

PROCEEDINGS OF THE NUTRITION SOCIETY

A Scientific Meeting was held at Robinson College, Cambridge on 4 July 1991

**TFOM Symposium on
'Nutrition in a changing Europe'**

Nutritional implications of changes in Eastern Europe

Nutritional implications of political and economic changes in Eastern Europe

BY W. B. SZOSTAK AND W. SEKUŁA

National Food and Nutrition Institute, Warsaw, Poland

For more than 40 years, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the Soviet Union formed a politically and economically uniform bloc of countries. (Albania and Yugoslavia are not mentioned here as these two countries stayed outside formal structures of the Eastern bloc, i.e. Warsaw Pact and COMECON.) In all of them, the economy was based on the principle of central planning, and all economic processes were formulated and implemented under the thorough control of the governments. As the governments were designated by the communist parties, all the more important political and economic decisions had their roots in the ruling bodies of these parties.

Food production, processing and marketing in this group of countries was centrally planned as well. As a rule, agricultural production in Eastern European countries was the domain of the collective farms and state-owned agricultural enterprises. Only Poland was able to maintain a leading position for the private sector in agriculture.

The growth of agricultural production was one of the basic goals of communist governments. At least two factors were considered in designing such a goal: (a) the need for growth of the overall national economy; (b) the need to ensure enough food for rapidly growing populations.

As personal incomes in Eastern European countries were generally low, the public in these countries were very sensitive to the problem of consumer prices, and particularly to the prices of food. This forced the governments of these countries to introduce the policy of low and stabilized food prices. That in turn required state subsidies to fill the gap between the increasing costs of agricultural production and food processing, and the lower stable retail prices of food.

All Eastern European countries were able, although in varying degree, to increase their agricultural production and, hence, the supply of food. This was particularly true for Czechoslovakia, the German Democratic Republic and Hungary. The same applied to Bulgaria and with some reservations to Poland. The USSR and Romania lagged behind the other countries in this respect.

As a result, there were important changes in food consumption in Eastern European countries. Meat, fats and sugar consumption generally followed an upward trend, while cereal and potato consumption decreased. The developments in meat and fats consumption are shown on Figs. 1 and 2. Over a 25-year period, all countries showed a high rate of growth in meat consumption. In Bulgaria and Romania, the quantities consumed more than doubled, and they increased by 75% in the German Democratic Republic. The USSR was able to increase its meat supply available for consumption by over 65% per person and Hungary by 60% per person. In Czechoslovakia it grew by 45% and by nearly 50% in Poland. In the latter, a record level of meat supply was noted in 1980. Because of economic crises, meat production and consumption decreased rather sharply in the next few years. Although there was some recovery later on, this level was not restored.

Edible fat consumption was subject to fairly rapid increase as well in all countries except the German Democratic Republic (Fig. 2). Between 1961 and 1986 edible fat consumption nearly doubled in the USSR. The rate of growth exceeded 70% in Romania and was only slightly lower in Hungary and Bulgaria.

Edible fat consumption grew rapidly in Poland until the end of the 1970s. Severe economic crisis at the beginning of the 1980s resulted, among other things, in a decrease in edible fat consumption and, hence, in 1986 it was only 30% higher than in 1961. It should be added, however, that more recent years have brought a further increase. In comparison with other countries, Czechoslovakia also showed a rather moderate rate of growth.

In these countries, butter consumption grew between 1961 and 1986 by, from 20% in the German Democratic Republic to 250% in Romania. Bulgaria was able to increase its butter consumption by 165%, and Poland by 85%. Consumption of butter grew by 65–70% in Hungary and the USSR.

Poland will be taken as an example to describe, in greater detail, the shifts in nutritional habits in Eastern Europe.

In Poland, an increase in animal protein consumption and a decrease in consumption of vegetable protein have been observed since the beginning of the 1950s. Whilst the increase in total protein intake was relatively small, the increase in total fat intake was high. The average daily fat consumption in 1950 was 75 g/d, and 129 g/d in 1989. It should be emphasized that during the whole period under observation, the share of animal fat in total fat intake was extremely high. Meat, milk, butter and other animal fats were the main sources of dietary fat. The intake of total carbohydrates decreased markedly, whereas sucrose consumption increased.

In general, the Polish national diet has been shifting over the last four decades towards a more affluent one. In 1989, protein supplied approximately 12% of total energy intake, fats 38% and carbohydrates 50% (calculated from household budget surveys), which is comparable with the composition of the diet in most developed countries.

