

NEWLY  
REVISED &  
UPDATED

HANDBOOK  
OF CLINICAL  
PSYCHOPHARMACOLOGY  
FOR THERAPISTS

NINTH EDITION



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“As a pharmacologist who has taught for more than forty years, this text fills an important void by presenting a well-balanced presentation of psychopharmacology, including the basic principles of pharmacology. John Preston’s book will be an excellent reference for the researcher and clinician, and a solid desk reference for anyone in the field of psychopharmacology and mental health.”

—**Randall Tackett, PhD**, professor in the department of clinical and administrative pharmacy, and director of the clinical trials certificate program in regulatory affairs at Fairleigh Dickinson University and Alliant University

“The new edition of *Handbook of Clinical Psychopharmacology for Therapists* provides even more information than previous versions that I have required for my graduate students. The writing and format make it accessible for professionals without formal training in psychopharmacology. A mental health professional will be using it constantly, as it includes the essentials of psychiatric diagnosis and assessment, in addition to up-to-date information on psychiatric medications, and various issues related to their use.”

—**Richard Tedeschi, PhD**, professor emeritus in the department of psychological science at the University of North Carolina at Charlotte

## Praise from Previous Editions

“Therapists will find this wonderful book helpful in two ways—as both a textbook and a reference book. Read as a textbook, they will learn essentially all they need to know about why patients are taking the meds they are taking, and what the likely next steps in treatment will be. As a reference book, therapists can look up a patient’s medication or diagnosis and quickly review dosing, side effects, and rationale for use. As a seasoned psychopharmacologist, I found the information accurate, useful, and presented with a refreshing clarity. It’s rare to find a book with so much information that is also a pleasure to read. I recommend it highly to any mental health clinician, whether they are a therapist, a prescriber, or both.”

—**Daniel Carlat, MD**, editor in chief of *The Carlat Psychiatry Report*

“I’m a psychoanalyst and clinical psychologist with no medical training, and I found *Handbook of Clinical Psychopharmacology for Therapists* to be a compelling and stimulating read, as well as a welcome addition to my reference shelf. This text is coherent and user-friendly, and reading it is a surprisingly pleasurable way to expand your knowledge in an area of clinical treatment usually not made this accessible to nonmedical professionals.”

—**Susan Flynn, PhD**

"I recommend *Handbook of Clinical Psychopharmacology for Therapists* to psychotherapists from various clinical trainings and diverse clinical orientations, as well as to nonpsychiatric physicians and their prescribing assistants. One of the most valuable elements of this text is the authors' reminder to consider when and how medication can be appropriate to treatment, and how the clinician is an essential part of the psycho-medical treatment team.

If you have only one reference book on your shelf addressing the interface between clinical treatment and psychopharmacology, this should be it."

—**Marvin B. Berman, PhD**

"*Handbook of Clinical Psychopharmacology for Therapists* is a modern masterpiece written by a multidisciplinary team of distinguished practitioners. It is one of the most clearly written, reader-friendly yet comprehensive books on the subject of psychiatric diagnosis and psychotropic drug therapy. The book is packed full of useful tables, figures, and illustrations that amplify the main text, or can be used independently for a rapid introduction to the field or for reviewing the fundamentals. Covering both the spectrums of pathophysiology and the neurobiology of drug action, this slim and state-of-the-art-and-science text is truly a handbook worthy of the name, and should be an essential resource for mental health professionals and students alike."

—**Clifford N. Lazarus, PhD**, licensed psychologist; director of Comprehensive Psychological Services in Princeton, NJ; and coauthor of *Don't Believe It for a Minute* and *The 60-Second Shrink*

"*Handbook of Clinical Psychopharmacology for Therapists* is a wonderfully useful and comprehensive book. It should be essential reading for all mental health professionals and for others like myself who have family members suffering from mental illness. Its great virtues are its clarity and its humane and informed sense of the diagnosis, treatment, and care of extraordinarily complicated conditions."

—**Jay Neugeboren**, author of *Imagining Robert*

"This book belongs on the desk of every psychiatrist, clinical psychologist, social worker, or anyone who works with clients who are taking psychoactive drugs. Also, anyone teaching or interested in abnormal psychology will find it indispensable. The authors manage—with judicious use of well-designed tables and clear, concise writing—to fill a gap in the current literature. No other book with which I am familiar covers the history of psychiatric medicine as well as both the neurochemistry and clinical use of psychotropics. The authors make excellent use of case histories, which are always to the point. I cannot think of anything that could be added to this text, or any part of it I would want to change."

—**Harry Avis, PhD**, professor of psychology at Sierra College, and author of *Drugs and Life*

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*To my sweet granddaughters, River and Aurora.*

—J. P.

*To my patients, for they have been my best teachers.*

—J. O.

*To Layla, for the joy you bring into my life.*

—M. T.

*To Kaitlyn and Lori, for they keep me inspired and motivated.*

—B. A. M.



