

REPORT

IN COMMON SPORT+ PROJECT: STUDY OF PARTICIPANTS' EATING HABITS



September 2022



IN COMMON SPORTS +: fit, food and fun for elderly!

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1. INTRODUCTION

Ensuring healthy nutrition for all has become one of the world's greatest challenges.

In April 2016, the United Nations General Assembly proclaimed the United Nations Decade of Action on Nutrition (2016-2025), providing a window of high-level political attention on nutrition to increase collective efforts to enable all people, at all times and at all stages of life, to obtain affordable, diverse, safe and healthy diets.

In an increasingly 'ageing' society such as ours, it is important to ensure that everyone has the opportunity to age well also through nutrition.

Ageing is not a disease, but a physiological condition, a phase of life. With this in mind, it is important to remember that through a healthy lifestyle - which also includes a proper diet - it is possible to age well and prevent many diseases typical of the passing years.

The basic rules of a healthy diet for a person who is over 65 and in good health do not differ from those of an adult: lots of fresh fruit and vegetables, especially wholegrain cereals, protein mainly of vegetable origin (legumes are excellent), few fats and simple sugars, and lots of water.

Achieving the goal of a correct diet in the elderly is by no means simple, not least because of the pathologies that may be present such as heart problems, hypertension, neurological diseases (Alzheimer's, Parkinson's, etc.).

And to further complicate the elderly-food relationship, economic and social factors also play a key role.

The basic rules to be followed for a healthy diet, in order to maintain a prolonged well-being throughout life, are few and simple. The first rule is that no food - except for allergies or intolerances - should be excluded from a proper diet, which must be rich, complete and varied.

It should not be forgotten that, in order to lead a healthy lifestyle, physical activity must also be added to a correct diet.

2. PROJECT “IN COMMON SPORT +: FIT, FOOD AND FUN FOR ELDERLY”

The overall objective of the project IN COMMON SPORT +: Fit, Food and Fun for Elderly! is to increase participation in sport and promote healthy lifestyles among people over 60. To achieve this goal, two main activities were identified: the implementation of two weekly training sessions for project participants and the analysis of their eating habits.

Food and nutrition, as well as other environmental factors, have a high impact on health and well-being, thus determining the quality of life of the elderly. From a holistic perspective, nutrition not only contributes to health status but is also a determinant of quality of life. Especially in old age, adequate nutrition helps maintain health and reduce the occurrence of chronic diseases, contributes to vitality in daily activities, energy and mood, and helps maintain functional independence.

Nutrition deserves special attention when people reach old age and is essential for good health. Healthy ageing is associated with physiological, cognitive, social and lifestyle changes that influence food intake and nutritional status.

Cultural, social and psychological factors and adherence to healthy lifestyles may also play an important role in the genetics of ageing itself. While socio-economic differences in the prevalence of obesity may act as one of the factors through which these health inequalities emerge, health promotion activities need to be tailored not only to different countries, but also to different socio-demographics.

For this reason, it was decided to include among the project activities the collection and analysis of the eating habits of the participants from each partner country in order to be able to give participants basic advice on how to improve their diet.

The Municipality of Cesena, as the person in charge of this activity, set up a working group made up of food experts who took care of the questionnaire, data processing and the drafting of short and simple dietary advice.

WORK TEAM	
Massimo Lodovici	Head of School and Sport Service of the Municipality of Cesena
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Valentina Giorgini	School Meals Office of the Municipality of Cesena
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3. DATA COLLECTION METHODOLOGY

The research involved all six partner countries - Portugal, Italy, Spain, Bulgaria, Hungary and Slovenia - and took place during the first semester of 2022. Compared to the project schedule, the activities were carried out a few months late due to difficulties caused by the global pandemic.

Based on the nutrition guidelines and the medical-scientific research carried out in this area, a questionnaire was prepared for all participants in order to find out and analyse their eating habits.

In order to make it easier for the participants to fill in the questionnaire and also to make it easier subsequently to collect and analyse the data, it was decided to opt for a questionnaire of 15 multiple-choice questions that could be filled in either online or on paper (see appendix 1).

The material was prepared in English and then, once validated by all partners, was translated into the languages of each country.

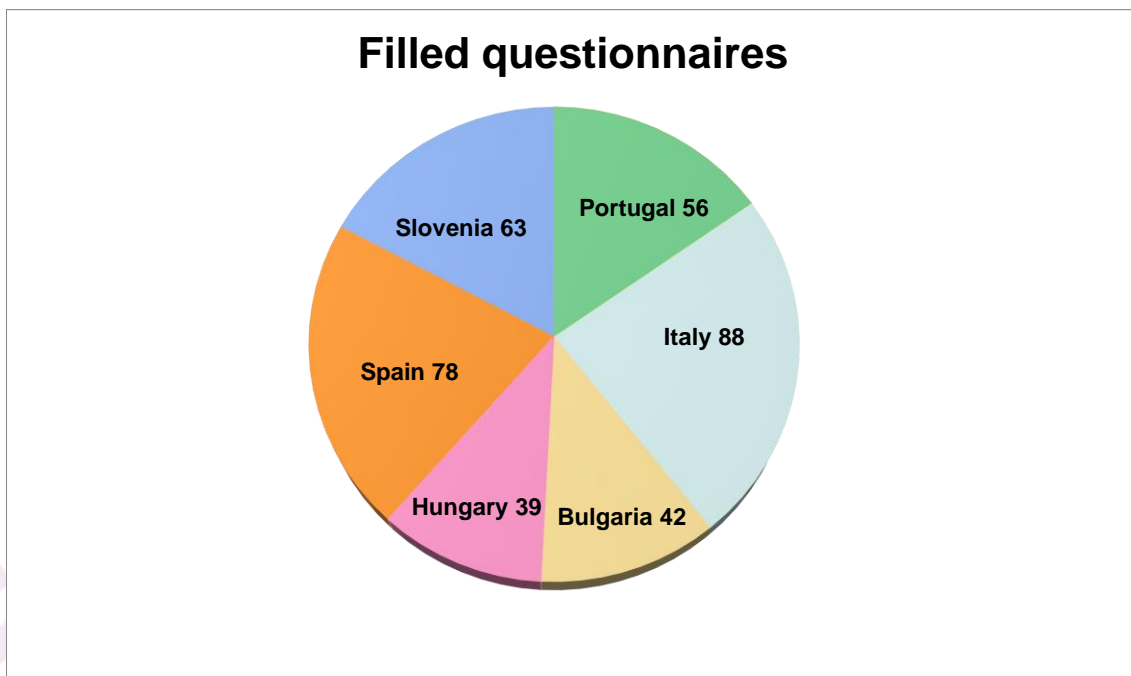
The questionnaires were distributed to the participants between March and April 2022 and subsequently the data were analysed by a group of experts, led by the Municipality of Cesena.



