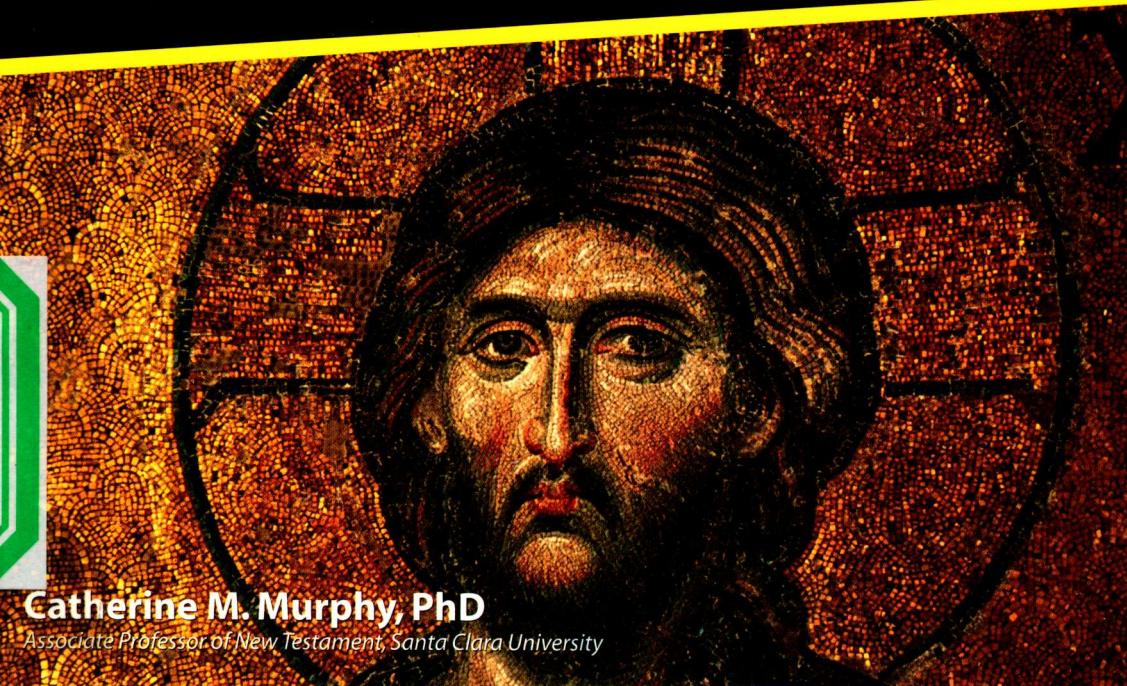


Discover new insights into the
politics, religion, and culture of Jesus's world

The Historical Jesus

FOR

DUMMIES[®]



Catherine M. Murphy, PhD

Associate Professor of New Testament, Santa Clara University

A Reference for the Rest of Us![®]

Training Your Brain FOR **DUMMIES®**

**by Dr Tracy Packiam Alloway
Puzzles by Timothy E. Parker**

常州大学图书馆
藏书章



WILEY

A John Wiley and Sons, Ltd, Publication

Training Your Brain For Dummies®

Published by
John Wiley & Sons, Ltd
The Atrium
Southern Gate
Chichester
West Sussex
PO19 8SQ
England

E-mail (for orders and customer service enquiries): cs-books@wiley.co.uk

Visit our Home Page on www.wiley.com

Copyright © 2011 John Wiley & Sons, Ltd, Chichester, West Sussex, England

Published by John Wiley & Sons, Ltd, Chichester, West Sussex

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except under the terms of the Copyright, Designs and Patents Act 1988 or under the terms of a licence issued by the Copyright Licensing Agency Ltd, Saffron House, 6-10 Kirby Street, London EC1N 8TS, UK, without the permission in writing of the Publisher. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, England, or emailed to permreq@wiley.co.uk, or faxed to (44) 1243 770620.