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# Part One

## *Understanding Psychopharmacology: The Basics*

Part one of this book briefly covers the development of psychopharmacology from a historical and sociological perspective and then goes on to provide an overview of neurobiology and pharmacology. The purpose of these chapters is not to provide a comprehensive discussion of the fields of pharmacology or neurophysiology, but is simply to familiarize you with the basic terminology and models of pharmacokinetics.



# 1

## *Introduction*

This book is intended primarily for mental health professionals and those in graduate training in psychology, social work, psychiatric nursing, and counseling. However, the depth and breadth of the following chapters are substantive enough to be of benefit to practicing mental health professionals who have minimal background and training in psychopharmacology. The professional goal of most readers will be to provide services that aim to reduce emotional pain, to promote psychological growth and healing, and to foster the development of personal autonomy. To these ends, we in the field are trained in various theoretical approaches that attempt to explain the development of maladaptive lifestyles and subjectively painful psychiatric symptoms. These theories serve to give meaning and coherence to what we do in clinical practice and, most importantly, lay a foundation of understanding so that interventions make sense and further the goal of reducing suffering in ways that are effective.

Many schools of thought exist regarding the origins of mental health problems. As has been well documented in the history of psychiatry, as schools of thought evolve, controversy, dogma, and impassioned belief systems emerge. It may be inherent to the development and maturation of science that these emotionally toned belief systems and the resulting debates occur.

From the mid-1960s through the 1970s, polarization occurred within psychiatry between those advocating psychological theories (primarily psychodynamic and behavioral models) and those on the other side of the fence using biological and medical models. The disagreements that emerged were more than differences of opinion or dry, academic debate. Each school attracted followers who had strong emotional investments in their perspective. In some respects, it was the first professional “turf war” within the mental health community.

For many years this division resulted in the development of barriers between groups of mental health clinicians—and at times in fragmentation in care. Fortunately, during the past decade something has changed. We are beginning to witness a shift in thinking, as increasing numbers of practitioners and training institutions move away from egocentric and dogmatic positions and begin to embrace a more integrated approach with regard to both theories of etiology and methods of treatment.

New discoveries in the neurosciences, refined scientific and practical advances in psychotherapy, and a large number of outcome studies in both pharmacotherapy and psychotherapy have made it abundantly clear: People are complex. Mental health problems spring from many sources, and reductionist, one-dimensional models are simply inadequate to explain the wide array of mental and emotional problems people experience. Likewise, no single approach to treatment works for all problems. Certain disorders clearly respond better to certain interventions, whereas others require alternative approaches.

In writing this book, although our primary focus is on psychopharmacology, we share a strong respect for what will be termed *integrative approaches* to treatment: recognition of the importance of varied treatments and collaboration among professionals from different disciplines.

We hope that you will find this book helpful as you engage in this most important profession and work toward the goals of reducing emotional pain and improving the lives of countless individuals.

## History of Biological Psychiatry

In understanding psychopharmacology, it may be helpful if you are able to place it in a historical context. Let's take a brief look at this history as it unfolded.

In the late 1800s, psychiatry was clearly rooted in the medical model and the neurology of the day. Psychiatrists believed, almost exclusively, that mental illness could be attributed to some sort of biologic disturbance. The earliest attempts to approach the understanding of mental illness in this era involved two main areas of investigation.

On one front was the development of the first systematic nosologic system by Emil Kraepelin. This pioneering work laid the foundation for all later diagnostic schema (such as the *Diagnostic and Statistical Manual of Mental Disorders*, or *DSM*). And many of Kraepelin's original notions about the classification of major mental illness have stood the test of time. He was a brilliant investigator and the one most responsible for ushering in descriptive clinical psychiatry. However, his endeavors must have been accompanied by a good deal of frustration and impotence, since, despite the development of a systematic approach to diagnosis, Kraepelin and other psychiatrists of his time had few, if any, methods of treatment.

At the same time, the hunt was on for evidence of brain pathology, which was presumed to underlie mental illness. Research was conducted in neuroanatomy labs across the world but yielded few concrete results. For example, the famous French neurologist Jean-Martin Charcot believed that hysterical conversation symptoms were undoubtedly due to some type of central nervous system lesion. He explained the fact that no demonstrable pathology could be isolated on autopsy by saying it simply suggested that somehow the lesion mysteriously disappeared at the time of death. We must bear in mind, however, that in all likelihood, these researchers and clinicians were desperate to find causes and cures and went at it by the means best known to them (biology) and using the scant technology available at the time.

Biological psychiatry got a shot in the arm in the late 1800s, as two discoveries were made. At the time, probably one half of those housed in asylums suffered from a type of psychotic-organic brain syndrome that ultimately was found to be caused by the *Treponema pallidum* bacteria (a central nervous system infection seen in the late stages of syphilis). It was also eventually discovered that some organic mental syndromes were due to pellagra (a disease associated with niacin and protein deficiency).

These were important discoveries, and they fueled enthusiasm in biological psychiatry. It was just a matter of time, it was felt, before other biologic causes would be isolated and medical treatments developed. However, such discoveries did not occur until the middle of the twentieth century. For practical purposes, biological psychiatry came to a halt as it entered the 1900s.

