactions * List of drugs that cause severe adverse reactions * List of main classes of drugs as a quick clinical reference guide * 27 tables of members of a class of drugs (such as statins or monoclonal antibodies), enabling clinicians to see at a glance whether a reaction is common to all drugs included in that class, or to a majority of them, or is known in only a handful—information that is critical for an informed decision to change drugs within the same class * 2 extensive tables showing reported genetic associations with cutaneous adverse drug reactions and recommendations regarding genetic screening to prevent cutaneous adverse drug reactions * A concordance of synonyms and trade names for ease of cross-reference Markets: Dermatologists, Neurologists, Oncologists, Psychiatrists, Pharmacists, Family Physicians, and those caring for patients on multiple medications, such as Geriatricians and Hospital Generalist Physicians. Litt's Drug Eruption & Reaction Manual is a succinct clinical reference derived from Litt's Drug Eruption & Reaction Database, located at www.drugeruptiondata.com, which currently holds over 1750 drug profiles with almost 70,000 documented drug reactions, as evidenced by well over 145,000 references on PubMed. Quick and easy access via the Litt app provides real time access to the most up-to-date drug safety information to a busy practitioner on-the-go. Subscribers to the database benefit from: * Easy access via the Litt app, ideal for working across a number of work-places * Full drug profiles with a wealth of information including category, half-life, indications, drug-drug interactions, and known adverse reactions * Links to PubMed abstracts * Searching a class of drugs for a specific reaction * Searching by adverse reaction pattern * Searching by indication for a drug * Searching by drug name (generic name/brand name) as well as by pharmaceutical company or drug class * Searching herbal medicines and supplements * Diagnosing the cause of reactions in patients on multiple drugs by selecting the adverse reaction(s) experienced and the drug(s) the patient is taking * Comparing reaction profiles for up to four drugs in a customized chart that can be saved for future reference * Descriptions of reaction patterns * Photographs of adverse reactions * Access via a computer, tablet, or smartphone * Regular updates To learn more, and to subscribe to the database, visit www.drugeruptiondata.com.

agonist and antagonist in psychology: Neuroscience for Psychologists Marc L. Zeise, 2020-11-30 This textbook is intended to give an introduction to neuroscience for students and researchers with no biomedical background. Primarily written for psychologists, this volume is a digest giving a rapid but solid overview for people who want to inform themselves about the core fields and core concepts in neuroscience but don't need so many anatomical or biochemical details given in "classical" textbooks for future doctors or biologists. It does not require any previous knowledge in basic science, such as physics or chemistry. On the other hand, it contains chapters that do go beyond the issues dealt with in most neuroscience textbooks: One chapter about mathematical modelling in neuroscience and another about "tools of neuroscience" explaining important methods. The book is divided in two parts. The first part presents core concepts in neuroscience: Electrical Signals in the Nervous System Basics of Neuropharmacology Neurotransmitters The second part presents an overview of the neuroscience fields of special interest for psychology: Clinical Neuropharmacology Inputs, Outputs and Multisensory Processing Neural Plasticity in Humans Mathematical Modeling in Neuroscience Subjective Experience and its Neural Basis The last chapter, "Tools of Neuroscience" presents important methodological approaches in neuroscience with a special focus on brain imaging. Neuroscience for Psychologists aims to fill a gap in the teaching literature by providing an introductory text for psychology students that can also be used in other social sciences courses, as well as a complement in courses of neurophysiology, neuropharmacology or similar in careers outside as well as inside biological or medical fields. Students of data sciences, chemistry and physics as well as engineering interested in neuroscience

will also profit from the text.

agonist and antagonist ib psychology: NIDA Research Monograph , 1976

agonist and antagonist ib psychology: *Problems of Drug Dependence* Committee on Problems of Drug Dependence (U.S.). Scientific Meeting, 1990

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