A Clinician's Guide to Using Light Therapy
A Clinician’s Guide to Using Light Therapy

RAYMOND W. LAM, MD, FRCPC
Professor and Head of the Mood and Anxiety Disorders Program in the Department of Psychiatry, University of British Columbia, and Director of the Mood Disorders Centre of Excellence at UBC Hospital, Vancouver, Canada.

EDWIN M. TAM, MDCM, FRCPC
Clinical Associate Professor at the Department of Psychiatry, University of British Columbia, and UBC Hospital, Vancouver, Canada.
CONTENTS

Preface ix
Light as therapy xi
How to use this book xii
Abbreviations used xiii

1 Seasonal Affective Disorder: Diagnostic Issues 1
   Definition and diagnostic criteria 3
   Prevalence and burden 11
   Screening 12
   Clinical features 13
   Differential diagnosis 18
   Variants of SAD 20
   Further reading 23

2 Light Treatment 25
   Incorporate light therapy into clinical practice 27
   Encourage self-care 27
   Who should not use light therapy? 29
   Use the simplified light treatment method 29
   Monitor clinical response 31
   Manage side effects 33
   Enhance adherence 38
   Customize treatment 39
   Review treatment parameters 40
   Trouble-shoot poor or limited response 43
   How long to continue light therapy 47
## Contents

When to restart light treatment in a subsequent season  48  
Using light therapy in the summer  48  
Further reading  50  

3 **Light Devices**  51  
What to look for in a light device  53  
Light boxes  54  
LED devices  59  
Light visors and caps  60  
Dawn simulators  60  
Unproven devices and false claims  62  
Practical aspects  63  
Further reading  65  

4 **Other Treatments, Alone and Combined with Light**  67  
Antidepressants  69  
How to choose between antidepressants and light therapy  73  
Combining antidepressants and light therapy  75  
Cognitive behavioural therapy  75  
Herbal and nutriceutical treatments  76  
Other treatments (negative ions, exercise)  78  
Further reading  79  

5 **Effectiveness and Mechanism of Action**  81  
How to measure effectiveness of treatments  83  
The placebo effect: myths and realities  84  
The evidence for light therapy in SAD  86  
How does light therapy work?  89  
Circadian rhythms: a primer  90  
Phase-shifting effects of light  92  
Photoperiod theory  95  
Phase-shift theory  95  
Neurotransmitter theory  96  

© in this web service Cambridge University Press  
www.cambridge.org
Contents

The dual vulnerability hypothesis 98
Further reading 98

6 Light Treatment for Other Conditions 101
Nonseasonal depression 103
Bipolar disorder 104
Other depressive and psychiatric conditions 107
Circadian sleep–wake disorders 109
Further reading 111

7 Clinician Resources 113
Internet and print resources 115
Audit Form – chart review 116
Frequently Asked Questions (FAQ) about SAD 118
Instructions for Light Therapy handout 123
Patient Self-Care handout 125
MEQ 127
SPAQ 133
SIGH-SAD Summary 136
PHQ-9 140
QIDS-SR 143
Adverse Events Scale 146
Sample insurance reimbursement letter 149

Index 151
Preface

- Light as therapy
- How to use this book
- Abbreviations used
Light as therapy

Light is ever-present in our daily lives. We experience light as the gentle arrival of dawn, the first flip of a room light switch, the warmth of the noonday sun, the glorious colours of the sunset, and the cool beams of moonlight. Light is represented in everyday expressions of speech and as scenes and symbols in literature and the media in every culture throughout the ages.

Given its ubiquitous presence, perhaps it is not so surprising that light would have healing properties. We have been studying and treating people with light for the past 20 years. We began as skeptics and first designed and conducted controlled studies to convince ourselves that light therapy was not just an elaborate placebo. We have been gratified to see the rapid responses that people experience with light therapy and the difference it has made to the lives of so many. We expected that this effective non-pharmacological treatment that made so much sense would be enthusiastically embraced by physicians and mental health clinicians everywhere.

Unfortunately, there are wide chasms between scientific evidence and clinical adoption. Despite its simplicity and effectiveness, light therapy was not widely used. Although disappointed, at first we understood the poor clinical uptake: the original light boxes were large, expensive, and difficult to obtain, and the lower intensities they produced required two to four hours of daily exposure. With all these limitations, light treatment was used only by the most motivated people. But when light devices became more portable, more affordable, and more easily purchased, and when the duration of treatment was reduced to only 30 minutes a day, we expected that light therapy would take off. In 1999 we published clinical guidelines for clinicians to follow when using this excellent treatment. We waited eagerly for light therapy to become widely available in clinical settings.

