

a double blind study

A Double-Blind Study: Unveiling Truth Through Controlled Research

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Editor: Dr. David Chen, MD, PhD, a seasoned medical editor with over 15 years of experience in peer-reviewing and editing clinical trial research papers. Dr. Chen's expertise lies in ensuring the methodological soundness and statistical accuracy of published articles, particularly focusing on the critical evaluation of double-blind study methodologies and their interpretation.

What is a Double-Blind Study?

A double-blind study is a type of clinical trial or research experiment where neither the participants nor the researchers administering the treatment know who is receiving the treatment (e.g., a new drug) and who is receiving a placebo or alternative treatment. This blinding process is crucial for minimizing bias and enhancing the reliability of the research findings. The gold standard of experimental design, a double-blind study significantly reduces the potential influence of subjective factors on the results.

The Importance of Blinding in Research

Bias can significantly influence the outcome of any study. In a clinical trial, for example, if researchers know which participants are receiving the active treatment, they might unintentionally treat them differently, leading to skewed results. Similarly, participants might subconsciously alter their behavior or reporting based on their expectation of the treatment. A double-blind study design mitigates these biases, ensuring that observed effects are more likely attributable to the treatment itself rather than extraneous factors.

How a Double-Blind Study Works

The process typically involves several steps:

1. Randomization: Participants are randomly assigned to either the treatment or control group. This randomization ensures that the groups are comparable at baseline and minimizes confounding variables.
1. Blinding: Both the participants and the researchers interacting with them are unaware of the treatment assignment. This is usually achieved through the use of coded labels or a third-party system managing the allocation.
1. Data Collection: Researchers collect data on predetermined outcomes, often using standardized measures and protocols to further minimize bias.
1. Unblinding (if necessary): After data collection, the codes are broken to reveal the treatment assignments, allowing for analysis of the results. In certain situations, unblinding may be delayed or only occur for specific analyses.

Data and Research Findings: A Case Study

Consider a hypothetical double-blind study investigating the efficacy of a new drug for treating hypertension. 200 participants with hypertension were randomly assigned to receive either the new drug (treatment group) or a placebo (control group). Neither the participants nor the administering clinicians knew which treatment each participant received. Blood pressure measurements were taken at baseline, after one month, and after three months.

Results:

Group	Baseline BP (mmHg)	1 Month BP (mmHg)	3 Month BP (mmHg)
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Treatment Group	150/95	135/85	125/80
Control Group	152/96	148/92	145/90

Statistical analysis revealed a statistically significant difference in blood pressure reduction between the treatment and control groups at both one and three months ($p < 0.001$). This suggests that the new drug is effective in lowering blood pressure. The double-blind nature of the study minimizes the possibility that these findings are due to placebo effects or researcher bias.

Challenges and Limitations of a Double-Blind Study

While a double-blind study is a powerful research design, it does have limitations:

Not always feasible: Some interventions, such as surgery or certain types of behavioral therapies, are difficult or impossible to blind.

Cost and complexity: Implementing a double-blind study can be more expensive and time-consuming than other designs due to the need for rigorous blinding procedures.

Unblinding emergencies: In certain cases, unblinding may be necessary due to unforeseen adverse events or participant safety concerns.

Potential for breaking the blind: Despite careful planning, there's always a small chance that the blind could be broken unintentionally.

Ethical Considerations in a Double-Blind Study

Ethical considerations are paramount in any research involving human participants. In a double-blind study, informed consent is crucial, ensuring that participants understand the study's purpose, procedures, potential risks and benefits, and their right to withdraw at any time. Data privacy and confidentiality must also be strictly maintained throughout the study. Ethical review board approval is a necessary prerequisite for conducting a double-blind study.

Conclusion

A double-blind study remains a cornerstone of rigorous scientific research, offering a robust method for minimizing bias and enhancing the validity of findings. While challenges and limitations exist, the benefits of a double-blind study design in ensuring the reliability and generalizability of research outweigh the difficulties in its implementation. The strength of a double-blind study lies in its ability to provide evidence that is less susceptible to subjective interpretation, thereby leading to more reliable and trustworthy conclusions. Its widespread application across various scientific disciplines underscores its crucial role in advancing our understanding of complex phenomena and improving healthcare outcomes.

FAQs

1. What is the difference between a single-blind and a double-blind study? In a single-blind study, only the participants are unaware of the treatment assignment, while in a double-blind study, both participants and researchers are blinded.
1. Can all types of research use a double-blind study design? No, some interventions are inherently difficult or impossible to blind, limiting the applicability of this design.

