سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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بالرسالة صفحات لم ترد بالأصل

VISUAL FUNCTION AND FATTY ACID COMPOSITION IN BREAST-FED AND FORMULA-FED INFANTS

Thesis

Submitted to the Faculty of Medicine
University of Alexandria
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By

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CONTENTS

ABBREVIATIONS

Arachidonic acid	A.A.
Body mass index	B.M.I.
Central nervous system	C.N.S.
Docosahexaenoic acid	D.H.A.
Eicosapentaenoic	E.P.A.
Essential fatty acids	E.F.As.
Fatty acid	F.A.
Forced-choice preferential- looking	F.P.L
Linoleic acid	L. A.
Linolenic acid	L.N.A.
Long chain saturated fatty acids	L.C.P.U.F.As.
Millisecond	ms.
Oleic acid	O.A.
Red blood cell	R.B.C.
Visual evoked potential	V.E.P.

INTRODUCTION

INTRODUCTION

Fatty acid nomenclature

Fatty acids are usually referred to using a shorthand notation which gives the number of carbon atoms followed by a colon, then the number of unsaturated bonds and a notation n (or ω) with a number to designate the fatty acid series **(Figure 1, Table 1)**. The position of the first double bond from the methyl (n) terminus is used to designate the series of unsaturated fatty acids. Fatty acid metabolism may involve chain elongation (addition of 2 carbon units) or desaturation (insertion of double bonds between adjacent carbon atoms **(Figure 2)**. The notation Δ is used to indicated the position from the carboxyl terminal, and the name of the enzyme, where a double bond is inserted [1].