Photo 1: Distribution of the questionnaire in Cesena (15 March 2022)

A total of 366 questionnaires were collected and analysed as follows:

COUNTRY	FEMALE	MALE	TOTAL
Portugal	31	25	56
Italy	63	25	88
Bulgaria	40	2	42
Hungary	32	7	39
Spain	62	16	78
Slovenia	42	21	63
	270	96	366



4. DATA ANALYSIS

The project partners forwarded all the questionnaires filled in by their participants to the Municipality of Cesena and the team of experts analysed each question in the questionnaire and related the different answers obtained in the different countries.

For each question, a correct answer (recommended consumption) related to food consumption according to WHO guidelines was also identified.

Below is the analysis of the individual questions.

QUESTION 1: how many servings of fruits and vegetables do you consume on average in a day?

- No serving
- 1-2
- 3-4
- 5 or more

1 serving of fresh fruit =150g (1 medium fruit, apple, pear, orange, etc., or 2 small fruits, apricots, plums, tangerines, etc.). 1 serving of raw or cooked vegetables =200g (2-3 tomatoes, 3-4 carrots, 1 fennel, 2-3 zucchinis, ½ plate of spinach, chard, broccoli, cauliflower, etc.).

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
none	1,79%	1,15%	1,28%	21,43%	0,00%	0,00%	3,29%
1-2 servings	32,14%	32,18%	52,56%	42,86%	76,92%	68,25%	48,77%
3-4 servings	51,79%	54,02%	39,74%	26,19%	23,08%	26,98%	39,45%
5 or more servings	14,29%	12,64%	6,41%	9,52%	0,00%	4,76%	8,49%

RECOMMENDED CONSUMPTION: 5 or more servings

DATA ANALYSIS

The results show that half of the project participants consume 1-2 portions of vegetables and fruit, while 40% consume 3-4 portions per day.

We can consider this a good result.

In particular, the consumption of fruit and vegetables is higher in Portugal and Italy than in the other countries.

QUESTION 2: how many servings of cereals and cereal products (*bread, pasta, rice, spelt, barley, bread substitutes such as rusks, crackers, breadsticks, etc.*) or potatoes do you consume daily?

- Less than 1 serving
- 1-2 servings
- 2-3 servings
- More than 3 serving

1 portion of pasta = 80g, 1 portion of bread = 50g or bread substitutes such as rusks, crackers, breadsticks = 30g, 1 portion of potatoes = 200g (2 small potatoes). The portion of fresh pasta is 100g, that of filled pasta (e.g. ravioli, tortellini) is 125g, that of lasagna is 250g.

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Less than 1 serving	1,79%	4,60%	8,97%	0,00%	12,82%	7,94%	6,03%
1-2 servings	62,50%	51,72%	84,62%	50,00%	61,54%	76,19%	65,48%
2-3 servings	26,79%	40,23%	6,41%	40,48%	23,08%	15,87%	24,93%
More than 3 servings	8,93%	3,45%	0,00%	9,52%	2,56%	0,00%	3,56%

RECOMMENDED CONSUMPTION: 3 or more serving per day

DATA ANALYSIS: from observation of the data, more than half of the participants consume 1-2 portions of cereals and cereal products per day, while only a quarter consume 2-3 portions. It can be noted that Italy and Bulgaria come closest to the ideal intake, with the latter having no participants consuming less than one portion per day.

This is not a negative result, but it might be useful to emphasise the importance of carbohydrates in the diet.

QUESTION 3: do you usually consume whole grains (i.e., products derived from grains in their "native", unrefined form, e.g., brown rice, wild rice, spelt, barley, millet, bulgur, quinoa, etc.)?

- Never
- Sometimes
- 1-2 times per week
- Always

1 serving of brown rice, wild rice, spelt, barley, millet, bulgur, quinoa = 80g cooked, 30g uncooked

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Never	16,07%	6,82%	55,13%	2,38%	5,13%	41,27%	23,77%
Sometimes	50,00%	45,45%	26,92%	38,10%	48,72%	3,17%	34,43%
1-2 times per week	30,36%	28,41%	7,69%	33,33%	28,21%	52,38%	28,96%
Always	3,57%	19,32%	10,26%	26,19%	17,95%	3,17%	12,84%

RECOMMENDED CONSUMPTION: always

DATA ANALYSIS: It can be seen that among the participants, about 50% consume at least a few portions of wholegrains per week: a result that can be considered satisfactory. The data are fairly homogeneous among all countries, except in Spain, as almost half of the population seems not to consume any type of wholegrain cereal.

QUESTION 4: how many servings of milk, yogurt, and cheese do you consume daily?

- None
- 1 serving
- 2 servings
- More than 2 servings

1 serving = 180g (one cup of milk = 125ml, one yogurt =125g, fresh cheese or mozzarella = 100g, aged cheese = 50g)

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
None	0,00%	11,36%	1,28%	7,50%	5,13%	9,52%	6,04%
1 serving	67,86%	62,50%	33,33%	25,00%	53,85%	58,73%	51,37%
2 servings	25,00%	22,73%	52,56%	37,50%	10,26%	23,81%	29,95%
More than 2 servings	7,14%	3,41%	12,82%	30,00%	30,77%	7,94%	12,64%

RECOMMENDED CONSUMPTION: 2 servings

DATA ANALYSIS: More than half of the participants were found to consume only one portion of dairy products and derivatives per day, particularly in Italy, Slovenia, Portugal and Hungary, while more than half respected the recommended daily intake.

Furthermore, it can be noted that in Italy more than 10% avoid the consumption of milk and dairy products.

Intervention to promote adequate consumption of calcium-containing foods is useful.

