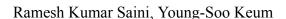
Accepted Manuscript

Omega-3 and omega-6 polyunsaturated fatty acids: Dietary sources, metabolism, and significance — A review



PII: S0024-3205(18)30230-3

DOI: doi:10.1016/j.lfs.2018.04.049

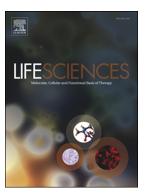
Reference: LFS 15684

To appear in: Life Sciences

Received date: 30 January 2018
Revised date: 19 April 2018
Accepted date: 25 April 2018

Please cite this article as: Ramesh Kumar Saini, Young-Soo Keum, Omega-3 and omega-6 polyunsaturated fatty acids: Dietary sources, metabolism, and significance — A review. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Lfs(2017), doi:10.1016/j.lfs.2018.04.049

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

Omega-3 and omega-6 polyunsaturated fatty acids: dietary sources, metabolism, and significance — A review

Ramesh Kumar Saini* and Young-Soo Keum,

Department of Crop Science, Konkuk University, Seoul 143-701, Republic of Korea

*Corresponding author: saini_1997@yahoo.com, Tel.: 82-2450-3739; Fax: 8234365439.

ABSTRACT

Linoleic acid (LA) (n-6) and α-linolenic acid (ALA) (n-3) are essential fatty acids (EFAs) as they cannot be synthesized by humans or other higher animals. In the human body, these fatty acids (FAs) give rise to arachidonic acid (ARA, n-6), eicosapentaenoic acid (EPA, n-3), and docosahexaenoic acid (DHA, n-3) that play key roles in regulating body homeostasis. Locally acting bioactive signaling lipids called eicosanoids derived from these FAs also regulate diverse homeostatic processes. In general, ARA gives rise to proinflammatory eicosanoids whereas EPA and DHA give rise to anti-inflammatory eicosanoids. Thus, a proportionally higher consumption of n-3 PUFAs can protect us against inflammatory diseases, cancer, cardiovascular diseases, and other chronic diseases. The present review summarizes major sources, intake, and global consumption of n-3 and n-6 PUFAs. Their metabolism to biosynthesize long-chain PUFAs and eicosanoids and their roles in brain metabolism, cardiovascular disease, obesity, cancer, and bone health are also discussed.

Keywords: Docosahexaenoic acid (DHA), Eicosapentaenoic acid (EPA), Eicosanoids, Fish oil

1

Download English Version:

https://daneshyari.com/en/article/8534892

Download Persian Version:

https://daneshyari.com/article/8534892

<u>Daneshyari.com</u>