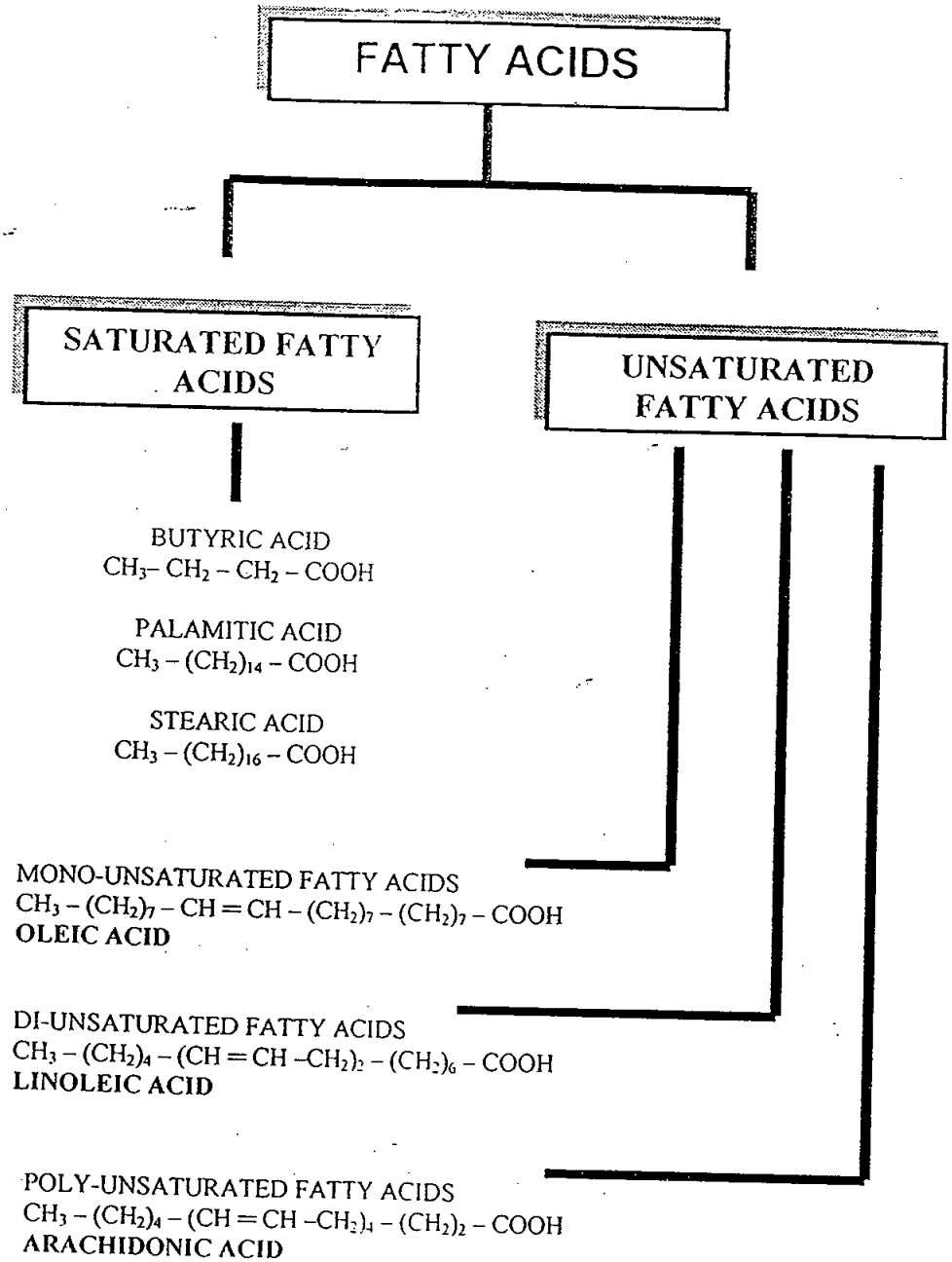

Fig. (1): Schematic representation of fatty acids: saturated and unsaturated; monounsaturated, diunsaturated and polyunsaturated n-6 and n-3 fatty acid families [1].

Table (1): Common names, abbreviations of fatty acids [1]

Common or systematic name	Nomenclature
Medium chain:	
Caproic	6:0
Caprylic	8:0
Capric	10:0
Lauric	12:0
Intermediate chain:	
Myristic	14:0
Long chain:	
Palmitic	16:0
Stearic	18:0
Oleic (O.A)	18:1n-9
Linoleic (L.A)	18:2n-6
Linolenic (L.N.A)	18:3n-3
Arachidonic (A.A.)	20:4n-6
Eicosapentaenoic (E.P.A.)	20:5n-3
Docosahexaenoic (D.H.A)	22:6n-3

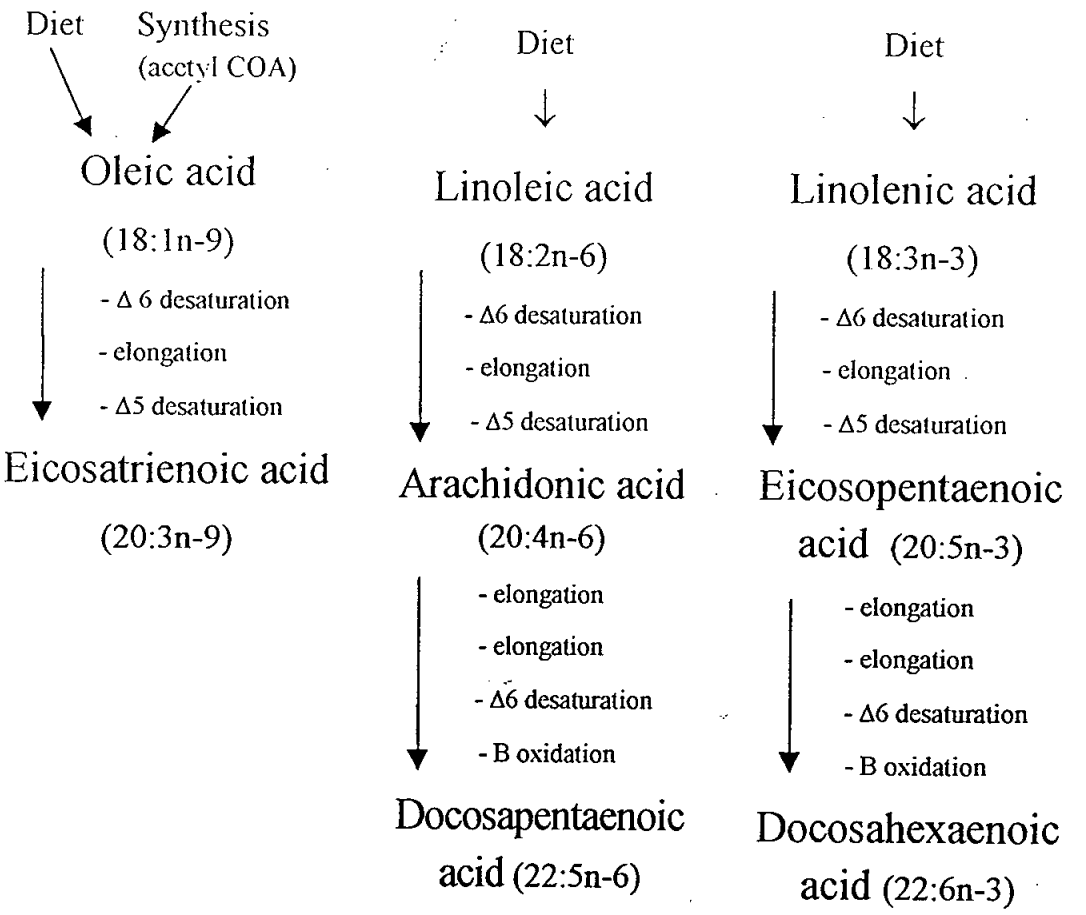

Figure (2): *Schematic representation of the major pathways of desaturation and elongation of oleic acid (18: 1n-9), linoleic acid (18:2n-6) and linolenic acid (18:3n-3)*[1].