Mozart’s Brain and the Fighter Pilot: Unleashing Your Brain’s Potential
Richard Restak.

Reviewed by David A. Goss, OD, PhD, Indiana University

In this book the author seeks to improve the reader’s cognitive ability by increasing memory, attention, concentration, powers of logic, mental relaxation, and other skills. The author, Richard Restak, is a neurologist and neuropsychiatrist, and a Clinical Professor of Neurology at George Washington University Medical Center. He has written fifteen books, the best known of which is The Brain, a companion book to the PBS series of the same name.

Between a six-page introduction and a two-page list of resources, the book consists of 28 chapters, each of which is a recommendation for improving brain function. Each chapter generally consists of the neuroanatomical, neurophysiological, or logical background for the particular recommendation and then some exercises designed to develop or enhance the corresponding attributes. In some cases the author draws upon literature and history to illustrate points being made.

I was struck on more than one occasion by the similarity of some of his recommended exercises to various aspects of optometric vision therapy. In Chapter 6, for example, in which he states that intelligence can be increased by improving memory, most of the exercises he presents involve visual memory. Chapter 17 is “Strengthen your powers of attention and concentration.” One of the exercises is a “character search,” in which particular letters and numbers are picked out of rows of randomly arranged letters and numbers. Another procedure in chapter is a “symbol-digit test,” in which particular symbols are learned to be associated with numbers from 1 to 9. Also described in that chapter is the Stroop Test, part of which involves naming the colors with which the words red, blue, and green have been written rather than the words themselves. Incidentally, in Chapter 17, Restak postulates that the increased prevalence of ADD is real, rather than due to increased reporting, and that it stems in part from the fact that television and some aspects of computer use do not enhance coherent thought and language-based communication. In Chapter 22, “Heighten your sensory capabilities,” the author talks about developing visualization and sharpening visual perceptual skills.

Some of the other chapters which I found to be interesting were: 15, “Take active measures to reduce stress;” 21, “Increase mental acuity through wide and varied reading;” 24, “Organize a physical exercise program that aims at brain enhancement;” and 25, “Cultivate fine-motor-control skills involving your hands.” Restak suggests that much of today’s stress stems from a hurried life style and from information overload. One of his suggestions for reducing such stress that I found interesting is to get the audio version of a favorite book and then read along in the book while listening to it. In Chapter 21, the author suggests that the most benefit from wide and varied reading can be obtained by keeping a reading journal. The physical exercises that meet the author’s criteria for brain enhancement are exercises that involve balance, strength in the legs, and dexterity. He describes two tai chi exercises which he feels meet those criteria. Restak posits that development of fine motor hand skills is important because it “will result in the establishment of new circuits in widely dispersed brain areas,” and because “the hand is the primary instrument that carries out the motor commands of the brain.”

This book does not have an index nor reference citations to primary literature. The resource section at the end of the book lists 14 books, including three by Restak, five games, a computer program, and three workbooks, and it suggests ways of finding websites with puzzles and brain teasers. The book has an easy flow and is entertaining to read. It is written on a popular science level, but it provides a great deal of information concerning the improvement of brain performance and the author provides reasonable rationales for the suggestions presented.
The premise of the *Eye Essentials* series is to make specific topics within primary eye care more accessible to the practicing optometrist. Each short textbook is written by a well-known author in the given field. Bruce Evans mentions, in his preface, that he writes with the general practitioner in mind, one who wants to be competent in binocular vision but who does not wish to specialize in it. I undertook a review of this book because that accurately described my initial intent.

This text is divided into eight chapters, beginning with an introductory overview of binocular vision anomalies. Chapter 1 is indeed quite basic, defining the difference between heterophoria and strabismus, and explaining how to perform a cover test. Chapter 2 then delineates the types of heterophoria, symptoms and signs noticed by the patient and examiner, and methods of treatment including some straightforward exercises in vision therapy. Chapter 3 covers strabismus, its detection and measurement, and when to consider intervention. The topic of microtropia is summarized in the five pages of Chapter 4. Amblyopia, both strabismic and anisometropic, is the subject in Chapter 5, and perhaps the easiest to understand in its explanations of diagnosis and treatment. Chapter 6 assesses noncomitant deviations and includes muscle and nerve palsies, Duane’s and Brown’s syndromes, and procedures for evaluating each. Chapter 7 is a brief overview of nystagmus, and Chapter 8 summarizes accommodative anomalies and their common presentation in tandem with binocular vision disorders.

Each chapter includes tables, some of which outline either how to perform a particular test or how to interpret test results. Additional tables list normative values and offer guidelines in recommending therapy. The tables are a good addition to the corresponding text as they both add information by example and summarize important chapter points. Very few photographs are included in this book, and at times I did wish for a visual example to enhance the written text.

The topic areas in this textbook are indeed adequate for the primary care practitioner, and I did come away with a few reminders on how to better serve patients with binocular vision disorders. The main drawback to American practitioners, however, is that the text is written by and for British optometrists, and some of the diagnostic tests and equipment are not found in most offices in the United States. It was at times difficult to follow Dr. Evans’ explanations and interpretations because the terminology and referenced tests are not common on this side of the Atlantic. This is unfortunate, since a quick-reference guide to binocular vision disorders would be a nice addition to the library of many primary care optometrists.