QUESTION 5: how many servings of legumes do you consume per week?

- None
- 1 serving
- 2 servings
- More than 2 servings

legumes, 1 portion =150g, a small box, dried legumes = 50g, 2-3 tablespoons

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
None	0,00%	3,41%	0,00%	9,52%	2,56%	17,46%	5,19%
1 serving	35,71%	50,00%	19,23%	16,67%	71,79%	61,90%	41,80%
2 servings	28,57%	34,09%	35,90%	35,71%	17,95%	20,63%	29,78%
More than 2 servings	35,71%	12,50%	44,87%	38,10%	7,69%	0,00%	23,22%

RECOMMENDED CONSUMPTION: More than 2 servings

DATA ANALYSIS: It is evident that 70% of the participants consume 1-2 portions of legumes per week, while only 20% exceed 2 portions. In Portugal, Bulgaria and particularly in Spain, more than 2 portions per week are consumed.

A satisfactory result, but there is still a need for action to increase their use.

QUESTION 6: how many servings of fish do you consume per week?

- None
- 1 serving
- 2 servings
- More than 3 servings

1 portion of fresh or frozen fish, molluscs, crustaceans = 150g (1 small fish, 1 medium fillet, 20 shrimps, etc.)

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
None	1,79%	9,20%	0,00%	19,05%	30,77%	15,87%	10,68%
1 serving	5,36%	43,68%	5,13%	38,10%	61,54%	58,73%	33,42%
2 servings	44,64%	40,23%	24,36%	30,95%	7,69%	25,40%	30,41%
More than 3 servings	48,21%	6,90%	70,51%	11,90%	0,00%	0,00%	25,48%

RECOMMENDED CONSUMPTION: More than 3 servings

DATA ANALYSIS: The following data show that around 60% of the entire population generally consumes 1-2 portions of fish per week, as is the case in Bulgaria, Hungary, Slovenia and Italy. In Portugal, the population generally consumes 2-3 portions of fish per week, with Spain standing out, where 70% of participants appear to consume more than 3 portions per week.

Furthermore, it should be noted that Bulgaria, Hungary and Slovenia have a fairly high percentage of people who do not consume fish, particularly in Bulgaria around 20%.

On average, fish consumption remains quite low, making it necessary to take action to increase fish consumption.

QUESTION 7: how many servings of meat and sausage products (sausage, ham....) do you consume per week?

- None
- 1 serving
- 2 servings
- More than 3 servings

1 portion of fresh or frozen "red" or "white" meat = 100g (1 slice, 1 hamburger, 1 slice of chicken breast or turkey, 1 small chicken thigh)

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
None	5,36%	10,23%	0,00%	4,76%	0,00%	6,35%	4,92%
1 serving	8,93%	22,73%	21,79%	30,95%	15,38%	46,03%	24,59%
2 servings	41,07%	40,91%	50,00%	40,48%	25,64%	36,51%	40,44%
More than 3 servings	44,64%	26,14%	28,21%	23,81%	58,97%	11,11%	30,05%

RECOMMENDED CONSUMPTION: 2 servings

DATA ANALYSIS: Meat consumption appears to be around 2 portions per week overall in almost all countries except Hungary where 60 % of the population consume more than 3 portions of meat per day.

In Italy, 10% of the population does not consume meat compared to 0% in Spain and Hungary. The result can be considered satisfactory

QUESTION 8: how many times a week, at your morning or afternoon snack, do you consume sweets (cakes, spoon cakes, ice cream, energy bars, chocolate, spreads, jam, etc.)?

- Never
- 1-2 times per week
- 2-3 times per week
- Always

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Never	21,43%	31,03%	65,38%	11,90%	17,95%	16,13%	30,77%
1-2 times per week	55,36%	37,93%	23,08%	45,24%	51,28%	61,29%	43,68%
2-3 times per week	21,43%	16,09%	2,56%	26,19%	20,51%	14,52%	15,38%
Always	1,79%	14,94%	8,97%	16,67%	10,26%	8,06%	10,16%

RECOMMENDED CONSUMPTION: 1-2 times per week

DATA ANALYSIS: The consumption of sweets appears to be around 1-2 times a week for 40% of the population, while 30% appear not to consume any type of sweet.

Note the low consumption of sweet foods in Spain, but also interesting is the 15% of the Italian and Bulgarian population who consume sweets daily.

Overall, the result is good.

QUESTION 9: do you eat sweets after lunch or dinner?

- Never
- Rarely
- 2-3 days/weeks
- Every day

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Never	16,07%	17,05%	64,10%	11,90%	10,26%	20,97%	26,30%
Rarely	67,86%	56,82%	26,92%	42,86%	61,54%	43,55%	48,77%
2-3 days/week	10,71%	20,45%	2,56%	26,19%	15,38%	32,26%	17,26%
Every day	5,36%	5,68%	6,41%	19,05%	12,82%	3,23%	7,67%

RECOMMENDED CONSUMPTION: Rarely

DATA ANALYSIS: The data show that 75 per cent of the total participants do not or rarely consume sweets after lunch or dinner, which is satisfactory. It is emphasised that approximately 20% of the Bulgarian population consume sweets at the end of a meal every day, which is a higher percentage than in other countries.

QUESTION 10: how many servings of nuts do you consume weekly?

- None
- 1-2 servings
- 2-3 servings
- More than 3 servings

1 serving = 30g (almonds, walnuts, hazelnuts, pine nuts, cashews, pistachios etc.)

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
None	21,43%	14,77%	26,92%	21,43%	13,89%	34,92%	22,59%
1-2 servings	46,43%	28,41%	62,82%	35,71%	66,67%	41,27%	45,45%
2-3 servings	19,64%	17,05%	5,13%	28,57%	8,33%	12,70%	14,60%
More than 3 servings	12,50%	39,77%	5,13%	14,29%	11,11%	11,11%	17,36%

RECOMMENDED CONSUMPTION: More then 3 servings

DATA ANALYSIS: The data indicate that there is a need to promote the consumption of nuts, since almost 70% of the total participating population consumes between 0 and 1-2 portions of nuts per week, which is a rather low proportion. The country that comes closest to an adequate consumption of nuts is Italy, while in Slovenia it can be seen that 1/3 of the population does not consume this type of food at all.