1. How does randomization help in a double-blind study? Randomization ensures that the treatment and control groups are comparable at baseline, reducing the risk of confounding variables influencing the results.
1. What are some common methods for blinding participants and researchers? Coded labels, third-party administration of treatments, and the use of identical placebos are common methods.
1. What happens if a participant needs to be unblinded during the study? Pre-determined procedures are typically in place for unblinding in emergencies, often involving an independent ethics committee.
1. How are the results of a double-blind study analyzed? Statistical methods are used to compare outcomes between the treatment and control groups, taking into account factors like baseline characteristics.
1. What is the significance of p-values in a double-blind study? P-values indicate the statistical significance of the findings, helping to determine whether observed differences are likely due to chance or the treatment.
1. What are some potential ethical concerns in a double-blind study? Informed consent, participant safety, data privacy, and the potential for deception are key ethical considerations.
1. How does a double-blind study contribute to evidence-based medicine? By minimizing bias, a double-blind study provides high-quality evidence that informs clinical practice guidelines and treatment decisions.

Related Articles

1. "The Role of Blinding in Clinical Trials: A Systematic Review": This article reviews

existing literature on the effectiveness of blinding techniques in clinical trials, highlighting best practices and challenges.

1. "Minimizing Bias in Randomized Controlled Trials: A Practical Guide": This guide provides practical advice on minimizing various types of bias, including selection bias and measurement bias, in randomized controlled trials.
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1. "Regulatory Guidelines for Double-Blind Studies: A Comparative Analysis": This article compares regulatory guidelines for double-blind studies across different countries and regions.

a double blind study: Double Blind Edward St. Aubyn, 2021-06-01 Double Blind follows three close friends and their circle through a year of extraordinary transformation. Set in London, Cap d'Antibes, Big Sur, and a rewilded corner of Sussex, this thrilling, ambitious novel is about the headlong pursuit of knowledge—for the purposes of pleasure, revelation, money, sanity, or survival—and the consequences of fleeing from what we know about others and ourselves. When Olivia meets a new lover just as she is welcoming her best friend, Lucy, back from New York, her dedicated academic life expands precipitously. Her connection to Francis, a committed naturalist living off the grid, is immediate and startling. Eager to involve Lucy in her joy, Olivia introduces the two—but Lucy has received shocking news of her own that binds the trio unusually close. Over the months that follow, Lucy's boss, Hunter, Olivia's psychoanalyst parents, and a young man named Sebastian are pulled into the friends' orbit, and not one of them will emerge unchanged. Expansive, playful, and compassionate, Edward St. Aubyn's Double Blind investigates themes of inheritance, determinism, freedom, consciousness, and the stories we tell about ourselves. It is as compelling about ecology, psychoanalysis, genetics, and neuroscience as it is about love, fear, and courage. Most of all, it is a perfect expression of the interconnections it sets out to examine, and a moving evocation of an imagined world that is deeply intelligent, often tender, curious, and very much alive.

a double blind study: Planning Clinical Research Robert A. Parker, Nancy G. Berman, 2016-10-12 Planning clinical research requires many decisions. The authors of this book explain key decisions with examples showing what works and what does not.

a double blind study: Field Trials of Health Interventions Peter G. Smith, Richard H. Morrow, David A. Ross, 2015 This is an open access title available under the terms of a CC BY-NC 4.0 International licence. It is free to read at Oxford Scholarship Online and offered as a free PDF download from OUP and selected open access locations. Before new interventions are released into disease control programmes, it is essential that they are carefully evaluated in field trials'. These may be complex and expensive undertakings, requiring the follow-up of hundreds, or thousands, of individuals, often for long periods. Descriptions of the detailed procedures and methods used in the trials that have been conducted have rarely been published. A consequence of this, individuals planning such trials have few guidelines available and little access to knowledge accumulated previously, other than their own. In this manual, practical issues in trial design and conduct are discussed fully and in sufficient detail, that Field Trials of Health Interventions may be used as a toolbox' by field investigators. It has been compiled by an international group of over 30 authors with direct experience in the design, conduct, and analysis of field trials in low and middle income countries and is based on their accumulated knowledge and experience. Available as an open access book via Oxford Medicine Online, this new edition is a comprehensive revision, incorporating the new developments that have taken place in recent years with respect to trials, including seven new chapters on subjects ranging from trial governance, and preliminary studies to pilot testing.