Trademarks: Wiley, the Wiley Publishing logo, For Dummies, the Dummies Man logo, A Reference for the Rest of Us!, The Dummies Way, Dummies Daily, The Fun and Easy Way, Dummies.com and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates in the United States and other countries, and may not be used without written permission. All other trademarks are the property of their respective owners. Wiley Publishing, Inc., is not associated with any product or vendor mentioned in this book.

LIMIT OF LIABILITY/DISCLAIMER OF WARRANTY: THE CONTENTS OF THIS WORK ARE INTENDED TO FURTHER GENERAL SCIENTIFIC RESEARCH, UNDERSTANDING, AND DISCUSSION ONLY AND ARE NOT INTENDED AND SHOULD NOT BE RELIED UPON AS RECOMMENDING OR PROMOTING A SPECIFIC METHOD, DIAGNOSIS, OR TREATMENT BY PHYSICIANS FOR ANY PARTICULAR PATIENT. THE PUBLISHER, THE AUTHOR, AND ANYONE ELSE INVOLVED IN PREPARING THIS WORK MAKE NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS OF THIS WORK AND SPECIFICALLY DISCLAIM ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. IN VIEW OF ONGOING RESEARCH, EQUIPMENT MODIFICATIONS, CHANGES IN GOVERNMENTAL REGULATIONS, AND THE CONSTANT FLOW OF INFORMATION RELATING TO THE USE OF MEDICINES, EQUIPMENT, AND DEVICES, THE READER IS URGED TO REVIEW AND EVALUATE THE INFORMATION PROVIDED IN THE PACKAGE INSERT OR INSTRUCTIONS FOR EACH MEDICINE, EQUIPMENT, OR DEVICE FOR, AMONG OTHER THINGS, ANY CHANGES IN THE INSTRUCTIONS OR INDICATION OF USAGE AND FOR ADDED WARNINGS AND PRECAUTIONS. READERS SHOULD CONSULT WITH A SPECIALIST WHERE APPROPRIATE. THE FACT THAT AN ORGANIZATION OR WEBSITE IS REFERRED TO IN THIS WORK AS A CITATION AND/OR A POTENTIAL SOURCE OF FURTHER INFORMATION DOES NOT MEAN THAT THE AUTHOR OR THE PUBLISHER ENDORSES THE INFORMATION THE ORGANIZATION OR WEBSITE MAY PROVIDE OR RECOMMENDATIONS IT MAY MAKE. FURTHER, READERS SHOULD BE AWARE THAT INTERNET WEBSITES LISTED IN THIS WORK MAY HAVE CHANGED OR DISAPPEARED BETWEEN WHEN THIS WORK WAS WRITTEN AND WHEN IT IS READ. NO WARRANTY MAY BE CREATED OR EXTENDED BY ANY PROMOTIONAL STATEMENTS FOR THIS WORK. NEITHER THE PUBLISHER NOR THE AUTHOR SHALL BE LIABLE FOR ANY DAMAGES ARISING HEREFROM.

For general information on our other products and services, please contact our Customer Care Department within the U.S. at 877-762-2974, outside the U.S. at 317-572-3993, or fax 317-572-4002.

For technical support, please visit www.wiley.com/techsupport.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

British Library Cataloguing in Publication Data: A catalogue record for this book is available from the British Library

ISBN: 978-0-470-97449-0 (paperback), 978-0-470-97541-1 (ebk), 978-0-470-97542-8 (ebk), 978-0-470-97630-2 (ebk)

Printed and bound in Great Britain by TJ International, Padstow, Cornwall

10 9 8 7 6 5 4 3 2



WILEY

***Training
Your Brain***
FOR
DUMMIES®

Copyright © 2004
by John Wiley & Sons, Inc.

