Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes

Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes

Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero

The mechanisms underlying diabetic encephalopathy are only partially understood. This review tries to address the mechanisms of diabetes-induced cell and tissue damage in the brain, and discusses whether docosahexaenoic acid (DHA) could attenuate the degenerative changes observed in the diabetic brain. DHA, the main omega-3 fatty acid, is concentrated and avidly retained in membrane phospholipids of the nervous system. DHA is involved in brain and retina physiological functions, aging, and neurological and behavioral illnesses. Neuroprotectin D1 (NPD1), the first identified stereoselective bioactive product of DHA, exerts neuroprotection in models of experimental diabetes. Photoreceptor membranes display the highest content of DHA of any cell. Retinal pigment epithelial cells participate in the phagocytosis of the tips of photoreceptor cells (photoreceptor outer segment renewal). There is a DHA retrieval-intercellular mechanism between both types of cells that conserves this fatty acid during this process. NPD1 promotes the homeostatic regulation of the integrity of these two cells, particularly during oxidative stress, and this protective signaling may be relevant in retinal degenerative diseases. Moreover, neurotrophins are NPD1-synthesis agonists, and NPD1 content is decreased in the CA1 region of the hippocampus of Alzheimer's patients. Overall, NPD1 promotes brain cell survival via the induction of anti-apoptotic and neuroprotective gene expression programs that suppress neurotoxicity. Thus, NPD1 elicits potent cell-protective, anti-inflammatory, prosurvival and repair signaling.

Download and Read Free Online Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero

---

From reader reviews:

Carrie Wilson:

This Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes tend to be reliable for you who want to be described as a successful person, why. The reason of this Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes can be one of many great books you must have will be giving you more than just simple reading through food but feed you with information that possibly will shock your earlier knowledge. This book is usually handy, you can bring it everywhere and whenever your conditions both in e-book and printed types. Beside that this Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes forcing you to have an enormous of experience such as rich vocabulary, giving you tryout of critical thinking that we know it useful in your day exercise. So , let's have it and enjoy reading.

Michael Berry:

This book untitled Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes to be one of several books which best seller in this year, honestly, that is because when you read this publication you can get a lot of benefit upon it. You will easily to buy this kind of book in the book retailer or you can order it by means of online. The publisher in this book sells the e-book too. It makes you quicker to read this book, as you can read this book in your Smartphone. So there is no reason for you to past this reserve from your list.

Michael Medellin:

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes can be one of your starter books that are good idea. We all recommend that straight away because this reserve has good vocabulary that can increase your knowledge in vocab, easy to understand, bit entertaining but nonetheless delivering the information. The author giving his/her effort to put every word into pleasure arrangement in writing Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes although doesn't forget the main level, giving the reader the hottest and based confirm resource info that maybe you can be certainly one of it. This great information may drawn you into fresh stage of crucial imagining.

John Bonilla:

Reading a publication make you to get more knowledge from it. You can take knowledge and information coming from a book. Book is created or printed or illustrated from each source that will filled update of news. In this particular modern era like currently, many ways to get information are available for a person. From media social such as newspaper, magazines, science reserve, encyclopedia, reference book, story and comic. You can add your understanding by that book. Are you ready to spend your spare time to open your

book? Or just in search of the Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes when you required it?

Read Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero for online ebook

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero books to read online.

Online Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero ebook PDF download

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero Doc

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero Mobipocket

Diabetes: Chapter 13. The Anti-Oxidative Component of Docosahexaenoic Acid (DHA) in the Brain in Diabetes by Emma Arnal, María Miranda, Siv Johnsen-Soriano, Francisco J. Romero EPub