QUESTION 11: how often do you consume extra virgin olive oil?

- Never, I use other oils
- Never, I use other fats
- Sometimes
- Always

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Never, I use other oils	9,09%	0,00%	5,13%	16,67%	25,64%	9,52%	8,77%
Never, I use other fats (butter, cream...)	0,00%	1,14%	0,00%	16,67%	2,56%	3,17%	3,01%
Sometimes	25,45%	0,00%	11,54%	50,00%	61,54%	15,87%	21,37%
Always	65,45%	98,86%	83,33%	16,67%	10,26%	71,43%	66,85%

RECOMMENDED CONSUMPTION: Always

DATA ANALYSIS: Observation of the data reveals a large and frequent consumption of extra virgin olive oil, with almost 70% of the total participating population consuming it all the time. Italy has the highest consumption, in fact over 98% of the Italian population uses oil every day. However, other countries such as Portugal, Spain and Slovenia also use it frequently, as opposed to Bulgaria and Hungary who consume it once in a while.

It is also interesting, how 1/4 of the Hungarian population does not use this oil at all, but other types of fat. Overall, we can consider the results quite satisfactory, but there is always a need to reiterate the benefits of this food with the aim of further increasing its consumption.

QUESTION 12: how many liters of water do you consume in a day?

- Less than 1 liter
- 1 liter
- 1-2 liters
- More than 2 liters

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Less than 1 liter	25,00%	15,91%	35,90%	4,76%	2,56%	12,70%	18,31%
1 liter	30,36%	36,36%	28,21%	21,43%	20,51%	39,68%	30,87%
1-2 liters	39,29%	44,32%	26,92%	40,48%	48,72%	41,27%	39,34%
More than 2 liters	5,36%	3,41%	8,97%	33,33%	28,21%	6,35%	11,48%

RECOMMENDED CONSUMPTION: More than 2 liters

DATA ANALYSIS: Overall, the data demonstrate moderate water consumption, which, however, would need intervention in order to increase its use. About 50% of the total participants consume 1 litre or less of water, while 40% consume 1-2 litres per day. In particular, 35% of the Spanish population consumes less than one litre per day, which is too little. Overall, only 10% consume more than 2 litres per day, particularly represented by Bulgaria and Hungary.

QUESTION 13: how often do you use alcoholic beverages? (1 glass of wine or 1 can of beer)

- Never
- Rarely
- 2-3 days per week
- Daily

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
Never	16,07%	28,41%	24,36%	30,95%	10,26%	15,87%	21,86%
Rarely	26,79%	30,68%	33,33%	38,10%	64,10%	33,33%	35,52%
2-3 days per week	23,21%	15,91%	0,00%	16,67%	17,95%	42,86%	18,58%
Daily	33,93%	25,00%	42,31%	14,29%	7,69%	7,94%	24,04%

RECOMMENDED CONSUMPTION: Rarely

DATA ANALYSIS: With regard to alcohol consumption, the data indicate that almost 50% of the total participants do not consume or rarely consume alcohol, e.g. in Hungary about 3/4 of the participants gave this answer. In general the result obtained is satisfactory, however it is recorded that 1/4 of the participants consume it on a daily basis, in particular in Spain more than 40%.

QUESTION 14: how many main meals (*breakfast-lunch-dinner*) do you consume during the day?

- 1 main meal
- 2 main meals
- 3 main meals
- More than 3 main meals

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
1 main meal	5,36%	1,14%	0,00%	14,29%	10,26%	1,59%	4,10%
2 main meals	10,71%	17,05%	28,21%	47,62%	41,03%	19,05%	24,86%
3 main meals	64,29%	77,27%	53,85%	30,95%	48,72%	73,02%	61,20%
More than 3 main meals	19,64%	4,55%	17,95%	7,14%	0,00%	6,35%	9,84%

RECOMMENDED CONSUMPTION: 3 main meals

DATA ANALYSIS: The data show a frequent consumption of 3 meals per day by 60% of the total population. It should be noted that more than 60% of the Bulgarian population consumes only one meal or only two meals a day. The habit of eating only 1 meal a day is also found to a very small extent in other countries.

QUESTION 15: during your main meal (which may be lunch or dinner, for example) what do you usually eat?

- A single complete dish consisting of cereals (e.g. pasta, rice, spelt or potatoes) plus protein foods (e.g. meat, fish, legumes, etc.) plus vegetable
- A first course of cereals, a second course of protein, a side dish of vegetables
- Only one second protein dish (e.g. meat, fish, legumes, etc.) with a side of vegetables
- Only a first course composed of cereals (e.g. pasta, rice, spelt or potatoes) with vegetables

ANSWERS

	PORTUGAL	ITALY	SPAIN	BULGARIA	HUNGARY	SLOVENIA	TOTAL
A single complete dish consisting of cereals (e.g. pasta, rice, spelt or potatoes) plus protein foods (e.g. meat, fish, legumes, etc.) plus vegetables	71,43%	26,19%	69,23%	21,43%	74,36%	82,26%	56,79%
A first course of cereals, a second course of protein, a side dish of vegetables	8,93%	26,19%	2,56%	40,48%	15,38%	0,00%	14,40%
Only one second protein dish (e.g. meat, fish, legumes, etc.) with a side of vegetables	16,07%	20,24%	28,21%	23,81%	5,13%	9,68%	18,28%
Only a first course composed of cereals (e.g. pasta, rice, spelt or potatoes) with vegetables	3,57%	27,38%	0,00%	14,29%	5,13%	8,06%	10,53%

RECOMMENDED CONSUMPTION: A single complete dish consisting of cereals (e.g. pasta, rice, spelt or potatoes) plus protein foods (e.g. meat, fish, legumes, etc.) plus vegetable

DATA ANALYSIS: From the observation of the results, there is a preponderant use of the single meal containing cereals, protein foods and vegetables, as it is consumed by 55% of the total participants. It is most commonly consumed in Portugal, Spain, Hungary and Slovenia.

Furthermore, 1/5 of the total participants have a low consumption of carbohydrates especially in Italy, Spain and Bulgaria, where around 20-25% of the population prefer a grain-free meal, favouring a protein dish accompanied by vegetables.

In contrast, in Hungary, carbohydrates are always introduced in the main dish.

