Biological Markers of Dietary Intake, with Emphasis on Fatty Acids

M.B.	Martijn B.	Katan ^a
A.	Angélique	van Birgelen ^a
J.P.	Jean Paul	Deslypere ^b
M.	Margriet	Fenders ^a
W.A.	Wija A.	van Staveren ^a

^aDepartment of Human Nutrition, Wageningen Agricultural University, The Netherlands;

^bDepartment of Endocrinology and Hematology, State University of Ghent, Belgium

The level of certain polyunsaturated fatty acids in body fluids or tissues can be a valid indicator of their consumption in man. In 59 housewives studied over a 2.5-year period we found a correlation of 0.70 between the intake of **H**noleic acid, assessed as the mean of nineteen 24-hour recalls, and the level in fat tissue [Van Staveren et al.: Am J Epidemiol 1986; 123:455-465]. In 58 adult men supplemented with fish oil capsules for 1 year the rise of eicosapentaenoic acid levels in erythrocyte membranes was strongly and specifically related to the rise in intake. We conclude that epidemiological studies of the role of these fatty acids in health and disease could fruitfully employ these markers of dietary intake.