In other Eastern European countries the changes in the composition of the national diets were similar to those of Poland. In all countries, fat and sucrose intakes increased during the post-war period, whereas complex carbohydrate intake decreased markedly. Total energy intake increased significantly.

It should be mentioned that substantial increases in alcohol and tobacco consumption have also been observed in Eastern Europe. According to recent findings tobacco and alcohol, high animal-fat intake and physical inactivity are important risk factors in some

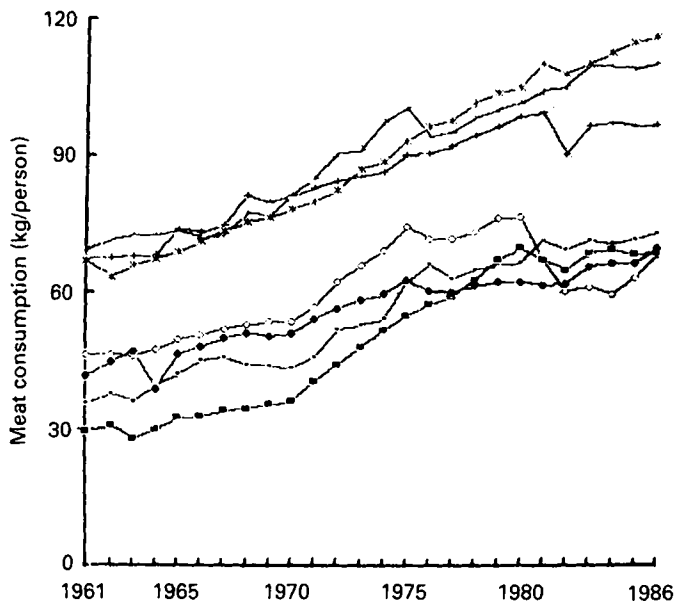


Fig. 1. Meat consumption (kg/person) in Eastern European countries between 1961 and 1986. (■), Bulgaria; (—), Hungary; (+), Czechoslovakia; (○), Poland; (●), USSR; (×), German Democratic Republic; (■), Romania. From Sekuła, 1991a.

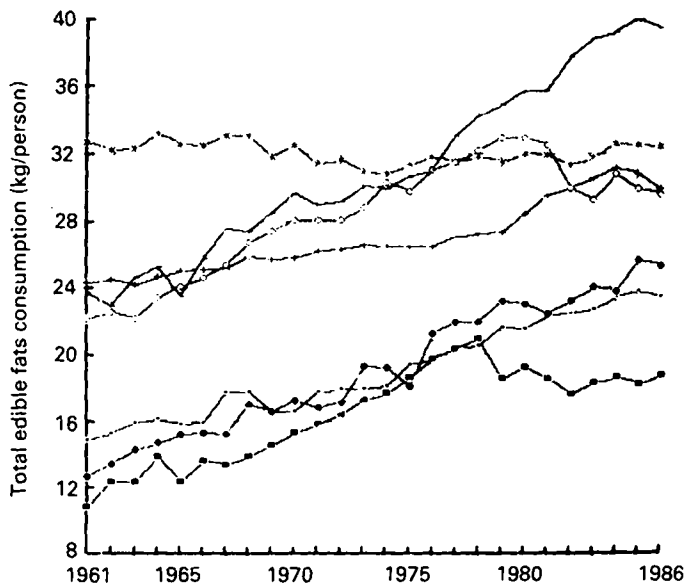


Fig. 2. Total edible fat consumption (kg/person) in Eastern European countries between 1961 and 1986. (■), Bulgaria; (—), Hungary; (+), Czechoslovakia; (○), Poland; (●), USSR; (×), German Democratic Republic; (■), Romania. From Sekuła, 1991a.

diseases of major public health importance. This justifies the inclusion of tobacco and alcohol intake in the present discussion.

It is well known that cardiovascular mortality increased considerably in all developed countries after the Second World War. This was also the case in Eastern European countries. In Poland, for example, the frequency of deaths from cardiovascular diseases rose nearly threefold in the years 1960–1989. Thus, a fundamental transformation occurred in the mortality pattern in Poland: while in 1960 cardiovascular diseases were associated with less than 25% of total deaths, in 1989 they accounted for 50%. The situation in other Eastern European countries was similar to that in Poland.