In general, a rather even split between the different types of dish composition can be observed in Italy, but this means that almost 50% of the population consume unbalanced dishes without a certain macronutrient.

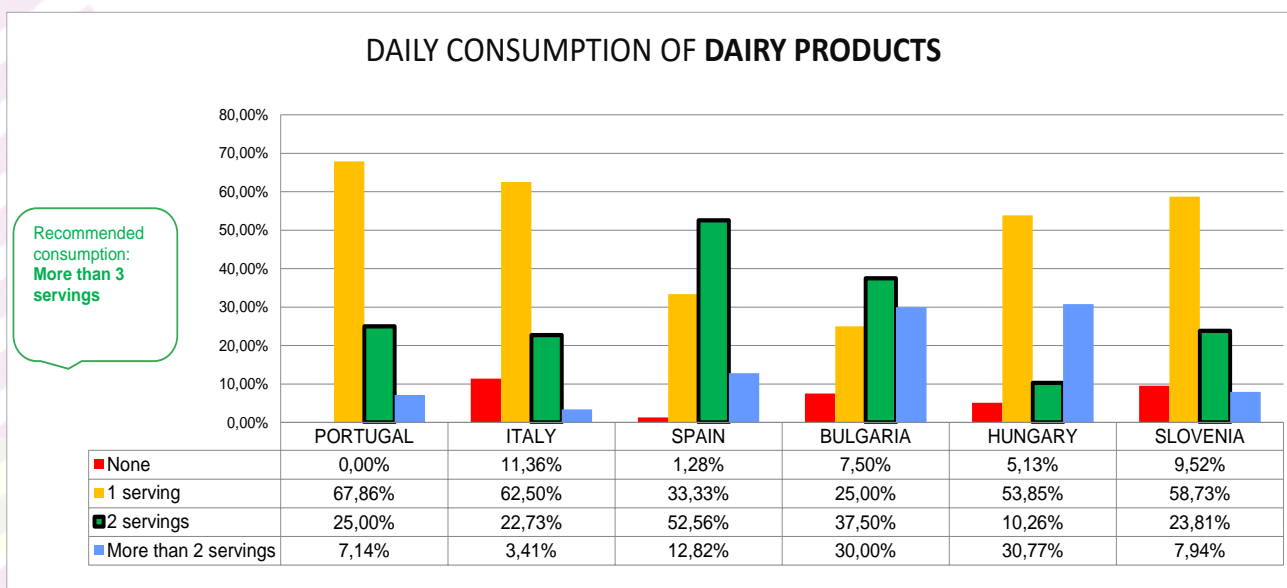
5. CONCLUSION

The results obtained from the completion of the questionnaires by the various countries involved in the project are very interesting and quite in line with the Guidelines for a Healthy Diet, published by the CREA, Food and Nutrition Research Centre.

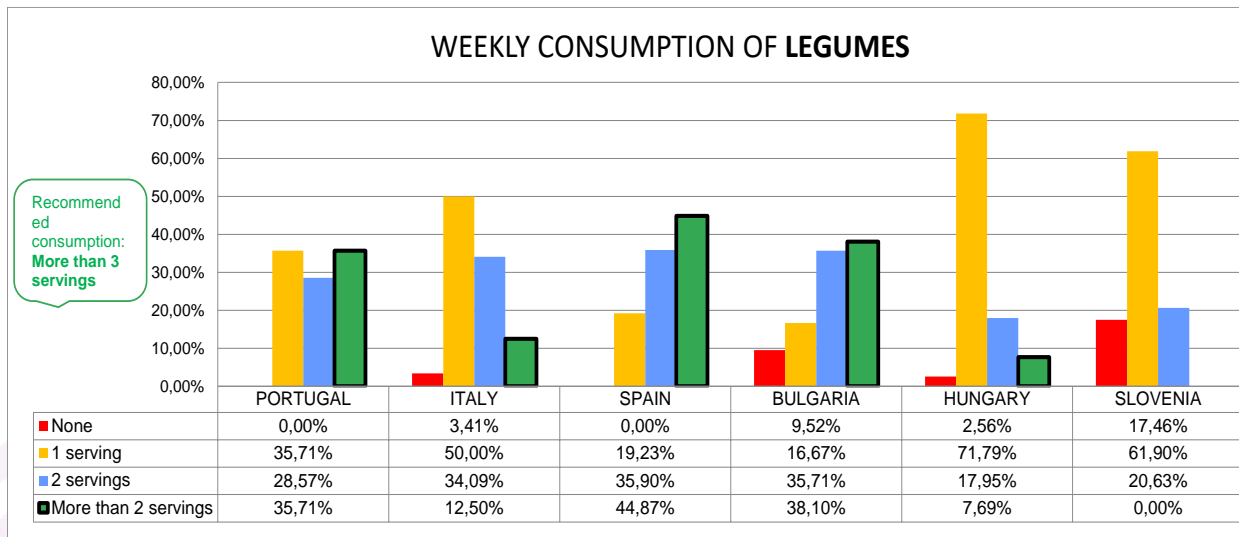
In fact, one can immediately see that most of the participants consume **fruit and vegetables** with a good frequency. Despite the good result, it is still necessary to increase their consumption in order to get as close as possible to the desired five portions per day.

With regard to the consumption of **cereals and cereal products**, from observation of the data, more than half of the participants consume 1-2 portions per day, while only a quarter consume 2-3 portions. It should be emphasised that these foods constitute the most important source of starch, and thus of easily usable energy, for humans. It is therefore advisable not to limit their use, but to consume at least 3 or more portions a day, generally preferring the less refined products, as they are richer in fibre in a natural way. The consumption of wholegrains is satisfactory, but their consumption should be encouraged for all the health benefits they provide.

The consumption of **milk and dairy products**, on the other hand, is somewhat lacking, with more than half of the participants consuming only one portion per day, Portugal, Italy, Hungary and Slovenia being notable. It should be remembered that such foods are important, as they are a rich source of calcium, contain proteins of excellent biological quality and important vitamins such as vitamins B2, A and D.