a double blind study: Small Clinical Trials Institute of Medicine, Board on Health Sciences Policy, Committee on Strategies for Small-Number-Participant Clinical Research Trials, 2001-01-01 Clinical trials are used to elucidate the most appropriate preventive, diagnostic, or treatment options for individuals with a given medical condition. Perhaps the most essential feature of a clinical trial is that it aims to use results based on a limited sample of research participants to see if the intervention is safe and effective or if it is comparable to a comparison treatment. Sample size is a crucial component of any clinical trial. A trial with a small number of research participants is more

prone to variability and carries a considerable risk of failing to demonstrate the effectiveness of a given intervention when one really is present. This may occur in phase I (safety and pharmacologic profiles), II (pilot efficacy evaluation), and III (extensive assessment of safety and efficacy) trials. Although phase I and II studies may have smaller sample sizes, they usually have adequate statistical power, which is the committee's definition of a large trial. Sometimes a trial with eight participants may have adequate statistical power, statistical power being the probability of rejecting the null hypothesis when the hypothesis is false. Small Clinical Trials assesses the current methodologies and the appropriate situations for the conduct of clinical trials with small sample sizes. This report assesses the published literature on various strategies such as (1) meta-analysis to combine disparate information from several studies including Bayesian techniques as in the confidence profile method and (2) other alternatives such as assessing therapeutic results in a single treated population (e.g., astronauts) by sequentially measuring whether the intervention is falling above or below a preestablished probability outcome range and meeting predesigned specifications as opposed to incremental improvement.

a double blind study: 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.

a double blind study: Dynamics of Brain Edema Hanna M. Pappius, William Feindel, 2012-12-06 A workshop on Dynamic Aspects of Cerebral Edema was organized to provide an opportunity for interdisciplinary and detailed consideration of this subject, so crucial in neurology and neurosurgery. The previous workshops were held in Vienna in 1965 and in Mainz in 1972. In the meantime, our ideas on mechanisms of resolution of cerebral edema had been changing drastically. Controversy had arisen regarding the role of biogenic amines in the development of edema. Active work in several centers had indicated the possibility of a reversible component in edematous changes associated with ischemia, the control of which could be of therapeutic significance in the problem of stroke. It was felt that a thorough discussion, at this time, by those involved in these various studies should help to resolve the controversies, to crystallize the implications of the new findings, and to evaluate their application for patient care. In preparing the proceedings for publication we have edited the manuscripts and selected the discussions with an aim to highlight new findings, to make this volume readable, and to eliminate duplication. We gratefully acknowledge financial support from the institutions and organizations previously listed. Many individuals contributed to the success of the workshop and the preparation of the proceedings for publication. Doctors J.B. Brierley, I. Klatzo, H.J. Reulen, and A.G.

a double blind study: Encyclopedia of Child Behavior and Development Sam Goldstein, Jack A. Naglieri, 2010-11-23 This reference work breaks new ground as an electronic resource. Utterly comprehensive, it serves as a repository of knowledge in the field as well as a frequently updated conduit of new material long before it finds its way into standard textbooks.

a double blind study: The Prevention and Treatment of Missing Data in Clinical Trials National Research Council, Division of Behavioral and Social Sciences and Education, Committee on National Statistics, Panel on Handling Missing Data in Clinical Trials, 2010-12-21 Randomized clinical trials are the primary tool for evaluating new medical interventions. Randomization provides for a fair comparison between treatment and control groups, balancing out, on average, distributions of known and unknown factors among the participants. Unfortunately, these studies often lack a substantial percentage of data. This missing data reduces the benefit provided by the randomization and introduces potential biases in the comparison of the treatment groups. Missing data can arise for a variety of reasons, including the inability or unwillingness of participants to meet appointments for evaluation. And in some studies, some or all of data collection ceases when participants discontinue study treatment. Existing guidelines for the design and conduct of clinical trials, and the analysis of the resulting data, provide only limited advice on how to handle missing data. Thus,

approaches to the analysis of data with an appreciable amount of missing values tend to be ad hoc and variable. The Prevention and Treatment of Missing Data in Clinical Trials concludes that a more principled approach to design and analysis in the presence of missing data is both needed and possible. Such an approach needs to focus on two critical elements: (1) careful design and conduct to limit the amount and impact of missing data and (2) analysis that makes full use of information on all randomized participants and is based on careful attention to the assumptions about the nature of the missing data underlying estimates of treatment effects. In addition to the highest priority recommendations, the book offers more detailed recommendations on the conduct of clinical trials and techniques for analysis of trial data.

a double blind study: FDA Approval of New Drugs United States. Food and Drug Administration, 1971

a double blind study: Migraine and Headache Alexander Mauskop, 2013-01-10 Migraine and Headache, Second Edition provides concise guidelines for the point-of-care diagnosis and management of all headache conditions, complete with clinically-relevant cases to help clinicians provide effective care to their headache patients.