The disappointments stemming from medical research on mental illness and the failure to develop any effective treatment probably increased the receptivity of psychiatry to divergent approaches. At this same time, Sigmund Freud was assembling the basic notions of psychoanalysis. Freud's initial theory was strongly influenced by his own medical and neurological training (for example, his "Project for a Scientific Psychology," 1895), and many of his prevailing ideas continued to have their roots in biology, including drive theory, instincts, and psychosexual development. However, his newly emerging theory and techniques of treatment sparked interest in the use of novel, nonmedical approaches to treatment.

By the 1920s, psychological (rather than biological) explanations for the development and treatment of psychopathology had found their place in clinical psychiatry, and by the 1940s, psychodynamic thinking had permeated American psychiatry and become the dominant theoretical model. Yet these newly developed approaches proved to be inadequate in the treatment of the more serious forms of mental illness, such as schizophrenia and manic-depressive psychosis. In one of his last manuscripts, Freud himself admitted his disappointment in psychoanalytic methods for treating schizophrenia. He hypothesized that eventually it would be discovered that these grave mental disorders were due to some form of biologic abnormality, and that perhaps drugs would eventually be found to treat these illnesses.

### *Somatic Therapies*

In the days of Kraepelin, pharmaceuticals were used to treat mentally ill patients. Generally, the drugs were prescribed to sedate wildly agitated psychotic patients. For example, Kraepelin listed in one of his textbooks the following group of recommended medications (Spiegel and Aebi 1989):

| <b>For Agitation</b> | <b>To Produce Sleep</b> |
|----------------------|-------------------------|
| Opium                | Chloral Hydrate         |
| Morphine             | Ether                   |
| Scopolamine          | Alcohol                 |
| Hashish              | Chloroform              |
|                      | Bromides                |

Kraepelin noted, however, that none of these preparations cured mental illness, that they were for short-term use, and that a number of them could lead to problems with addiction. All of these drugs achieved behavioral control by sedating patients; none really affected psychotic symptoms *per se*, nor did they have any impact on activating patients who were stuporous or clinically depressed.

Other somatic therapies were developed in the first half of the twentieth century, with variable results. Malaria therapy was conceived in 1917, insulin shock in 1927, psychosurgery in 1936, and electroconvulsive treatment (ECT) in 1938. All of these

methods, as originally conceived, carried serious risks, and most demonstrated marginal effectiveness. Psychosurgeries were carried out by the thousands in the 1940s, resulting in rather effective behavioral control over agitated psychotic patients but at great human cost. The most common psychosurgery at the time, lobotomy, was a barbaric procedure in which areas of the prefrontal cortex were crudely severed. Many, if not most, lobotomized patients were reduced to anergic, passive, and emotionally dead human beings. By the time this practice was stopped, over 20,000 patients had undergone the procedure; approximately two out of three were women.

Electroconvulsive treatment, conversely, was quite effective in certain groups of patients, such as those with psychotic depressive disorders. However, early methods of administration were fraught with dangerous complications and side effects. Unfortunately, ECT was used on a widespread basis, indiscriminately. Many patients were treated with it inappropriately and did not respond. (As shall be discussed later, in recent years significant advances have been made in ECT, and it now affords a highly effective, safe treatment for selected types of patients.)

Most severely ill patients in the late nineteenth and early twentieth centuries continued to be housed in overcrowded state mental hospitals and were “treated” using tried and true methods of the day: seclusion, restraint, and wet-sheet packs. Although seemingly inhumane procedures were employed, it may be important to consider that the psychiatrists of that era were relatively helpless in the face of very severe mental illnesses and that these approaches (although certainly misused at times) reflected their attempt to reduce the horrendous human suffering seen in thousands of severely ill people.

## *New Discoveries*

In the 1950s, three new discoveries heralded the beginnings of a new interest in biological psychiatry. Interestingly, these three areas of investigation were conducted by separate groups of researchers, each with little knowledge of the work being done by their colleagues (Kety 1975).

### **Thorazine and other early psychotropic drugs**

Immediately after World War II, medical researchers and chemists working for pharmaceutical companies were trying to develop a drug that would reduce the complications associated with shock following major surgery. In early 1951, a compound initially labeled #4560 RP was developed and testing with surgical patients was begun (Spiegel and Aebi 1989). The initial results were encouraging. Given preoperatively, it relaxed patients, somewhat reduced postoperative shock, and proved to be a good antiemetic (preventing postsurgical nausea). The finding that it produced noticeable sedation came as a surprise. In the aftermath of field trials with surgical patients, the pharmaceutical company Laborit decided to try this medication with restless, agitated psychiatric patients to help improve sleep, totally unaware that the drug would prove to have more widespread effects on the psychiatric patients who were tested.

