Changes in the nutrient composition of meat between 1990 and 2006 in Switzerland

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Background

The knowledge of the nutrient composition is a basic requirement for the correct evaluation of the nutritive value of meat and its assessment of the suitability in human nutrition. In public, meat and meat products are often recognized as rich in fat and other undesired substances like cholesterol, saturated fatty acids or medical residues. A regular survey of the composition of meat is therefore necessary. Changes in the nutrient composition can be expected because of the genetic and feeding improvements as well as different trimming habits.

Material and Methods

In 1990 Mannhart and Wenk developed a Swiss Meat composition table.

After 15 years Gerber et al (2006) revised the existing table and expanded the number of meat cuts as well as analyzed nutrients. In total 420 samples from 56 different meat cuts of 16 species were considered and 59 parameters analyzed.

Results:

Comparison of meat cuts analysed in 1990 and 2006 (examples for protein and fat)

Species	Cut	Total fat g/100g		Protein g/100g	
		2006	*1990*	2006	*1990*
Beef	Entrecote	4.5	*6.4*	23.2	*22.1*
	Braising steak	1.8	*3.5*	22.4	*21.6*
	Simmer meat lean	5.5	*7.0*	20.7	*19.6*
	Simmer meat streaky	16.6	*21.8*	19.5	*17.3*
	Minced meat	7.5	*8.9*	21.6	*19.8*
Veal	Chop *(without bone)*	8.7	*13.8*	20.7	*18.9*
	Braising steak	1.8	*1.6*	21.9	*22.2*
	Breast	14.5	*14.5*	18.3	*18.7*
Pork	Chop *(without bone)*	10.4	*10.9*	21.4	*20.6*
	Braising steak	4.9	*7.8*	20.6	*19.4*
	Minced meat / Ragout	6.6	*6.9*	20.8	*20.4*
Lamb	Chop *(without bone)*	9.5	*20.6*	20.2	*17.3*
	Gigot	8.2	*10.5*	20.2	*19.6*
Chicken	Breast with skin	6.5	*5.9*	23.3	*21.0*
	Breast without skin	1.0	*1.8*	24.6	*22.1*
	Leg with skin	10.2	*12.6*	17.9	*17.6*
	Led without skin	6.2	*8.4*	19.7	*18.2*
Turkey	Escalope	1.1	*1.3*	25.6	*24.1*

Conclusions

The most evident changes in the nutrient composition of meat are found for the fat content and the fatty acid profile comparing data from 1990 with current data from the study. Fat reducing techniques have allowed a substantial reduction of fat among the muscle fibres (intramuscular), laid down between the muscles (intermuscular), under the skin (subcutaneous) and in the body cavities (visceral). Lean meat shows in most cases a favorable fatty acid composition. Already moderate meat consumption contributes substantially to cover the requirement of essential nutrients.

Literature

- Mannhart
-Gerber

Table available at www.proviande.ch