a double blind study: Sharing Clinical Trial Data Institute of Medicine, Board on Health Sciences Policy, Committee on Strategies for Responsible Sharing of Clinical Trial Data, 2015-04-20 Data sharing can accelerate new discoveries by avoiding duplicative trials, stimulating new ideas for research, and enabling the maximal scientific knowledge and benefits to be gained from the efforts of clinical trial participants and investigators. At the same time, sharing clinical trial data presents risks, burdens, and challenges. These include the need to protect the privacy and honor the consent of clinical trial participants; safeguard the legitimate economic interests of sponsors; and guard against invalid secondary analyses, which could undermine trust in clinical trials or otherwise harm public health. Sharing Clinical Trial Data presents activities and strategies for the responsible sharing of clinical trial data. With the goal of increasing scientific knowledge to lead to better therapies for patients, this book identifies guiding principles and makes recommendations to maximize the benefits and minimize risks. This report offers guidance on the types of clinical trial data available at different points in the process, the points in the process at which each type of data should be shared, methods for sharing data, what groups should have access to data, and future knowledge and infrastructure needs. Responsible sharing of clinical trial data will allow other investigators to replicate published findings and carry out additional analyses, strengthen the evidence base for regulatory and clinical decisions, and increase the scientific knowledge gained from investments by the funders of clinical trials. The recommendations of Sharing Clinical Trial Data will be useful both now and well into the future as improved sharing of data leads to a stronger evidence base for treatment. This book will be of interest to stakeholders across the spectrum of research-from funders, to researchers, to journals, to physicians, and ultimately, to patients.

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a double blind study: Pediatric Bipolar Disorder Robert L. Findling, Robert A Kowatch, Robert M. Post, 2002-10-10 Bipolar disorders were once considered rare in children and adolescents. A growing body of scientific evidence now suggests that they may be more prevalent in this group than previously believed. At the same time, the practitioner faces significant clinical challenges in both the assessment processes and also the implementation of a treatment plan. A paucity of treatment manuals and pharmacological algorithms providing practical guidance makes the task of the clinician even more difficult, despite the fact that more is known about the assessment, neurobiology and treatment of children and adolescents with bipolar disorder than ever before. Written by three distinguished experts, this book conveys to clinicians all the information currently available in this area. They review both the neuroscience and also the integration of rational, practical, pharmacological and psychosocial interventions. Based on what is known, a sound approach to the assessment of these youngsters can be developed. Similarly, available evidence allows practitioners

to ground their treatment protocols solidly on scientific knowledge. Concise and authoritative, *Pediatric Bipolar Disorders* will give the reader a practical approach to both the art and science of providing the best possible clinical care to children and adolescents with the disorder. This book is written primarily for clinical psychiatrists, but will also be of interest to non-specialist doctors and other members of the health care team.

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a double blind study: Human Mesenchymal Stem Cells Mitchell Khan, 2021 In Chapter 1, the COVID-19 pandemic and the damage mechanisms on the cellular level which can be ameliorated with the cellular therapies is thoroughly evaluated. Previous and ongoing stem cell clinical trial data from diseases with similar symptoms is gathered. All this accumulated data and current clinical trial results indicate that the cellular therapies could be the most effective treatment option for COVID-19 patients to ameliorate the damaged tissues and save lives. In Chapter 2, the authors examine activated mesenchymal stem cells for stroke repair. Stem Cell treatment has shown recovery in animal models of stroke, indicating an improved regenerative and repair potential. Though stem cells are still being used in clinical trials, there is no evidence that they enhance recovery in ischemic stroke patients. Nevertheless, the multipotent mesenchymal stem has widely been explored for stroke recovery. An 'Activated MSC' as a therapeutic alternative to tackling ischemic stroke is proposed, thereby the activation of MSCs by cytokines, growth factors, hypoxia, pharmacological drugs, etc., could be a novel approach to improving stroke patients' responses to receiving MSCs. In Chapter 3, the potential benefits of in vitro culture of therapeutic stem cells in the presence of HB along with the ketogenic diet, whereby higher physiological concentrations of ketone bodies can be achieved in vivo, as an adjuvant to stem cell transplantation is assessed--

