

Book Review

Minimizing the Risk of Alzheimer's Disease, By Frank Murray, Algora Publishing, New York, 2012, 328 p.

The menace of Alzheimer's disease (AD) is certainly a growing preoccupation and the public is increasingly interested in knowing if there are effective therapies on the horizon or measures to be taken to avoid or delay the disease. These are very valid concerns given the aging of world populations.

The book of Frank Murray addresses the aspect of prevention. It is a brave attempt at explaining the pathology and the value of nutrients, herbs, and supplements to delay the onset of AD. There are some 300 pages dealing with these issues. Unfortunately, the book is repetitious, contains many conceptual errors, and often quotes papers that are somewhat out of context. It is my impression that both the scientifically educated reader and the lay person would be disappointed. The scientific minded reader will be irritated with the abundant errors (both minor and significant) while the lay reader will have to read some 300 pages to figure out that they will have to contend with a large list of measures or molecules, most of which are presented as potentially beneficial.

The scientific errors are many. There is an unnecessary and erroneous description of the PAS histochemical reaction to demonstrate "amyloid" plaques. PAS is defined here as "p-aminosalicylic acid" when actually PAS in this context refers to "periodic acid Schiff reaction" Likewise, the author refers to amyloid- β protein stating that "some studies suggest it is toxic to mature neurons in the brains of AD patients". It is an unfortunate and misleading comment given the large number of publications and solid evidence that amyloid- β peptides have enormous pathological significance in unleashing the full amyloid pathology. Decades of exhaustive molecular, neurochemical, cell biology, and clinical studies support the toxic properties of amyloid- β peptides. While much of the book's description of the pathology and clinical aspects can be informative for the lay audience, some comments are inaccurate, misleading, or out of context. A prime case is the description of acetylcholine, a transmitter from a

neuronal system most vulnerable to the AD pathology, as "a chemical that is released from nerve endings in the autoimmune nervous system".

Most of the general comments made regarding the impact of lifestyle in delaying the onset of AD are correct and there is a need for these ideas to be broadcasted again and again. Frank Murray rightly points out in this book the benefits of maintaining intellectual activity, exercising, and having a healthy diet as sensible mechanisms to protect the brain from the neurodegenerative process.

The bulk of the book deals with vitamins, herbs, nutrients, and supplements. This component consists of an extensive listing of substances with suspected benefits to maintain a healthy brain or otherwise substances to be avoided. The list of substances is quite remarkable, some with proven benefits, yet most without consistent evidence of benefit. This shortcoming is largely due to the well-known fact that they are available in a variety of formulations and lack adequate evidence for clinical efficacy. This component of the book resembles a catalogue more than an accurate essay defining properties and benefits.

In brief, the author, who clearly lacks scientific credentials, has done an extraordinary effort to collect information from a variety of sources about possible strategies to minimize the risk of AD. These include scientific meetings and scientific publications. Some of the references given are solid and significant while others are not. The author would have greatly benefited from working together with an investigator in the field or with a scientifically-minded clinician with an interest in AD.

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