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Preface

There is no doubt that fats are of a great importance in nutrition from the point of view of preventive as well as of curative medicine. This topic has many aspects. The 14th Symposium of the Group of European Nutritionists, which took place in Paris, has dealt with the more important ones. This book contains the lectures presented at this conference.

Atherosclerosis is a major problem of public health. Its mortality rate in western industrialized countries is high; in Switzerland for instance 33%, this means about twice as much as the mortality of cancer (18-19%). Atherosclerosis is — as is well known - closely related with nutrition, mainly with dietary fats and some other food components. Several groups of compounds are of great interest in this connection, e.g. polyunsaturated fatty acids, cholesterol, certain sugars, etc. (Aaes-Jørgensen, Winand and Christophe, Hruby). Some polyunsaturated fatty acids are transformed into prostaglandins and it is therefore possible that the polyunsaturated fatty acids exert their effect at least partly as prostaglandins (Paoletti).

The composition of dietary fats influences the plasma lipids, especially the cholesterol metabolism, which cause among others biochemical and morphological changes of the arteries. These changes play an eminent role, e.g. in the pathogenesis of coronary heart disease (Truswell, Zöllner, Beaumont and Jacotot, Chevallier, Hejda). In this connection the question is discussed whether a weight-reducing diet with high fat content leads to additional heat loss (Prabucki and Schiirch).

About 10-15 years ago very little was known about the relation between dietary fats and blood coagulation. New studies indicate that fats containing long chain saturated fatty acids seem to predispose to both arterial and venous
thrombosis (Renaud, Jacotot and Beaumont).
Further contributions summarize the new findings in the field of intestinal
absorption and re-absorption of fats and lipids and their metabolism, the transport

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of lipids in blood plasma, and the importance of medium chain triglycerides
in therapy (Borgström, Boucrot and Clement, Norum, Bach, Debry and Metais).
The last part of this volume deals with various pathophysiological effects of
fats and fatty acids: with the chemical changes and possible health hazards of
heated fats, with the very important problem, whether the consumption of long
chain fatty acids, e.g. erucic acid, has consequences for health also in humans,
and with nutritional aspects of hydrogenated fats (Varela, Causeret et al, Ziemlanski,
In conclusion I would like to thank Prof. François, co-editor of this volume,
Dr. Rerat and the other members of the French Steering Committee for the
outstanding organization of this symposium. A special debt of gratitude is due to
the authors and to all those who have contributed to the publication of this
book.
Rüschlikon-Zürich, June 1977 Prof. Dr. J.C. Somogyi