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a double blind study: The Invisible Gorilla Christopher Chabris, Daniel Simons, 2011-06-07 Reading this book will make you less sure of yourself—and that's a good thing. In *The Invisible Gorilla*, Christopher Chabris and Daniel Simons, creators of one of psychology's most famous experiments, use remarkable stories and counterintuitive scientific findings to demonstrate an important truth: Our minds don't work the way we think they do. We think we see ourselves and the world as they really are, but we're actually missing a whole lot. Chabris and Simons combine the work of other researchers with their own findings on attention, perception, memory, and reasoning to reveal how faulty intuitions often get us into trouble. In the process, they explain:

- Why a company would spend billions to launch a product that its own analysts know will fail
- How a police officer could run right past a brutal assault without seeing it
- Why award-winning movies are full of editing mistakes
- What criminals have in common with chess masters
- Why measles and other childhood diseases are making a comeback
- Why money managers could learn a lot from weather forecasters

Again and again, we think we experience and understand the world as it is, but our thoughts are beset by everyday illusions. We write traffic laws and build criminal cases on the assumption that people will notice when something unusual happens right in front of them. We're sure we know where we were on 9/11, falsely believing that vivid memories are seared into our minds with perfect fidelity. And as a society, we spend billions on devices to train our brains because

we're continually tempted by the lure of quick fixes and effortless self-improvement. The Invisible Gorilla reveals the myriad ways that our intuitions can deceive us, but it's much more than a catalog of human failings. Chabris and Simons explain why we succumb to these everyday illusions and what we can do to inoculate ourselves against their effects. Ultimately, the book provides a kind of x-ray vision into our own minds, making it possible to pierce the veil of illusions that clouds our thoughts and to think clearly for perhaps the first time.

a double blind study: The Powerful Placebo Arthur K. Shapiro, Elaine Shapiro, 2000-10-17 Ranging from antiquity to modern times, this history of the placebo effect is especially timely in light of renewed interest in the mind-body relationship. Until this century, most medications prescribed by physicians were pharmacologically inert, if not harmful. That is, physicians were prescribing placebos or worse without knowing it. In a sense, then, the history of medical treatment until relatively recently is the history of the placebo effect. Based on the authors' lifelong study and clinical research, this is a comprehensive and scholarly examination of the placebo effect. The authors begin by surveying the use of placebos from antiquity to modern times. They also examine the development, use, and validity of the double-blind, controlled clinical trial. And they present their own study of the placebo effect in more than 1000 patients. Demonstrating both the magnitude and the limitations of the placebo effect, the book helps to clarify knotty issues ranging from the evaluation of therapies to the ethics of conducting controlled studies in which patients are deliberately given placebos. With the renewed interest in the mind-body relationship as well as in the role of placebos in new and alternative medical procedures and therapies, the findings of this book are especially timely.

a double blind study: The Love Hypothesis Ali Hazelwood, 2021-09-14 The Instant New York Times Bestseller and TikTok Sensation! As seen on THE VIEW! A BuzzFeed Best Summer Read of 2021 When a fake relationship between scientists meets the irresistible force of attraction, it throws one woman's carefully calculated theories on love into chaos. As a third-year Ph.D. candidate, Olive Smith doesn't believe in lasting romantic relationships--but her best friend does, and that's what got her into this situation. Convincing Anh that Olive is dating and well on her way to a happily ever after was always going to take more than hand-wavy Jedi mind tricks: Scientists require proof. So, like any self-respecting biologist, Olive panics and kisses the first man she sees. That man is none other than Adam Carlsen, a young hotshot professor--and well-known ass. Which is why Olive is positively floored when Stanford's reigning lab tyrant agrees to keep her charade a secret and be her fake boyfriend. But when a big science conference goes haywire, putting Olive's career on the Bunsen burner, Adam surprises her again with his unyielding support and even more unyielding...six-pack abs. Suddenly their little experiment feels dangerously close to combustion. And Olive discovers that the only thing more complicated than a hypothesis on love is putting her own heart under the microscope.

a double blind study: Obstetrics and Gynecology in Chinese Medicine Giovanni Maciocia, 2011-05-12 New edition of the most comprehensive Chinese Medicine Obstetrics and Gynecology textbook in the English language World-renowned author and teacher Giovanni Maciocia gives a clear, detailed explanation of the physiology, pathology and aetiology of women's disorders in Traditional Chinese Medicine (TCM) and adapts these to Western conditions and patients. Seventy gynecological conditions are discussed in detail with consideration given to differentiation between conditions, the advised treatment using acupuncture and herbs, prevention and prognosis. Guidelines on lifestyle and use of the eight Extraordinary Vessels are provided, with case studies allowing easy application of theory to practice throughout. New for this edition: New attractive two-colour layout with book marks to ease navigation Endometriosis and its treatment now included and fully covered in a new chapter Infertility chapter includes recent research highlighting factors in infertility All prescriptions now removed from the text and attractively presented in three appendices: Patient Remedies, Prescriptions and Three Treasure Remedies Obstetrics and Gynecology in Chinese Medicine is a paradigmatic work. It is tempered with reverence and innovation, meticulous archival attention and detailed modern clinical insight. When future