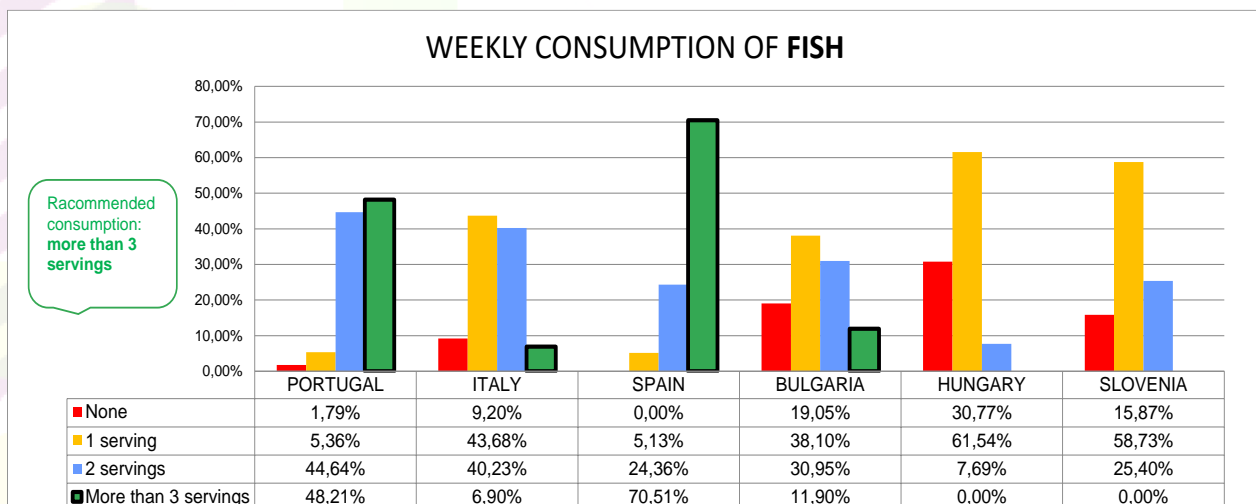


The use of **legumes** should also be increased; 70% of participants consume 1-2 portions of legumes per week, while only 20% exceed two portions. Legumes can be good substitutes for meat or fish, as they provide key nutrients such as iron, trace elements and significant amounts of protein of good biological quality.

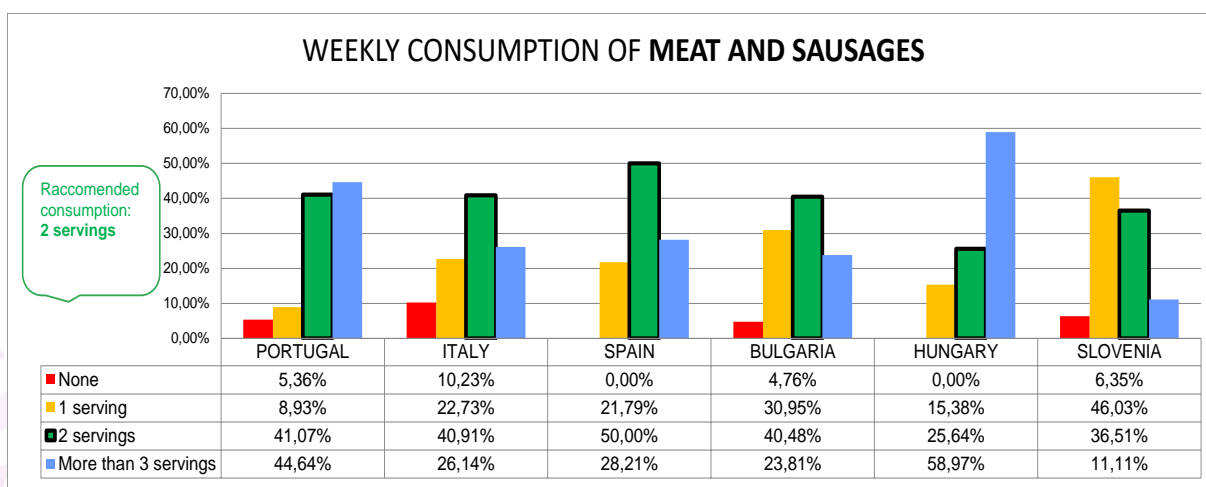


As far as **fish** consumption is concerned, the data show that around 60% of the entire population generally consumes 1-2 portions of fish per week, as is the case in Italy, Bulgaria, Hungary and Slovenia. This is a bit low when one considers that consumption should be at least 2 or 3 portions per week. Spain stands out among them all, where 70% of the participants seem to consume more than 3 portions per week. However, it should also be noted that a high percentage of people in Bulgaria, Hungary and Slovenia do not consume fish, even 30% in Hungary.

The strong discrepancy found for fish consumption between Mediterranean and Eastern European countries could also be explained by the privileged geographical position of the former compared to the latter countries and the consequent different costs for buying this food.



On the other hand, as far as **meat** consumption is concerned, the result is satisfactory. Meat consumption seems to be around 2 portions per week overall in all countries, except Hungary where 60% of the population consumes more than three portions per day. Fish and meat belong to the same macronutrient group, their main function being to provide proteins of excellent biological quality. However, lean meat and fish are to be preferred. On the other hand, consumption of products with a higher fat content, such as certain types of meat and sausages, should be moderate in quantity.



Regarding the result obtained on the consumption of **sweets**, it can be said that it is satisfactory, many of the participants consume sweets only 1-2 times a week, and even 30% of the participants do not seem to consume any. It is advisable to limit the consumption of sweets, preferring a fruit in the mid-morning or afternoon, as it provides other nutrients such as vitamins and minerals in addition to sucrose.

In addition to fruit, it is also important to use **dried fruit**, which is rich in iron, magnesium, potassium and zinc. The data shows that almost all participants do not consume dried fruit or consume it in moderate quantities. The country that comes closest to an adequate consumption of dried fruit is Italy, while in Slovenia it can be seen that 1/3 of the population does not consume this type of food at all.