Initial clinical trials first reported in 1952 resulted in marked behavioral changes when given to manic and schizophrenic patients. Not only did it produce a calming effect, but after a period of time it actually appeared to reduce psychotic symptoms, such as delusions and hallucinations. Additional studies were carried out the following year, and by 1954 the drug was approved for use. The new medication was given the generic name chlorpromazine; in the United States it was marketed under the brand name Thorazine. It received immediate acceptance, and by the end of 1954, for

the first time ever, there was a marked decrease in the number of patients incarcerated in state mental hospitals: the first major breakthrough in psychopharmacology.

Other psychotropic medications were discovered during the 1950s. The first antidepressant was developed in 1952 (iproniazid, an MAO inhibitor), although clinical studies in humans did not take place until 1956. The first tricyclic antidepressant, imipramine (Tofranil), was developed in 1954 and entered the market in 1957. The first minor tranquilizer, meprobamate, was released in 1955, followed shortly by the safer benzodiazepine, chlordiazepoxide (Librium), in 1958. Finally, lithium carbonate, originally used as a sedative by J. Cade in 1948, began to be used to treat bipolar disorder (formerly called manic-depressive illness) in the early 1960s.

It is interesting to note that most of these psychopharmacological discoveries were accidental; that is, the drug companies were developing medications to treat other medical illnesses and just happened to find that the drugs could affect psychiatric symptoms. Also, these discoveries were made empirically; they were not developed as an outgrowth of a particular theory of neurochemical dysfunction, nor was the mechanism of action at all known. What was evident was that the medications worked and were far superior to any previous treatments for severe mental illness.

### **The synapse and neurochemical transmission**

Although C. S. Sherrington inferred the existence of the synapse (the small space separating individual nerve cells) as early as 1906, the specific details of synaptic transmission were not fully understood for many decades thereafter. Sherrington's ideas involved a sort of telephone switchboard model of the nervous system, and neuronal messages were assumed to be transmitted via electrical stimulation. It was not until the 1950s that neuroscientists realized that communication between nerve cells, although partially electrochemical in nature, is largely due to the release of chemical substances. These chemicals, which transmit messages from one nerve cell to another, are referred to as neurotransmitters; other chemicals that play an indirect role in neurotransmission are called neuromodulators.

With this discovery, it became possible to imagine that certain neurologic dysfunctions might be caused by chemical irregularities, and that therefore it might be possible to develop drugs that could influence or alter neurotransmitter function. This discovery resulted in the popular monoamine hypothesis of depression, which you will read about later.

### **Genetic studies**

The third line of investigation involved both genetics and studies of familial patterns of mental illness. The earliest research in this direction was ultimately criticized for numerous methodological flaws. Yet some of the basic findings proved to be fundamentally correct. There is a strong genetic loading for certain mental illnesses, in particular for schizophrenia and bipolar disorder. (In recent times, evidence has been obtained revealing genetic loadings for a number of mental disorders, although clearly the strongest evidence exists for bipolar disorder, attention deficit/hyperactivity disorder, and some types of schizophrenia.)

### *Controversy*

By the early 1960s, it had been discovered that synaptic activation is chemical in nature; certain illnesses seem to be genetically passed on from generation to generation



## Medications and the Media

Research studies and clinical experience certainly influence prescribing practices. However, in recent years the media has had a profound effect on public opinion and ultimately on clinical practice.

In the late 1980s, negative attention was focused on the drug Ritalin (methylphenidate), a widely prescribed stimulant used in the treatment of attention deficit/hyperactivity disorder (ADHD). Andrew Brotman, summarizing the work of Safer and Krager (1992), states, "The media attack was led by major national television talk show hosts and in the opinion of the authors, allowed anecdotal and unsubstantiated allegations concerning Ritalin to be aired. There were also over twenty lawsuits initiated throughout the country, most by a lawyer linked to the Church of Scientology" (Brotman 1992, audiotape).

In a study of the effects of this negative media and litigation blitz, conducted in Baltimore County, Maryland, Safer and Krager (1992) found that the use of Ritalin had dropped significantly. From 1981 through 1987, the use of Ritalin had increased fivefold. However, in the two-year period during and just following the negative media attention, there was a 40 percent decrease in prescriptions for Ritalin. And this decrease occurred at a time when research on ADHD and stimulant treatment continued to strongly support the safety and efficacy of such medications. The authors go on to state that 36 percent of children who discontinued Ritalin experienced major academic

*continued*

(and genetic factors are expressed biochemically), and newer drugs could significantly reduce psychiatric symptoms. The triangulation of this data provided rather strong support for a renewed interest in biological psychiatry. There was new hope for the millions of patients suffering from serious mental illness, and psychiatry had begun to step back into "real medicine" again and became more prominent and respected as a profession.

However, despite the advances, these new treatments were plagued by a host of side effects—some unpleasant, some actually dangerous. These potent drugs were also often overused or were misused in certain treatment settings. Consequently, controversy began to arise, both among professionals and in the lay public and mass media.

## Professional dissention

Within professional ranks, debate ensued from two fairly discrete theoretical camps: those who were pro-medication and those who were pro-psychotherapy. Each group amassed impassioned arguments not only in favor of its own point of view but also against the other school of thought, as set out below.