Coronary heart disease (CHD) mortality has been frequently used as a criterion of population health status in relation to nutrition. Eastern European countries were by no means spared this disastrous epidemic. They shared the fate of other countries in Europe. It is, however, remarkable that CHD mortality in industrialized countries between 1970 and 1980 clearly shows a decreasing tendency in the Western World (World Health Organization, 1986).

On the contrary the mortality in Eastern countries increased during this period of time. The reason for this phenomenon should be sought in the difference in intensity of environmental risk factors in the various countries. Nutrition may be one of the factors involved.

It is worth mentioning that in the countries with high CHD mortality which experienced the highest decrease in death rate between 1970 and 1980, i.e. Australia, USA, Canada, New Zealand and Finland, a decrease in animal fat, including butter and egg, consumption occurred in the same period of time (Szostak, 1990). In contrast, in all countries where CHD mortality evidently increased between 1970 and 1980, a clear increase in the availability of atherogenic food items occurred.

Generally speaking, the communist system was ineffective in economic terms and repressive in internal policy. Needless to say, people were dissatisfied with this system and resistance has been developing gradually. Poland occupied the leading position in this process and still is most advanced in political and economic reforms. For this reason we will discuss the situation in Eastern Europe using our country as an outstanding example.

The 1970s, particularly the first half of that decade, was a period of particularly rapid changes in the Polish national diet. These changes resulted from the new economic policy, introduced by the new political and state authorities that came to power in 1970. The new economic policy has led, in the case of food, to growing imports of coarse cereals and other feedstuffs necessary to increase meat production. As the value of Polish total exports was lower than that of total imports, the imbalance of the foreign trade grew. Retail prices of food were kept stable by the government despite the rising costs of agricultural production and processing, and resulted in growing food subsidies. An attempt, undertaken in 1976, to raise food prices led to public protests and was abandoned.

Increases in the consumption of foods of animal origin, fats and sugar continued in the second half of the 1970s, although the rate of growth, because of the deteriorating economic situation, was lower than in the first half of the decade. In 1980, daily energy available for consumption reached approximately 15.1 MJ (3600 kcal) *per capita*. Whilst in 1950 only 25% of total energy came from animal products, in 1980 these products constituted 36%.

Table 1. *Food expenditure (per person) in Polish households**
(includes both manual and office employees)

		Expenditure ($\times 10^3$ Polish zlotys)	Relative to July 1989 value as 100	Percentage of total expenditure
1989	July	22.4	100	41.9
	August	37.6	168	49.5
	September	57.6	257	51.1
	October	83.5	373	56.7
	November	87.6	391	52.0
	December	124.7	557	52.0
1990	January	146.3	653	57.4
	March	180.6	806	48.5
	June	237.3	1 059	53.0
	September	259.4	1 158	48.2
	December	361.3	1 613	45.7

* From Sekuła, 1991b.

As is widely known, the Polish food market collapsed in 1980 and was one of the major causes of political destabilization. In consequence, food rationing was introduced in 1981. Consumption of many foodstuffs temporarily decreased. However, even in the worst year, i.e. in 1982, average meat consumption was over 58 kg per person and total edible fat consumption was over 21 kg per person. In both cases these quantities represented consumption levels comparable with those for some developed countries.

Between 1980 and 1982, the average Polish diet decreased by over 7% with respect to energy, by 10% with respect to total protein and by 13% with respect to fat. Despite this decrease, the energy content of the diet amounted to over 13.8 MJ (3300 kcals) per person in 1982.

After 1982 the economic situation improved resulting in an increase in the energy and nutrient content of the diet. However, the food market remained unbalanced and it had to be regulated by food rationing until 1985, and in the case of meat up to August 1989.

In 1989 Poland experienced a radical change in political system followed by profound re-orientation of the national economy. The constitution was changed, political pluralism was introduced, a new government was formed by the former political opposition, and a market-oriented economy was substituted for the centrally planned one. Food rationing was removed and food prices increased dramatically.

The results of household budget surveys have been examined to study the effect of these soaring prices on food expenditure and food consumption. Employees' households were taken as an example. The data in Table 1 illustrate the enormously rapid growth of the expenditure on food after August 1989. Food expenditure was growing in relative terms as well. In July 1989, of their total expenditure on all commodities and consumer services, employees' households spent approximately 42% on food (alcohol and tobacco excluded). That proportion increased in subsequent months, particularly over August–October. There was a 'jump' in the proportion spent on food in January 1990 and then the share of total expenditure spent on food fluctuated. A weak decreasing tendency in this respect began in August 1990.