About the Authors

Tracy Packiam Alloway, PhD, is the Director of the Center for Memory and Learning in the Lifespan at the University of Stirling, UK. She was the 2009 winner of the prestigious Joseph Lister Award by the British Science Association for bringing her scientific discoveries to a wide audience. She is the author of over 75 scientific articles and books on working memory and learning, and has developed the world's first standardised working-memory tests for educators, published by Pearson Assessment. Her research has received widespread international coverage, appearing in outlets such as the *Scientific American*, *Forbes*, *US News*, *ABC News*, *BC*, *BBC*, *Guardian*, and *Daily Mail*. She is a much-in-demand international speaker in North America, Europe, Asia, and Australia, and provides advice to the World Bank on the importance of working memory.

Timothy E. Parker is the Senior Crossword Puzzle Editor of *USA Today Crosswords* and the 'World's Most Syndicated Puzzle Compiler' according to *Guinness World Records*. In addition, he is the creator and senior editor of the *Universal Crossword*, the Internet's most popular crossword puzzle since 1998.

Dedication

To Marcus: For teaching me that you are never too young to train your brain.

To Baby No. 2: For keeping me company while I was writing this book.

– Tracy Packiam Alloway, PhD

Publisher's Acknowledgements

We're proud of this book; please send us your comments through our Dummies online registration form located at www.dummies.com/register/.

Some of the people who helped bring this book to market include the following:

Commissioning, Editorial, and Media Development

Project Editor: Steve Edwards

Commissioning Editor: Nicole Hermitage

Assistant Editor: Ben Kemble

Development Editor: Kelly Ewing

Copy Editor: Charlie Wilson

Technical Editor: Liam Healy

Proofreader: Anne O'Rourke

Production Manager: Daniel Mersey

Cover Photos:

© Mike Kemp/Rubberball/Corbis

Cartoons: Rich Tennant

(www.the5thwave.com)

Composition Services

Project Coordinator: Lynsey Stanford

Layout and Graphics:

Samantha K. Cherolis, Cheryl Grubbs

Proofreader: Lauren Mandelbaum

Indexer: Claudia Bourbeau

Special Help

Brand Reviewer: Carrie Burchfield

Publishing and Editorial for Consumer Dummies

Diane Graves Steele, Vice President and Publisher, Consumer Dummies

Kristin Ferguson-Wagstaffe, Product Development Director, Consumer Dummies

Ensley Eikenburg, Associate Publisher, Travel

Kelly Regan, Editorial Director, Travel

Publishing for Technology Dummies

Andy Cummings, Vice President and Publisher, Dummies Technology/General User

Composition Services

Debbie Stalley, Director of Composition Services

Contents at a Glance

Introduction.....	1
Part I: Brain Training Basics.....	7
Chapter 1: Introducing Brain Training.....	9
Chapter 2: Getting to Know Your Brain.....	15
Chapter 3: Brain Training for Your Needs.....	29
Part II: Remember, Remember . . .	
Keeping Your Memory Sharp.....	39
Chapter 4: Honing Your Long-Term Memory	41
Chapter 5: Improving Your Short-Term Memory.....	53
Chapter 6: Improving Your Language Skills.....	67
Chapter 7: Recognising Faces and Remembering Directions	75
Part III: Fostering a Happy, Healthy Mind.....	87
Chapter 8: Improving Your Creativity	89
Chapter 9: Developing a Positive Mindset	101
Chapter 10: Reaping the Rewards of Peace and Quiet	113
Chapter 11: Keeping Your Brain Sociable	123
Part IV: Getting Physical: Looking at Brain-Friendly Diet and Lifestyle	133
Chapter 12: Feeding the Brain	135
Chapter 13: Looking at Stimulants: Drugs and Caffeine.....	147
Chapter 14: Building Up Mind/Body Fitness	157
Part V: Game On! Brain Training	
Games to Play at Home	171
Chapter 15: Verbal Brain Games	173
Chapter 16: Numerical Brain Games	183
Chapter 17: Logic Games.....	203
Part VI: The Part of Tens.....	215
Chapter 18: Ten New Habits to Train Your Brain	217
Chapter 19: Ten Brain Games to Play on the Move	225
Appendix: The Payoff: Checking Your Answers....	231
Index.....	247