### Pro-medication (anti-psychotherapy)—arguments in favor of medication treatment as the treatment of choice:

- Because of its quantifiable nature—that is, the ability to monitor dosage—medication treatment can be studied much more systematically than psychotherapy.
- Medications act quickly to reduce painful and debilitating symptoms.
- The quicker response seen with medications can help restore hope and reduce demoralization.
- Treatment with medications can be conducted in a much more systematic and standardized fashion, whereas psychotherapy relies heavily on the individual skill of the psychotherapist.
- Rapid and effective symptom relief can potentially reduce suffering to such an extent that the patient is better able to engage productively in psychotherapy. Likewise, the reductions of drive strength

afforded by some psychotropic medications may operate to free up more psychic energy, which could then be channeled into adaptive ego functions.

- Medications can provide help to patients who have limited intellectual capacity, poor ego strength, or both; that is, drugs may be effective with people for whom psychotherapy is inappropriate.
- Psychotherapy is often prolonged and expensive, may be unavailable to many people, and is of unproven effectiveness (this was the case especially in light of the very limited psychotherapy outcome studies available in the 1950s and 1960s). Thus, medications are much more cost-effective and more readily available to the general public.

Finally, those strongly wedded to a biochemical model of psychopathology contended that social, behavioral, and psychological approaches simply could not correct the underlying biologic abnormality responsible for major mental illnesses. Recent studies, however, have cast doubt on this hypothesis.

**Pro-psychotherapy (anti-medication)—arguments in favor of psychotherapy as the treatment of choice:**

- Only psychotherapy, not medications, can address the complexity of human psychological functioning. Medications only treat symptoms and are reductionistic in nature, whereas psychotherapy focuses on the whole person or psyche.
- Psychotherapy aims toward personal growth and autonomy, whereas drugs are likely to foster dependency, either on the doctor or on the drug itself.
- Drugs can interfere with autonomy and expressions of free will, whereas psychotherapy honors these processes. The prescription of medications may, at least at an unconscious level, communicate the message that the drug will do the work, you don't have to. (Numerous documented instances of overuse of tranquilizing medications to achieve behavioral control provided fodder for this argument.)

maladjustment (such as failing grades or being suspended), and an additional 47 percent who discontinued encountered mild to moderate academic problems. Concurrently, as Ritalin use (especially new prescriptions) decreased, there was a significant (fourfold) increase in the prescription of tricyclic antidepressants among ADHD children. It is important to note that tricyclics, although often used to treat ADHD, tend to have more troublesome side effects than Ritalin, and have been implicated in six reports of cardiac fatalities. Brotman (1992) concludes, "When there are reports in the media that lead to stigmatization of a certain drug ... there tends to be a move to other medications which have less notoriety, even if they may, in fact, be more problematic."

More recently, following wide acclaim as a new "breakthrough drug for depression" (Cowley et al. 1990), Prozac (fluoxetine) came under attack by consumer groups and, again, the Church of Scientology. The negative attention was sparked by a single article (Teicher, Glod, and Cole 1990) documenting the emergence or reemergence of suicidal ideas in six patients treated with Prozac. The six patients had been diagnosed as suffering from severe depressive disorders, and in no case were there actual suicide attempts following the onset of treatment with Prozac. But suddenly Prozac was thrust into a very unfavorable light and was the next drug in line to find itself the topic of television talk shows.

Subsequent studies have failed to find any evidence that Prozac is more likely to be associated with suicidal feelings

*continued*

than any other antidepressant (Fava and Rosenbaum 1991; Beasley and Dornseif 1991). In fact, in one study the incidence of suicidal ideations was greater in patients treated by placebo or imipramine (a tricyclic antidepressant) than by Prozac (Beasley and Dornseif 1991).

The Church of Scientology attempted to convince the Federal Drug Administration (FDA) to pull Prozac from the market. However, the FDA ruled against taking such action because there was no scientific evidence to support the claims made by the Church of Scientology (Burton 1991).

All medications produce some side effects. Reports of adverse effects, even if very infrequent, must be taken seriously and investigated systematically. There is a place for skepticism and scrutiny. However, one must consider the negative effect of unsubstantiated reports in the lay press. For example, the risk of Prozac-induced suicide appears to be *extremely* low, and the suicide rate in untreated major depression is reported to be 9 percent. Clearly, failure to treat carries the graver risk.

It is very likely that many seriously depressed people and parents of ADHD children have been understandably, and unnecessarily, frightened by negative, sensationalistic reports in the media. To quote Brotman (1992) again, "Pharmacotherapy does not exist in a social and political vacuum."

- Medications may reduce anxiety and other forms of suffering to such an extent that people will be less motivated to engage in psychotherapy.
- Many drugs have undesirable or dangerous side effects, and some can lead to dependence and abuse.
- Medications ultimately do not solve problems, teach adaptive coping skills, mend broken hearts, or fill empty lives (Menninger 1963).