Growing food costs have resulted in a reduction in demand for food commodities. That in turn resulted in a decrease in food consumption. Data in Table 2 show the extent

Table 2. *Food consumption (kg/person per year) in Polish households**
(includes both manual and office employees)

	1989	1990	Relative to 1988 value as 100	
			1989	1990
Bread	84.7	86.3	98	100
Wheat flour	13.6	13.3	96	94
Groats, rice and flakes	4.6	3.6	96	75
Potatoes	96.1	99.1	100	103
Fruits (including processed)	35.5	36.3	100	102
Vegetables (including processed)	60.7	61.8	91	93
Meat and its products	60.1	59.2	104	102
Fish and its products	5.5	4.6	98	82
Fats: Total	19.0	18.1	97	92
Animal fats	4.3	4.0	98	91
Vegetable fats and oils	5.9	5.3	100	90
Butter	8.8	8.8	96	96
Liquid milk (l)	87.1	81.0	95	89
Cheese	11.0	9.1	96	79
Cream	7.2	5.9	93	77
Eggs (n)	190 †	172	98	89
Sugar	24.7	22.8	90	83

* Source: Sekuła, 1991b.

Table 3. *Energy and nutrient contents (g/person) of the daily diet* in Polish households†*
(includes both manual and office employees)

	1989	1990	Relative to 1988 value as 100	
			1989	1990
Energy				
(MJ)	9.9	9.6	—	—
kcal	2 376	2 286	97	93
Protein: Total	65.2	62.7	98	94
Animal protein	41.3	39.0	99	94
Vegetable protein	23.9	23.7	97	96
Fat	101	96	98	93
Carbohydrates	300	293	95	93

* Excluding energy and nutrient content of food consumed outside the household.

† Source: Sekuła, 1991b.

of that decrease. In 1988 consumption of fish and fish products, liquid milk, cheese, eggs and sugar was most affected. On the other hand, the consumption of meat and meat products slightly increased as consumers tried to maintain the former consumption level of this group of foods. This was facilitated by the removal of meat rationing in August 1989.

Table 3 presents the effect of the reduction in food consumption on the energy and nutrient content of the daily diet in employees' households. In 1990, the amount of energy derived from food eaten in the home was 7% lower than in 1988. Lower quantities of all energy-yielding nutrients contributed to this fall.

This study of the Polish case shows that the rapid transformation of an economic system can have a profound influence on human nutrition. It may be expected that this will also be experienced in other Eastern European countries. Even in those countries where food production in collective and state-owned farms was high, some difficulties are expected to emerge from the privatization of these farms. The reduction and even total abolition of food subsidies with an increase in food prices will be an unavoidable effect of the introduction of a market-oriented economy. It could be expected that a nutrition policy may be helpful in moderating unfavourable effects on human nutrition of these changes. However, the development of a nutrition policy in the period of revolutionary change seems unlikely. The new governments are entirely preoccupied with very serious political problems. The introduction of a new economy leads to new social strains and governments are confronted with problems which have not been experienced previously. These problems have to be solved in a limited time-period, in a situation of political tension, without economic reserve and, frankly speaking, by people whose political experience is usually not wide enough. However, it should be kept in mind that the relatively peaceful change of an autocratic and repressive system for a democratic one, and of a centrally-planned economy for a market-oriented one, is an adventure without any precedents. No one has experience in this area. In this complicated situation no politician may be expected to occupy his mind with nutrition policy.

As a consequence, new problems concerning human nutrition may be expected. They should be carefully observed and analysed.

REFERENCES

- Sekuła, W. (1991a). Food consumption patterns in Central and Eastern European countries. *Nutrition Policies in Central/Eastern Europe. Report of a WHO Consultation*. WHO Collaborating Centre, National Food and Nutrition Institute, Warsaw. Geneva: WHO.
- Sekuła, W. (1991b). Zmiany w wydatkach i spożyciu po urynkowaniu gospodarki żywnościowej. *Gospodarstwo domowe w Kraju i na świecie* 3, 4.
- Szostak, W. B. (1990). How can food and nutrition policy contribute towards curbing the heart disease epidemic in Eastern Europe? *Proceedings of the First European Conference on Food and Nutrition Policy*, Budapest, 1–5 October 1990. Copenhagen: WHO Regional Office for Europe.
- World Health Organization (1986). *Community Prevention and Control of Cardiovascular Diseases. Technical Report Series* no. 732. Geneva: WHO.