generations look back at this work...they will find not only knowledge and wisdom but also reasons for inspiration and awe. From the Foreword to the first edition by Ted J. Kaptchuk, Associate Director, Centre for Alternative Medicine Research, Beth Israel Hospital; Instructor in Medicine, Harvard medical School, Boston, USA. • Physiology and pathology of women's disorders in Chinese medicine • Aetiology and diagnosis of women's disorders • Differentiation and treatment – including acupuncture, herbs and patent remedies – of 64 gynecological conditions • Prevention and prognosis for each disease • Approximately 100 case histories from the author's own practice • A detailed discussion of the use of the eight extraordinary vessels in gynecology

a double blind study: The Health Effects of Cannabis and Cannabinoids National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Population Health and Public Health Practice, Committee on the Health Effects of Marijuana: An Evidence Review and Research Agenda, 2017-03-31 Significant changes have taken place in the policy landscape surrounding cannabis legalization, production, and use. During the past 20 years, 25 states and the District of Columbia have legalized cannabis and/or cannabidiol (a component of cannabis) for medical conditions or retail sales at the state level and 4 states have legalized both the medical and recreational use of cannabis. These landmark changes in policy have impacted cannabis use patterns and perceived levels of risk. However, despite this changing landscape, evidence regarding the short- and long-term health effects of cannabis use remains elusive. While a myriad of studies have examined cannabis use in all its various forms, often these research conclusions are not appropriately synthesized, translated for, or communicated to policy makers, health care providers, state health officials, or other stakeholders who have been charged with influencing and enacting policies, procedures, and laws related to cannabis use. Unlike other controlled substances such as alcohol or tobacco, no accepted standards for safe use or appropriate dose are available to help guide individuals as they make choices regarding the issues of if, when, where, and how to use cannabis safely and, in regard to therapeutic uses, effectively. Shifting public sentiment, conflicting and impeded scientific research, and legislative battles have fueled the debate about what, if any, harms or benefits can be attributed to the use of cannabis or its derivatives, and this lack of aggregated knowledge has broad public health implications. The Health Effects of Cannabis and Cannabinoids provides a comprehensive review of scientific evidence related to the health effects and potential therapeutic benefits of cannabis. This report provides a research agenda—outlining gaps in current knowledge and opportunities for providing additional insight into these issues—that summarizes and prioritizes pressing research needs.

a double blind study: *Hearing Equals Behavior: Updated and Expanded* Guy Berard, MD, Sally Brockett, MS, 2014-01-10 If you are a parent or teacher working with individuals who struggle to process auditory and sensory information, you will find that this book offers new understanding of these problems, and most importantly, explains the intervention called Berard auditory integration training (AIT). This 10-hour training program reorganizes the dysfunctional auditory and sensory center so the brain no longer gets overloaded with confusing information. Berard AIT is regarded as the most effective approach available for enhancing listening skills, language, learning, sound tolerance, and sensory modulation. Evaluation of learning and behavior difficulties should include how the individual hears. Are there distortions, timing delays, misperceptions, sequencing problems? These disruptions will interfere with processing until the auditory system is reorganized and balanced. Pre- and post-test data provided in this book demonstrates the types of improvements that may be observed after this 10-day retraining program. Readers will understand how listening and learning can switch on when the auditory system is rebalanced and functioning effectively. Studies show that this short-term intervention leads to long-term achievement when distortions, timing delays, and misperceptions in processing are eliminated. This 300-page book explains the concepts underlying Dr. Berard's method and how he developed his retraining program through years of detailed clinical observations. Professionals familiar with Berard AIT recommend his program for those struggling with learning and behavior.

a double blind study: *The Invisible Life of Addie LaRue* V. E. Schwab, 2020-10-06 NEW YORK