Table of Contents

Introduction..... 1

About This Book	1
Conventions Used in This Book	1
What You're Not to Read	2
Foolish Assumptions	2
How This Book Is Organised	2
Part I: Brain Training Basics	2
Part II: Remember, Remember . . .	
Keeping Your Memory Sharp	3
Part III: Fostering a Happy, Healthy Mind	3
Part IV: Getting Physical: Looking at	
Brain-Friendly Diet and Lifestyle	3
Part V: Game On! Brain Training Games	
to Play at Home	3
Part VI: The Part of Tens	4
Icons Used in This Book	4
Where to Go from Here	5

Part 1: Brain Training Basics 7

Chapter 1: Introducing Brain Training.....9

Yes, You Can Train Your Brain!	9
Getting to Know Your Brain	10
The Long and Short of Memory	10
The long story	11
The short story	11
Developing a Healthy Brain	12
Getting Active for Life	13

Chapter 2: Getting to Know Your Brain15

Discovering How the Brain Works	15
The four-part brain	15
Keeping the brain alert and active	18
Looking at the Brain's Two Sides	22
Saying hello to the left side	22
Getting to know the right side	23
Separating Fact from Fiction	24
Do you really only use 10 per cent of your brain?	24
Does your brain shrink as you get older?	25
Can you change your brain?	27

Chapter 3: Brain Training for Your Needs 29

Brain Training in Children	29
Providing a stimulating environment for the brain...	29
Sesame Street versus Dr Seuss	32
Making the most of the early years	32
Brain Training for Adults	34
Dispelling the myths of brain training	35
Using what works for your brain	35

Part II: Remember, Remember . . .**Keeping Your Memory Sharp..... 39****Chapter 4: Honing Your Long-Term Memory 41**

Remembering Your Past: Autobiographical Memory	41
Discovering the importance of childhood memories	42
Harnessing the power of happy memories	43
Using Your Everyday Knowledge: Semantic Memory	45
Knowing the Eiffel Tower from the Leaning Tower...	45
Making associations that last	47
Long-term Skills: Procedural Memory	50
Practising for perfection	50
Training in your sleep	52

Chapter 5: Improving Your Short-Term Memory 53

Speaking Your Brain's Language: Verbal Memory	54
Articulating for a better brain	55
Talking fast to remember more	56
Seeing Your Brain's Perspective: Visual Memory	57
Harnessing the power of visualisation	59
Photographing your memory	60
Moving at Your Brain's Pace: Spatial Memory	61
Getting a bird's eye perspective	62
Move through space	63

Chapter 6: Improving Your Language Skills 67

Avoiding Verbal Loss	67
Banishing the tip-of-the-tongue phenomenon	68
Using a variety of words	69
Remembering Your Shopping List and Other Important Things	70
Repeating, repeating, repeating	70
Rhyming to remember	71

Measuring Your Language Skills with Verbal IQ Tests	72
Looking at verbal IQ tests	72
Measuring your brain's verbal IQ	73

Chapter 7: Recognising Faces and Remembering Directions.....75

Understanding Visual-Spatial Memory Skills.....	75
Banishing the 'You Look Familiar, But I Can't Remember You' Phenomenon.....	76
Reasoning and logic: The key to training your visual-spatial skills.....	78
Working Your Memory Muscle	81
Looking at Visual-Spatial IQ Tests	82
Testing, testing.....	83
Measuring your brain's visual-spatial IQ	84
Scoring your test.....	85

Part III: Fostering a Happy, Healthy Mind..... 87

Chapter 8: Improving Your Creativity.....89

Boosting Your Brain Power with Creative Endeavours	89
Tapping Out Tempo.....	91
Music and language development	92
Perfecting your pitch to keep your brain	94
Drawing Isn't Just for Picasso	97
Doodling to stay on task.....	98
Drawing to release your creative side	98
Comparing the Brains of Creative and Non-creative People.....	99

