

DIETARY OMEGA-3 FATTY ACIDS IN RELATION TO DEPRESSION AND SCHIZOPHRENIA

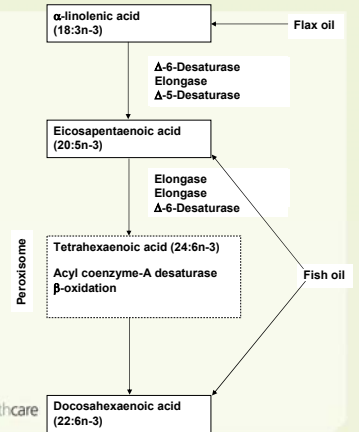
Malcolm Peet

Consultant Psychiatrist, Early Intervention in Psychosis Team,
Rotherham, UK
Professor Associate, School of Health and Related Research,
University of Sheffield



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METABOLIC PATHWAY OF OMEGA-3 PUFA



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SOME PHYSIOLOGICAL EFFECTS OF OMEGA-3 FATTY ACIDS ON THE BRAIN

- Brain development
- Gene expression
- Neurotransmission
- Immune system



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DEPRESSION: THE OMEGA-3 CONNECTION

- International variations in population rates of depression correlate with national fish consumption
- Individuals who are infrequent fish eaters are more likely to become depressed
- Depressed patients have low levels of omega-3 fatty acids in their cell membranes
- There is evidence that omega-3 fatty acids are of therapeutic benefit in depression

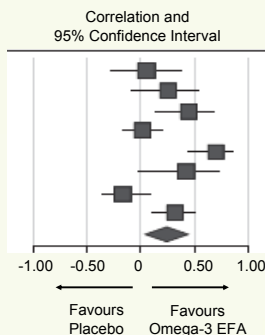


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META-ANALYSIS OF TRIALS OF OMEGA-3 FATTY ACIDS IN DEPRESSION

Best-case analysis;
only 1-g/day doses were included

Freeman et al 2006



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OTHER NUTRIENTS INVESTIGATED IN DEPRESSION

- Folic Acid
- Tryptophan
- Zinc
- Selenium
- Vitamins B6 and B12
- Iron
- Chromium



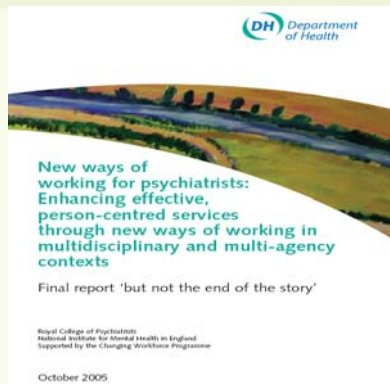
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OMEGA-3 FATTY ACIDS IN OTHER CONDITIONS

- Recurrent self-harm
- Borderline personality disorder
- Childhood behavioural and learning difficulties

OMEGA-3 FATTY ACIDS AND SCHIZOPHRENIA

- Epidemiology shows that outcome of schizophrenia is better in developing countries than in more developed countries. This correlates with national diet: high saturated fat, high sugar diet is associated with worse long-term outcome
- Blood levels of omega-3 and omega-6 fatty acids are reduced in people with schizophrenia
- Treatment studies using omega-3 fatty acids in schizophrenia have given mixed results:
 - Young people at high risk of schizophrenia may have a lower rate of developing the illness if given omega-3 fatty acids
 - People who have developed their first episode of schizophrenia may need less antipsychotic medication if treated with omega-3 fatty acids
 - In established schizophrenia, omega-3 fatty acids have no consistent benefit



New Ways of Working for Psychiatrists: ROLE OF THE DIETICIAN

- Service users need to have access to care, which is appropriate to the individual, timely and supported.
- Service users suffer more physical ill health, related to lifestyle and have needs, which have not been met from the primary care services.
- There is a recognition that there are insufficient specialist dietetic posts within the mental health services and action taken to address this.

FOOD AND MOOD

'Food and Mood' project found that many people with mental health problems use diet to help themselves.

Popular Strategies:

- Restrict sugar
- Restrict saturated fat
- Eat more fish
- Eat more fruit & Veg.

(Geary A. The Food and Mood Handbook. London: Thorson's Publishers, 2001)



THE DIET WHICH IS GOOD FOR YOUR
BRAIN IS THE SAME AS THAT WHICH
IS GOOD FOR THE REST OF YOUR
BODY

WORK IN DONCASTER AND SOUTH HUMBER HEALTHCARE NHS TRUST

- Putting science into practice by developing a nutrition service for patients
- Providing nutritional assessment for young people presenting to services with early symptoms of psychosis
- Mood and lifestyle clinic for people with depression
- Developing a simplified and structured procedure for dietary analysis and advice for use by non-specialists within mental health services, in order to disseminate this knowledge and skill to other NHS Trusts