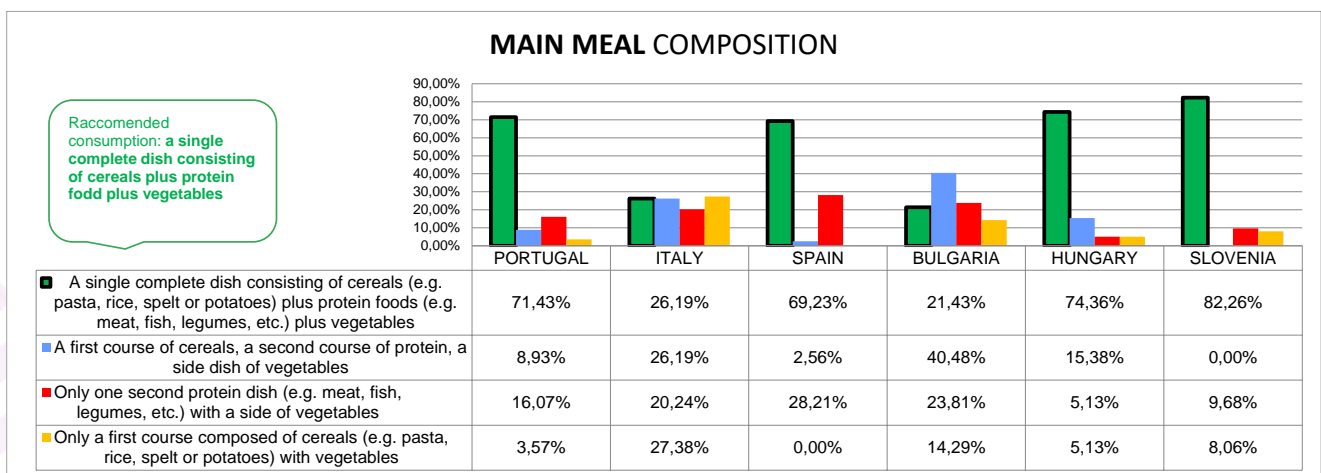
Water consumption is also moderate, about 50% of the participants consume 1 litre or less of water, while 40% consume 1-2 litres per day. Only 10% of the participants drink more than 2 litres a day.

Finally, the data show us that almost all participants, more than 60% seem to consume three **meals a day**. The main meal most commonly used in the different countries seems to be the one-course meal containing cereals, protein foods and vegetables. However, it is important to point out that 1/5 of the total number of participants have a low carbohydrate consumption, especially in Italy, Spain, and Bulgaria, where about 20-25% of the population prefers a dish without cereals, favouring a protein dish accompanied by vegetables. In contrast, in Hungary, carbohydrates are always introduced in the main dish. In general, in Italy, a rather even split

between the different types of dish composition can be noted, but this means that almost 50% of the population consume unbalanced dishes without a certain macronutrient.

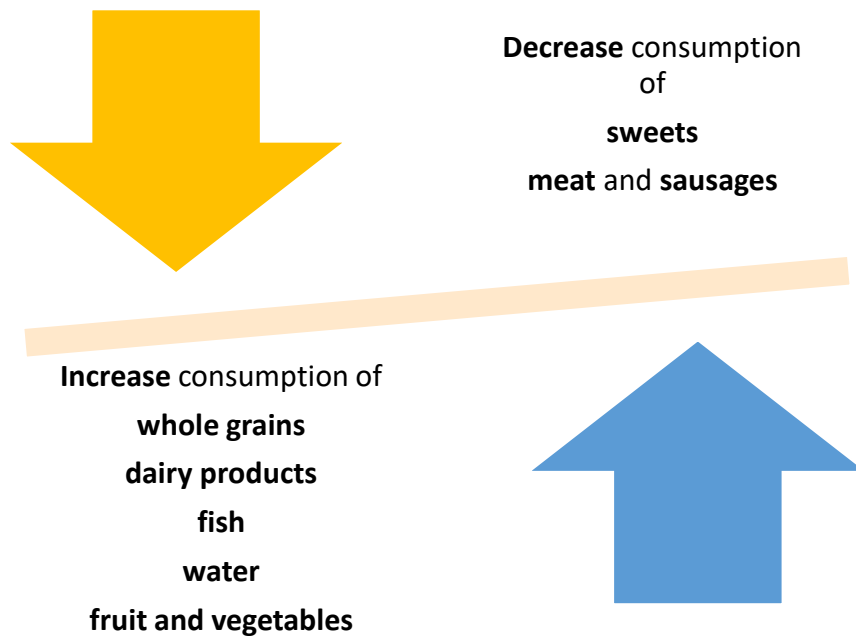
Generally, an eating pattern should be structured with five meals, three main meals, breakfast, lunch and dinner, and two snacks.

However, this is not a universal rule, as it is also based on the preferences and habits of the individual. However, the optimal meal should be a complete meal consisting of cereals with protein foods and vegetables. Totally eliminating carbohydrates is wrong; they should make up about half of the entire meal, while the remainder should be divided between lipids, protein and vegetables.



6. TIPS FOR A BETTER DIET

In summary, we can conclude from the analysis of the data examined that it is necessary to



Let us look more specifically at what each participating country should do to improve its nutrition.

Portugal



- Fruits and vegetables ✓
- Legumes ✓
- Fish ✓
- Sweets ✓
- Olive oil ✓
- Meat and sausage products ✓



- Cereals and cereal products ↑
- Whole grain products ↑
- Milk, yogurt and cheese ↑
- Nuts ↑
- Water ↑



Italy



- Fruits and vegetables ✓
- Sweets ✓
- Olive oil ✓
- Nuts ✓
- Meat and sausage products ✓



- Cereals and cereal products ↑
- Whole grain products ↑
- Milk, yogurt and cheese ↑
- Fish ↑
- Legumes ↑
- Water ↑



Increase the consumption of the balanced dish which contains all the main macronutrients

Spain

- Milk, yogurt and cheese ✓
- Legumes ✓
- Fish ✓
- Sweets ✓
- Meat and sausage products ✓



- Fruits and vegetables ↑
- Cereals and cereal products ↑
- Whole grain ↑
- Nuts ↑
- Water ↑



Bulgaria

- Milk, yogurt and cheese ✓
- Legumes ✓
- Nuts ✓
- Sweets ✓
- Meat and sausage products ✓



- Fruits and vegetables ↑
- Cereals and cereal products ↑
- Whole grain products ↑
- Fish ↑
- Nuts ↑
- Water ↑



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8. APPENDIX 1: QUESTIONNAIRE

IN COMMON SPORTS +: FIT, FOOD AND FUN FOR ELDERLY!