TIMES BESTSELLER USA TODAY BESTSELLER NATIONAL INDIE BESTSELLER THE WASHINGTON POST BESTSELLER Recommended by Entertainment Weekly, Real Simple, NPR, Slate, and Oprah Magazine #1 Library Reads Pick—October 2020 #1 Indie Next Pick—October 2020 BOOK OF THE YEAR (2020) FINALIST—Book of The Month Club A “Best Of” Book From: Oprah Mag * CNN * Amazon * Amazon Editors * NPR * Goodreads * Bustle * PopSugar * BuzzFeed * Barnes & Noble * Kirkus Reviews * Lambda Literary * Nerdette * The Nerd Daily * Polygon * Library Reads * io9 * Smart Bitches Trashy Books * LiteraryHub * Medium * BookBub * The Mary Sue * Chicago Tribune * NY Daily News * SyFy Wire * Powells.com * Bookish * Book Riot * Library Reads Voter Favorite * In the vein of *The Time Traveler’s Wife* and *Life After Life*, *The Invisible Life of Addie LaRue* is New York Times bestselling author V. E. Schwab’s genre-defying tour de force. A Life No One Will Remember. A Story You Will Never Forget. France, 1714: in a moment of desperation, a young woman makes a Faustian bargain to live forever—and is cursed to be forgotten by everyone she meets. Thus begins the extraordinary life of Addie LaRue, and a dazzling adventure that will play out across centuries and continents, across history and art, as a young woman learns how far she will go to leave her mark on the world. But everything changes when, after nearly 300 years, Addie stumbles across a young man in a hidden bookstore and he remembers her name. Also by V. E. Schwab *Shades of Magic* *A Darker Shade of Magic* *A Gathering of Shadows* *A Conjuring of Light* *Villains Vicious Vengeful* At the Publisher's request, this title is being sold without Digital Rights Management Software (DRM) applied.

a double blind study: Testing Treatments Imogen Evans, Hazel Thornton, Iain Chalmers, Paul Glasziou, 2011 This work provides a thought-provoking account of how medical treatments can be tested with unbiased or 'fair' trials and explains how patients can work with doctors to achieve this vital goal. It spans the gamut of therapy from mastectomy to thalidomide and explores a vast range of case studies.

a double blind study: Guidelines for the Use of Psychotropic Drugs H.C. Stancer, P.E. Garfinkel, V.M. Rakoff, 2012-12-06 . . . to the Clinician Although huge quantities of drugs are dispensed daily by psychiatrists, there appears to be insufficient concern about the short and long term effects of these exogenous agents on the recipients - our patients. Many clinicians have been trained at a time when knowledge of clinical psychopharmacology was superficial at best, and recent trainees do not necessarily have access to newer, constantly changing, relevant information. The busy clinician is frequently dependent upon the limited knowledge dispensed by the drug company representatives and naturally shies away from many of the more esoteric contributions appearing in the literature. Because of the foregoing issues, the Executive of the Clarke Institute of Psychiatry of the University of Toronto, with the financial support of the Ministry of Health of the Government of Ontario, organized an international symposium on May 14-17, 1982, to bring together some of the acknowledged experts in clinical psychopharmacology. This book is, in part, a reflection of that symposium. The editors are aware that a contributed volume, however tightly edited, is not necessarily a textbook. Notwithstanding this, it was thought to be important to assemble expert opinion on current important issues, of immediate concern to the practicing clinician. With this in mind, the chapters have been organized around five themes. Schizophrenia, Affective disorders, and Anxiety, are clearly important since they are the major targets of drug use in psychiatry.

a double blind study: Once Upon a Chef: Weeknight/Weekend Jennifer Segal, 2021-09-14 NEW YORK TIMES BESTSELLER • 70 quick-fix weeknight dinners and 30 luscious weekend recipes that make every day taste extra special, no matter how much time you have to spend in the kitchen—from the beloved bestselling author of *Once Upon a Chef*. “Jennifer’s recipes are healthy, approachable, and creative. I literally want to make everything from this cookbook!”—Gina Homolka, author of *The Skinnytaste Cookbook* Jennifer Segal, author of the blog and bestselling cookbook *Once Upon a Chef*, is known for her foolproof, updated spins on everyday classics. Meticulously tested and crafted with an eye toward both flavor and practicality, Jenn’s recipes hone in on exactly what you feel like making. Here she devotes whole chapters to fan favorites, from

Marvelous Meatballs to Chicken Winners, and Breakfast for Dinner to Family Feasts. Whether you decide on sticky-sweet Barbecued Soy and Ginger Chicken Thighs; an enlightened and healthy-ish take on Turkey, Spinach & Cheese Meatballs; Chorizo-Style Burgers; or Brownie Pudding that comes together in under thirty minutes, Jenn has you covered.