Although this debate continued throughout the 1960s and 1970s, clearly there were also a number of what G. L. Klerman (Beitman and Klerman 1991) calls "pragmatic practitioners"—those mental health professionals who used whatever approaches seemed to work. Certainly it was, and is, reasonable to consider that some disorders are best treated by psychotropic medications, others by psychotherapy, and it often makes sense to use a combination of both modalities.

### Public opinion

A parallel to the professional debate began to occur within the general public. In institutes of higher education, the humanistic movement began to permeate not only departments of psychology but the global academic community as well. The post-McCarthy social climate was ripe for new attitudes that challenged political and social control and applauded the expression of free will, self-expression, and self-actualization. Reports began to surface regarding the abuse of psychiatric medication by the medical profession. Opponents to drug treatment accused the psychiatrists of using medications to achieve control. The term "chemical straitjacket" became popularized.

The 1970s saw the proliferation of new tranquilizers, and pharmaceutical companies reaped fortunes from the sale of well-known pills such as Valium and Librium. The vast majority of prescriptions written for minor tranquilizers (more than 90 percent) were written by family practice doctors,

not psychiatric specialists. The "drugged state" was the fastest growing state in the union (Bly 1990). The inappropriate use and abuse of tranquilizers gained increasing public attention and even found its way into popular songs (the Rolling Stones' "Mother's Little Helper") and movies (*I'm Dancing as Fast as I Can*).

In the 1960s, the Church of Scientology was successfully sued by the American Psychiatric Association. In retaliation, it began a long, embittered assault on American

psychiatry. Initially, the Church of Scientology launched a negative campaign against the use of Ritalin, a psychotropic medication used to treat attention deficit disorder. That was followed by an orchestrated move to shed negative light on the antidepressant Prozac (see sidebar on page 8).

Biological psychiatry was under attack. Although clearly there was a good deal of abuse and misuse of psychoactive drugs, there also continued to be decreasing numbers of people living in mental hospitals, and drug companies were at work developing newer and “cleaner” psychotropic medications, medications with fewer side effects.

### *Rapprochement: Biological and Psychological Perspectives*

During the 1980s, a shift began in which increasing numbers of mental health practitioners and researchers widened their previously narrow views on etiology and treatment of mental illness. Increasingly, it became recognized that one-dimensional models, whether psychological or biological, fell short of explaining the tremendous complexities of human psychological functioning and psychopathology. This transition to more complementary and integrated views of cause and cure can be attributed to several new developments:

- The side effects of medications historically resulted in very poor compliance rates among psychiatric patients, and the most effective medication available is useless if the patient doesn't take the drug as prescribed. Compounds introduced in the 1980s and early 1990s have yielded effective medications with much more user-friendly side-effect profiles.
- Discoveries have been made in which new medications and newer uses for existing medications provide very good results in treating certain types of mental illnesses, such as panic disorder and obsessive-compulsive disorder. This greatly increases the psychiatrist's arsenal of effective medications.
- A growing body of well-controlled research studies (double-blind, randomized, placebo-controlled) lend convincing support to the efficacy of psychotropic drugs.

### **Psychopharmacology and the “Managed Care” Dilemma**

Since the advent of newer-generation psychotropic medication, many millions of people are receiving more effective treatment for a host of psychiatric conditions. For this we are grateful. However, it also has become abundantly clear that the effects of psychiatric drugs are limited. Under the best of all circumstances, such treatments do not have an impact on all aspects of psychological suffering.

In our view, successful psychiatric treatment should always include psychotherapy. Only in the context of a healing relationship may many aspects of psychological dysfunction be adequately addressed. Numerous interpersonal, intrapsychic, spiritual, and existential dimensions of human functioning simply are not amenable to pharmacologic treatment.

In this book we acknowledge the many benefits of drug treatment; however, we must also share a concern: in these days of cost containment and managed care, individual human lives and quality-of-life issues are often ignored. It is a real concern that an automatic, knee-jerk reaction will be just to prescribe pills, when so much more is needed. We are treating people, not just nerve cells.

However, given the rising cost of pharmaceuticals, the most recent cost-containment strategies are as likely to focus on the use of psychiatric medication as well as on psychotherapeutic interventions. Paradoxically, perhaps as psychotropic drugs begin to account for an ever-increasing

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percentage of total health care expenditures, we will see best-practice guidelines influenced in a way that will support psychotherapy.

We hope that critical questions will be raised. Are medication treatment failures completely an effect of the drugs not working? Or could the relative lack of psychotherapeutic modalities be a contributing factor? Similarly, as the prescribing of psychotropics has become the first step in treatment, has that first step been taken before an accurate diagnosis was made? Are we medicating out of habit, when it is not really indicated? If the patient would benefit more from psychotherapy, are we doing more harm than good?

We remain hopeful that the pendulum will swing back to support what most practicing clinicians know to be true: the best outcomes result from appropriately balanced treatment that includes therapy and medications.