QUESTIONNAIRE ON nutritional HABITS

"In Common Sport +: Fit, Food and Fun for Elderly" is an European project funded by the Erasmus+ programme that involves six countries: Portugal (coordinator), Spain, Hungary, Bulgaria, Italy and Slovenia.

The main goal is to promote a healthy lifestyle among elderly people in two ways: encouraging physical activity through traditional games and team games and analyzing eating habits to prevent some age-related problems.

This questionnaire, elaborated with the support of AUSL Romagna (Italian Local Health Agency) and the School Refectory Office of the Municipality of Cesena (Italy), will be filled in by all the participants of the 6 countries involved in the project.

It is the first step of a range of activities about that will be carried out in the next months on this topic.

Your participation is therefore very important!

Are you ready?

3...2...1... LET'S GO!!!

BIRTH YEAR _____

MALE FEMALE

3. HOW MANY SERVINGS OF **FRUITS AND VEGETABLES** DO YOU CONSUME ON AVERAGE IN A DAY?



1 serving of fresh fruit =150g (1 medium fruit, apple, pear, orange, etc., or 2 small fruits, apricots, plums, tangerines, etc.).

1 serving of raw or cooked vegetables =200g (2-3 tomatoes, 3-4 carrots, 1 fennel, 2-3 zucchini, ½ plate of spinach, chard, broccoli, cauliflower, etc.).

- No serving
- 1-2 servings
- 3-4 servings
- 5 or more servings

4. HOW MANY SERVINGS OF **CEREALS AND CEREAL PRODUCTS** (BREAD, PASTA, RICE, SPELT, BARLEY, BREAD SUBSTITUTES SUCH AS RUSKS, CRACKERS, BREADSTICKS, ETC.) OR **POTATOES** DO YOU CONSUME DAILY?



1 portion of pasta = 80g, 1 portion of bread = 50g or bread substitutes such as rusks, crackers, breadsticks = 30g, 1 portion of potatoes = 200g (2 small potatoes). The portion of fresh pasta is 100g, that of filled pasta (e.g. ravioli, tortellini) is 125g, that of lasagna is 250g.

- Less than 1 serving
- 1-2 servings
- 2-3 servings
- More than 3 servings

11. DO YOU USUALLY CONSUME **WHOLE GRAINS** (I.E., PRODUCTS DERIVED FROM GRAINS IN THEIR "NATIVE", UNREFINED FORM, E.G., BROWN RICE, WILD RICE, SPELT, BARLEY, MILLET, BULGUR, QUINOA, ETC.)?

1 serving of brown rice, wild rice, spelt, barley, millet, bulgur, quinoa = 80g cooked, 30g uncooked

- Never
- Sometimes
- 1-2 times per week
- Always



12. HOW MANY SERVINGS OF **MILK, YOGURT, AND CHEESE** DO YOU CONSUME DAILY?

1 serving = 180g (one cup of milk = 125ml, one yogurt = 125g, fresh cheese or mozzarella = 100g, aged cheese = 50g)

- None
- 1 serving
- 2 servings
- More than 2 servings



13. HOW MANY SERVINGS OF **LEGUMES** DO YOU CONSUME PER WEEK?
fresh legumes, 1 portion = 150g, a small box, dried legumes = 50g, 2-3 tablespoons

- None
- 1 serving
- 2 servings
- More than 2 servings



14. HOW MANY SERVINGS OF **FISH** DO YOU CONSUME PER WEEK?

1 portion of fresh or frozen fish, molluscs, crustaceans = 150g (1 small fish, 1 medium fillet, 20 shrimps, etc.)

- None
- 1 serving
- 2 servings
- More than 3 servings



15. HOW MANY SERVINGS OF **MEAT AND SAUSAGE PRODUCTS** (SAUSAGE, HAM....) DO YOU CONSUME PER WEEK?

1 portion of fresh or frozen "red" or "white" meat = 100g (1 slice, 1 hamburger, 1 slice of chicken breast or turkey, 1 small chicken thigh)

- None
- 1 serving
- 2 servings
- More than 3 servings



16. HOW MANY TIMES A WEEK, AT YOUR MORNING OR AFTERNOON **SNACK**, DO YOU CONSUME **SWEETS** (*cakes, spoon cakes, ice cream, energy bars, chocolate, spreads, jam, etc.*)?

- Never
- 1-2 times per week
- 2-3 times per week
- Always



17. DO YOU EAT **SWEETS** AFTER **LUNCH** OR **DINNER**?

- Never
- Rarely
- 2-3 days/week
- Every day



18. HOW MANY SERVINGS OF **NUTS** DO YOU CONSUME WEEKLY?

1 serving = 30g (almonds, walnuts, hazelnuts, pine nuts, cashews, pistachios etc.)

- None
- 1-2 servings
- 2-3 servings
- More than 3 servings



19. HOW OFTEN DO YOU CONSUME **EXTRA VIRGIN OLIVE OIL**?

- Never, I use other oils
- Never, I use other fats (butter, cream...)
- Sometimes
- Always



20. HOW MANY LITERS OF **WATER** DO YOU CONSUME IN A DAY?

- Less than 1 liter
- 1 liter
- 1-2 liters
- More than 2 liters



21. HOW OFTEN DO YOU USE **ALCOHOLIC BEVERAGES**?

(1 glass of wine or 1 can of beer)

- Never
- Rarely
- 2-3 days per week
- Daily



22. HOW MANY **MAIN MEALS (BREAKFAST-LUNCH-DINNER)** DO YOU CONSUME DURING THE DAY?

- 1 main meal
- 2 main meals
- 3 main meals
- More than 3 main meals



23. DURING YOUR **MAIN MEAL** (*which may be lunch or dinner, for example*)
WHAT DO YOU USUALLY EAT?

- A single complete dish consisting of cereals (*e.g. pasta, rice, spelt or potatoes*) plus protein foods (*e.g. meat, fish, legumes, etc.*) plus vegetables
- A first course of cereals, a second course of protein, a side dish of vegetables
- Only one second protein dish (*e.g. meat, fish, legumes, etc.*) with a side of vegetables
- Only a first course composed of cereals (*e.g. pasta, rice, spelt or potatoes*) with vegetables