Chapter 9: Developing a Positive Mindset101

Smiling Your Way to a Better Brain.....	101
When everyday life has you stressed out.....	102
Thinking positive	103
Changing Perspectives	105
Taking stock of your brain's health.....	106
Why 'half-empty' doesn't make a difference to your mental health	108
Managing Stress and Anxiety	108
Understanding why stress kills brain cells.....	109
Taking control to de-stress.....	111

Chapter 10: Reaping the Rewards of Peace and Quiet113

Using the Power of Silence	113
Finding meaning in the noise	113
Finding calm amidst the chaos	115
Making time for quiet	116
Overcoming the Daily Bustle with Meditation	116
What happens in the brain during meditation?	117
Boosting your visual memory with meditation	118
Changing Your Brain with Prayer	119

Chapter 11: Keeping Your Brain Sociable123

Letting Go of Anger and Loneliness	123
Making Friends and Losing Enemies	124
Staying Happy and Fostering Friendships	125
Socialising Your Brain Digitally	128
Multiplayer computer games count as socialising ...	129
Social networking sites are A-OK	129

Part IV: Getting Physical: Looking at Brain-Friendly Diet and Lifestyle 133

Chapter 12: Feeding Your Brain135

Eating for Life: Nutrition in the Womb	135
Craving Marmite	135
Resisting the sugary urge	138
Eating for Life: Nutrition in Childhood	139
Fishing for your brain	139
Dealing with picky eaters	140
Snacking right for a better brain	141
Developing Eating Habits for a Lifetime	143
Juicing for life	143
Making meat count	145
Brain foods in your cupboard	146

Chapter 13: Looking at Stimulants: Drugs and Caffeine147

Pepping Up Your Brain	147
Keeping your brain sharp: What works and what doesn't	147
Avoiding the caffeine dip	149
Relaxing Your Brain	150
Taking a cup of green tea a day to keep the doctor away	150
Calming your brain	151

Medicating Your Brain	152
Popping pills: Can they keep your brain sharp?	153
Staying away from brain drainers	154

Chapter 14: Building Up Mind/Body Fitness.....157

Moving Your Body to Keep Your Brain Healthy	157
Comparing running and yoga	157
Finding your ideal level	159
Feeling good from exercise	160
Getting Started On an Exercise Programme	161
Resting Your Brain	163
Getting better rest	164
Sleeping your way to a better brain	165

Part V: Game On! Brain Training

Games to Play at Home 171

Chapter 15: Verbal Brain Games.....173

Scrambling Words	173
Getting a feel for different types of word scrambles	174
Being strategic	175
Giving word scrambles a try	175
Relaxing with Word Searches	178
Being strategic	178
Trying your hand at word searches	179

Chapter 16: Numerical Brain Games.....183

Using Logic to Solve Sudoku Puzzles	183
Solving strategies	184
Trying the puzzles	185
Taking Target Practice with Circular Sudoku	197

Chapter 17: Logic Games.....203

Logic Puzzles	203
Easy	204
Tricky	204
Tough	205
Treacherous	205
Riddles	206
Easy	206
Tricky	207
Tough	207
Treacherous	208

Cryptograms	208
Easy	209
Tricky	210
Tough	211
Treacherous	212

Part VI: The Part of Tens 215

Chapter 18: Ten New Habits to Train Your Brain ... 217

Try Line Dancing	217
Puzzle Over Jigsaws	218
Learn a Language	219
Memorise Capital Cities	220
Walk in a Different Park	221
Eat New Food	221
Join a Book Club	222
Write a Film Review	223
Spend Five Minutes Each Morning in Contemplation	224
List Three Things You're Thankful for Before Bed	224

Chapter 19: Ten Brain Games to Play on the Move ... 225

Match That Face	225
Spot the Objects	225
Tip-of-the-tongue Game	226
Number Game	226
Memory Game	227
Tell Me a Story	227
Drumming for your Brain	228
Read a Challenging Book	228
Circling Fun	228
Wrapping It Up.	229

Appendix: The Payoff: Checking Your Answers ... 231

Index..... 247

Introduction

I imagine that you've picked up this book because you're interested in finding out more about the brain. In particular, I expect you're interested in what *you* can do to help your brain work better than it does now. Knowledge about the brain and how to train your brain has snowballed in recent years and keeping up with all the scientific research that's coming out is hard.