Human beings and their life problems are enormously complex. And it is the highly trained clinician who must ultimately decide which combinations of treatments are best suited for each individual client (*not* insurance companies, treatment manuals, or untrained technicians)!

- Neuroimaging techniques, such as PET and SPECT scans, allow researchers to view metabolic activity in the living brain. These technologies have been able to isolate localized brain abnormalities in certain mental disorders, including major depression, schizophrenia, ADHD, and obsessive-compulsive disorder. They can provide data on particular sites of drug action or binding, and can illustrate changes between the pre- and post-treatment status of particular brain structures. Imaging techniques have added considerable “hard data” to various theories of biochemical etiology in selected mental illnesses.
- Neuroimaging techniques have been accompanied by a host of new laboratory procedures that allow neuroscientists to assay the neurochemical by-products found in spinal fluid. Although early psychopharmacology was implemented without any real knowledge of the underlying pathophysiology, in the past decade, biochemical theories have gained scientific support.

These new developments in psychiatry and the neurosciences have been hard to ignore. Many formerly hard-line psychotherapists have been won over by the flood of research findings and their personal experiences in treating people with psychoactive drugs.

During this same period, important advances were made in the theory and practice of psychotherapy. During the late 1970s and 1980s, the first truly well-controlled psychotherapy studies emerged (including the now popular meta-analyses). The results of these studies cast doubt on the findings of early research that had suggested that psychotherapy was ineffective (Eysenck 1965, for example). Of the many forms of psychotherapy that have been developed, the meta-analyses suggest that no single school of therapy is clearly superior and that psychotherapies across the board are often much more effective than no treatment.

Also during this time we witnessed the development of novel treatment approaches, such as cognitive behavioral psychotherapy (Beck 1976) and interpersonal psychotherapy (Klerman et al. 1984) as a treatment for particular disorders, such as depression and panic disorder. These approaches have appeal, in that they can be somewhat systematically applied; some even provide “canned” formats or “cookbooks” referred to as manualized therapies. Also, the methodology is a bit less reliant on the personal characteristics of the therapist. These approaches then lend themselves to a short-term format and can often be conducted in groups. And, finally, these psychotherapies can

be more easily studied. Both cognitive behavioral and interpersonal psychotherapies have a solid track record of effectiveness (as is discussed further in the next chapter).

Finally, both clinical-anecdotal and research studies have emerged that support the combined use of pharmacotherapy and psychotherapy in the treatment of particular disorders. At times, the combined treatments have been shown to be superior to either single treatment alone. The area of combined treatment, or what some refer to as integrated treatment, is a relatively new area of inquiry in mental health. It's only been over the last two decades that the majority of research in combined treatments for mental health conditions has appeared. One of the earliest and most comprehensive reviews on the topic was published in 2001 by Sammons and Schmidt in which they reviewed the relatively limited research for combining psychotherapy and medication for the treatment of all major psychiatric disorders. The bottom line is that combined treatments are more effective than medication or psychotherapy alone, except for anxiety disorders for which psychotherapy alone is considered the best approach (Muse, Moore, and Stahl 2013).

For many in the mental health community, the writing on the wall has become far more legible: a single model for understanding and treating mental disorders is too narrow and is simply inadequate. As we shall be discussing in subsequent chapters, current evidence suggests that particular disorders do respond best to certain medical treatments, and for these, medications are the treatment of choice. Other disorders have little to do with biochemical dysfunction, and medications play little or no role in their treatment. And still other disorders require the skillful integration of biological and psychotherapies.

As the saying goes, when you only have a hammer, every problem looks like a nail. Fortunately, at the present time, mental health professionals have access to a "toolbox" of approaches that can, if employed appropriately, dramatically increase our effectiveness in reducing emotional suffering and promoting mental health.

## Why Learn About Psychopharmacology?

In the United States, the majority of mental health services are provided by non-medical therapists. Likewise, the majority of prescriptions for psychotropic medications are written by family practice and primary care physicians (see figure 1-A). Thus, even though psychiatrists represent the branch of medicine that specializes in

| <b>Who Writes Prescriptions for Psychotropic Medications</b> |                          |                               |
|--------------------------------------------------------------|--------------------------|-------------------------------|
| <b>Class of Medications</b>                                  | <b>Psychiatrists (%)</b> | <b>Nonpsychiatric MDs (%)</b> |
| Antipsychotics                                               | 40                       | 60                            |
| Antidepressants                                              | 15                       | 85                            |
| Antianxiety                                                  | 10                       | 90                            |
| Hypnotics                                                    | 11                       | 89                            |
| Lithium                                                      | 62                       | 38                            |

Source: Pomerantz et al. (2004)

Figure 1-A

psychopharmacology, they are directly responsible for providing only a fraction of professional services to the mentally ill. Consequently, it is becoming increasingly important for all mental health clinicians to have a basic familiarity with psychiatric medication treatment.