Not so. Again, we were disappointed. The uptake for light therapy continued to be slow, despite the popular and successful courses that we gave at major psychiatric and professional conferences. It was clear that clinical adoption of new non-pharmacological treatments was very challenging for both physicians (psychiatrists and family doctors) and for mental health
Preface

professionals. They needed more guidance about the practical details of using light therapy than scientific articles or textbooks could provide.

That observation was the inspiration for writing this book. It is not a reference textbook or a systematic scientific review. Rather, we have drawn on our collective 35 years of clinical and scientific experience to provide a simple, step-by-step guide to prescribe light therapy and to incorporate its use within a busy clinical practice. We hope that this practical book will help to make light therapy accessible to many more clinicians and to the patients that they treat.

How to use this book

Because light therapy is used primarily for treating seasonal affective disorder (SAD), we begin in Chapter 1 by providing some “tips and traps” for recognizing, diagnosing, and assessing SAD and other related conditions. Those readers who are experienced in diagnosis can go immediately to Chapter 2, which describes a simple method for using light treatment. Chapter 3 covers the practical aspects of evaluating and purchasing light devices. Other treatments for SAD, which can be used alone or combined with light, are described in Chapter 4. We left the summary of scientific evidence for the effectiveness of light therapy and theories about its mechanism(s) of action for Chapter 5. In Chapter 6, we briefly review some of the other conditions (both seasonal and nonseasonal) in which light has been studied and in which it can be used clinically, along with practical considerations of how the light treatment method is modified. Finally, Chapter 7 provides many clinician resources that are helpful for using light therapy. The rating scales and patient handouts can be photocopied for clinical use and masters are also available for free download at our website, www.UBCsad.ca. This book is not extensively referenced like a scientific paper or a textbook. Instead, we provide a “Further reading” section at the end of each chapter with major references in the field and a list of reference books in Chapter 7.

We dedicate this book to our research mentors, Dr. J. Christian Gillin (in memoriam) and Dr. Daniel F. Kripke at the University of California,
Preface

San Diego, whose sage scientific and professional advice has always been welcome, and to all our colleagues and patients (past, present and future) at the Seasonal Mood Disorders Clinic at UBC Hospital.

Abbreviations used

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-HIAA</td>
<td>5-hydroxyindoleacetic acid</td>
</tr>
<tr>
<td>5-HT</td>
<td>5-hydroxytryptamine (serotonin)</td>
</tr>
<tr>
<td>ADHD</td>
<td>Attention deficit hyperactivity disorder</td>
</tr>
<tr>
<td>CBT</td>
<td>Cognitive behavioural therapy</td>
</tr>
<tr>
<td>DLMO</td>
<td>Dim light melatonin onset</td>
</tr>
<tr>
<td>DSM-IV</td>
<td>Diagnostic and Statistical Manual of Mental Disorders, 4th Edition</td>
</tr>
<tr>
<td>DSPS</td>
<td>Delayed sleep phase syndrome</td>
</tr>
<tr>
<td>EEG</td>
<td>Electroencephalography</td>
</tr>
<tr>
<td>Ham-D</td>
<td>Hamilton Depression Rating Scale</td>
</tr>
<tr>
<td>LED</td>
<td>Light-emitting diode</td>
</tr>
<tr>
<td>MDD</td>
<td>Major depressive disorder</td>
</tr>
<tr>
<td>MDE</td>
<td>Major depressive episodes</td>
</tr>
<tr>
<td>MEQ</td>
<td>Morningness-Eveningness Questionnaire</td>
</tr>
<tr>
<td>MT</td>
<td>Melatonin receptor</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>Patient Health Questionnaire, 9-item version</td>
</tr>
<tr>
<td>PIDS</td>
<td>Personal Inventory of Depression and Seasonality</td>
</tr>
<tr>
<td>PMDD</td>
<td>Premenstrual dysphoric disorder</td>
</tr>
<tr>
<td>QIDS-SR</td>
<td>Quick Inventory of Depressive Symptomatology, Self-Rated</td>
</tr>
<tr>
<td>RCT</td>
<td>Randomized controlled trial</td>
</tr>
<tr>
<td>SAD</td>
<td>Seasonal affective disorder</td>
</tr>
<tr>
<td>SCN</td>
<td>Suprachiasmatic nucleus</td>
</tr>
<tr>
<td>SIGH-SAD</td>
<td>Structured Interview Guide for the Ham-D, SAD version</td>
</tr>
<tr>
<td>SPAQ</td>
<td>Seasonal Pattern Assessment Questionnaire</td>
</tr>
<tr>
<td>SSRI</td>
<td>Selective serotonin reuptake inhibitor</td>
</tr>
<tr>
<td>STAR*D</td>
<td>Sequenced Treatment Alternatives to Relieve Depression study</td>
</tr>
</tbody>
</table>