About This Book

In this book I distil information into bite-sized chunks. I discuss a range of topics relevant to brain training, from computer games to what you should eat, even to what exercise is best for your brain, calling on cutting-edge science. In some of the topics I draw from my own research expertise, and in other topics I follow leading psychologists, scientists, and researchers in the field.

Each chapter deals with a different aspect of brain training, so by the time you get to the end of the book you have a complete picture of what you can do to boost your brain power. The strategies are simple, effective, and easy to fit into your busy lifestyle. You don't have to make major changes to make a big difference. Many of the tips and advice involve small changes that revolutionise your brain.

Conventions Used in This Book

This book follows similar conventions to those that you may have come across in the *For Dummies* series. Here are some of the conventions that you see in the chapters:

- ✓ **Italics.** Words in italics are new words or keywords I introduce that are relevant to the chapter or the section. I always provide definitions for these keywords.
- ✓ **Sidebar.** I include interesting stories that are relevant to the chapter in the grey, shaded boxes. You don't have to read the sidebars, but I think they provide a nice way to see brain training tips in action.

What You're Not to Read

If you've read a *For Dummies* book before, then you may be familiar with its characteristic relaxed style. You don't have to read this book from cover to cover to know what's going on. In fact, don't do that! Start with a section that you're interested in, and read that. Feel free to dip in and out of the chapters. As with all *For Dummies* books, the chapters are stand-alone so you can easily follow them without having to read the previous chapters.

Foolish Assumptions

In writing this book, I've assumed that you want to know the essentials about how the brain works, and that you want to know what you can do in your daily life to help your brain work more efficiently.

To help fulfil these needs, I've included some cutting-edge scientific research on the brain as well, but not so much that things get boring! Whenever I mention psychologists or studies, I'm referring to actual published research. I've also included some stories from real-life situations that I hope you enjoy as well.

How This Book Is Organised

This book has six parts. I provide you with tips, advice, strategies, and the science behind the ideas. Here's a breakdown of what you can expect.

Part 1: Brain Training Basics

This part provides you with a step-by-step guideline to how the brain works and who the key players are. I also talk about common misconceptions about the brain, as well as frequently asked questions about brain training. The brain training software industry has exploded in the last few years, and I review a range of products for all ages. Find out the science behind these different programs (such as Nintendo's Brain Age) and discover whether they'll work to train your brain.

Part II: Remember, Remember . . . Keeping Your Memory Sharp

From forgetting car keys to shopping lists, faces, and directions, everyone's experienced that feeling of 'what was it that I needed to do?'. In this part I talk about the different memory systems and what you can do to make your memory work better. Get tips to improve your verbal memory (language), visual memory (faces), and spatial memory (directions). So at the next company party, you'll be the only one who doesn't get lost on the way and remembers everyone's face and name!

Part III: Fostering a Happy, Healthy Mind

Stress, anxiety, and depression can all take a toll on how your brain works. They can start to have a negative impact on your job, your relationships, and even your plans for the future. But it doesn't have to be this way. You can do many scientifically proven things to boost your mental health. Find out how to combat stress and anxiety and make happiness a daily choice. It really does make your brain work better. Probably one of the most fun ways to train your brain is to foster healthy friendships. Even digital friendships (through social networking) make a positive difference!

Part IV: Getting Physical: Looking at Brain-Friendly Diet and Lifestyle

Brain-boosting food doesn't have to be boring – in this part you find out many delicious foods that you can eat and drink to improve your brain. I provide tips from pre-birth (pregnancy) to adulthood, so you have no excuse for not benefiting from what you're eating, no matter what your age. Also in this part is advice on what physical activities work best to enhance your brain's functioning.

Part V: Game On! Brain Training Games to Play at Home

Ready to get started? Part V includes many different games that you can play to train your brain at home. Take your pick from language games, number games, and memory games.