Many nonmedical psychotherapists are or will become strongly and rather directly involved in medication treatment. In some settings, psychologists and social workers assume a major role in monitoring client responses to psychotropic medications. As primary therapist, these practitioners are in most frequent contact with clients and are in the best position to observe symptom improvements, side-effect problems, and issues involving medication adherence. When consulting with primary care physicians, or as a staff member in some HMO settings, nonmedical therapists who are well versed in the use of psychiatric medications can play an active (albeit collaborative) role in recommending particular medications and dosage adjustments. In addition, the Department of Defense, in response to an inadequate number of psychiatrists available in the military, implemented a program in the early 1990s to train a small number of psychologists so that they could prescribe a limited formulary of psychiatric medications. Although this program was eventually discontinued, it paved the way for appropriately trained psychologists to prescribe psychotropic medications in the military today. Currently, the United States Army, Navy, and Air Force have specific guidelines for credentialing psychologists in psychopharmacology, and it's estimated that at least one dozen psychologists are actively prescribing in the Department of Defense. Psychologists are also prescribing in the Indian Health Services (another federal institution) and in New Mexico and Louisiana. State laws allowing psychologists to prescribe have also been passed in Illinois, Iowa, and Idaho. These various activities reflect quite direct involvement in medication treatment by nonmedical therapists.

In contrast, many nonmedical therapists have little to do with drug treatment. In some cases, this may be due to the nature of their position in a particular treatment setting; in others, it may have more to do with their own preferences and biases, such as opposition to medication treatment. However, we believe that, regardless of the degree of involvement and interest in medication treatment, it is increasingly important that all mental health therapists become acquainted with some basic notions regarding psychopharmacology.

Convincing evidence now exists that certain mental disorders are either caused or accompanied by neurochemical abnormalities. The failure to appropriately diagnose and medically treat such conditions can result in the use of ineffective or only partially effective treatments and hence in prolonged suffering. Furthermore, many serious mental illnesses are progressive in nature. As a result, inadequate treatment may lead to worsening of a condition to the point where pharmacological and psychological interventions will have little to no effect in later stages of the illness. Aside from the obvious cost in human terms, prolonged inappropriate treatment results in excessive financial burdens for clients, their families, and the health care system.

In addition, to date there have been successful malpractice suits brought against therapists who failed to treat or refer for treatment patients suffering from particular disorders known to be generally responsive to medication.

All mental health professionals must be able to, at the very least, diagnose mental disorders that require psychotropic medication treatment so that appropriate referrals can be made. Differential diagnosis will be discussed in detail in this book.

In many cases, clients may not choose to see a psychiatrist, even when told by their therapists that medication treatment is indicated. This may be due to financial

concerns or to the negative stigma some people believe is attached to psychiatric treatment. A viable alternative, in some cases, is referral to the family practice doctor. Many people suffering from emotional distress see their family physician first. This doctor may begin treatment with psychotropic medications and may also refer the patient for psychotherapy. In such cases, the nonmedical therapist may be in a key position to supply information regarding diagnosis and treatment response. Increasingly, family practice physicians and nonmedical therapists become partners collaborating on the treatment of many clients—especially those suffering from fairly uncomplicated depressive and anxiety disorders.

Effective consultation with family practice doctors and psychiatrists alike is enhanced by the nonmedical therapist's ability to accurately communicate and discuss diagnosis, target symptoms, presumed etiology, and possible treatments. We hope this book will provide a solid grounding in basic issues to help improve communication and cooperation between professionals.

Mental health treatment has moved increasingly toward greater acceptance of multidisciplinary and integrated treatment modalities. As sophistication in the diagnosis and medical treatment of mental disorders continues to develop, it will be important that mental health professionals not take a step backward. The polarization of models and professional "turf battles" of the 1960s and 1970s may have sparked useful and lively debate, but they also often resulted in a fragmentation of care. Ongoing knowledge of and respect for diverse models and collaborative involvement hold promise for increasingly effective efforts in treating mental illness. If you are an instructor interested in using this book in courses you teach, visit <http://www.newharbinger.com/39256> for classroom adoption resources.



## A COMPREHENSIVE GUIDE TO MENTAL HEALTH MEDICATIONS & TREATMENTS

*Handbook of Clinical Psychopharmacology for Therapists* is the go-to resource for mental health clinicians looking for clear, reliable information about the treatment of mental health issues. Organized by disorder and, within each disorder, by medication, this book is designed to familiarize clinicians and students with the basic terminology and models of pharmacokinetics.

This fully revised and updated ninth edition provides essential information on new medications and treatment options, and includes the latest research on side effects, contraindications, and efficacy of all major medications prescribed for mental health disorders. Each chapter includes quick-reference guides for each mental health disorder to indicate when you should consider referring a client for medical treatment. This edition also features new chapters on sleep and emerging mental health treatments.

### **This handbook makes it simple to:**

- » **Get the facts about drug interactions and side effects**
- » **Find out how medications affect adults, children, and adolescents differently**
- » **Learn how different cultures view medical treatment, vital information for anyone who treats clients from a variety of backgrounds**
- » **Discontinue medication safely when needed**



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