a double blind study: Ulysses ,

a double blind study: *Neuroscience Trials of the Future* National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Forum on Neuroscience and Nervous System Disorders, 2016-11-07 On March 3-4, 2016, the National Academies of Sciences, Engineering, and Medicine's Forum on Neuroscience and Nervous System Disorders held a workshop in Washington, DC, bringing together key stakeholders to discuss opportunities for improving the integrity, efficiency, and validity of clinical trials for nervous system disorders. Participants in the workshop represented a range of diverse perspectives, including individuals not normally associated with traditional clinical trials. The purpose of this workshop was to generate discussion about not only what is feasible now, but what may be possible with the implementation of cutting-edge technologies in the future.

a double blind study: Double Blind Heidi Cullinan, 2017-06-10 Know when to show your hand...and when to hedge your bets. Randy Jansen can't stand to just sit by and watch as a mysterious man throws money away on the roulette wheel, especially since Randy's got his own bet going as to the reason this guy is making every play like it's his last day on earth. The man's dark desperation hits Randy right in the gut. Half of him warns that getting involved is a sucker's bet, and the other half scrambles for a reason—any reason—to save the man's soul. Ethan Ellison has no idea what he's going to do with himself once his last dollar is gone—until Randy whirls into his life with a heart-stealing smile and a poker player's gaze that sees too much. Randy draws Ethan into a series of wagers that leads to a scorching kiss by midnight, but he isn't the only one with an interest in Ethan's vulnerability. Soon they're both taking risks that not only play fast and loose with the law, but with the biggest prize of all: their hearts.

a double blind study: Psychotic Disorders in Children and Adolescents Robert L. Findling, S. Charles Schulz, Javad H. Kashani, Elena Harlan, 2000-10-13 Psychotic disorders can be misunderstood or misdiagnosed by clinicians that deal with children, including clinical social workers, counselors, child psychiatrists, and child psychologists. Many times it is difficult for a mental health professional to determine whether the problematic behaviors exhibited are the result of an altered normal developmental process or the result of a serious mental disorder. This book provides professionals and students with the specific information needed to assess better the exact nature of what is affecting the young patient.

a double blind study: The ESC Textbook of Cardiovascular Medicine A. John Camm, 2019

a double blind study: *Cochrane Handbook for Systematic Reviews of Interventions* Julian P. T. Higgins, Sally Green, 2008-11-24 Healthcare providers, consumers, researchers and policy makers are inundated with unmanageable amounts of information, including evidence from healthcare research. It has become impossible for all to have the time and resources to find, appraise and interpret this evidence and incorporate it into healthcare decisions. Cochrane Reviews respond to this challenge by identifying, appraising and synthesizing research-based evidence and presenting it in a standardized format, published in The Cochrane Library (www.thecochranelibrary.com). The Cochrane Handbook for Systematic Reviews of Interventions contains methodological guidance for the preparation and maintenance of Cochrane intervention reviews. Written in a clear and accessible format, it is the essential manual for all those preparing, maintaining and reading Cochrane reviews. Many of the principles and methods described here are appropriate for systematic reviews applied to other types of research and to systematic reviews of interventions undertaken by others. It is hoped therefore that this book will be invaluable to all those who want to understand the role of systematic reviews, critically appraise published reviews or perform reviews themselves.

a double blind study: Drug Addiction and Its Treatment Bankole A. Johnson, John D. Roache, 1997 Provides a basic understanding of the behavioral and biological processes involved in

drug addiction with 19 contributions by specialists in various disciplines writing specifically for readers who are not. They explain the procedures, results, and significance of research in their field, emphasizing the commonality of actions between drugs of abuse rather than discussing addictive substances by drug class. Annotation copyrighted by Book News, Inc., Portland, OR.

a double blind study: *Young Children with ADHD* George J. DuPaul, Lee Kern, 2011 In the first book to describe empirically-supported early intervention with children aged 2-5 years who have or are at risk for ADHD, the authors present a three-tiered model for prevention and intervention that can be implemented at home or in preschool settings. This promising model can be adjusted to the degree of difficulty the child is experiencing and consists of universal intervention strategies, small group skills instruction, and assessment-based behavioral interventions. Lively case examples drawn from the authors' clinical experience illustrate common challenges of implementation. The authors also describe how to foster children's early academic skills and promote their physical safety.

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a double blind study: *Science of the Placebo* Harry Guess, Linda Engel, Arthur Kleinman, John Kusek, 2002-03-15 Based on a meeting in November 2000, this book brings together researchers from a wide range of disciplines to examine the biological, behavioral, social, cultural and ethical aspects related to the placebo effect. Perspectives on the necessity for including a placebo in randomized clinical trials will also be examined. This is the first attempt to examine the evidence-base of the placebo effect and will provide important information for clinicians.

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