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On Italian Cuisine







Scientific Evidence and Health Benefits

BOOK

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Colophon

Handbook on Italian Cuisine. Scientific Evidence and Health Benefits

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Introduction

Italian cuisine is an example of how gastronomic tradition and scientific evidence can come together to define a dietary model capable of promoting health, sustainability, cultural identity and quality of life all at the same time.

The benefits associated with Italian cuisine stem not only from the properties of the individual foods that characterise it, but primarily from the combination of dietary choices, preparation methods, meal composition and eating habits. Together, these define a balanced dietary model consistent with the principles of the Mediterranean Diet, while retaining the distinctive features that make Italian cuisine unique.

The handbook, developed with the scientific collaboration of the OnFoods Foundation, aims to compile and summarise the latest scientific evidence on the role of Italian cuisine in promoting public health and wellbeing. Using a rigorous yet informative approach, the document promotes Italian cuisine as an expression of the healthy and sustainable Mediterranean dietary model. It explains how foods, preparation methods, eating habits and lifestyle contribute to its health benefits.

The handbook also aims to promote communication based on scientific evidence, helping to overcome not only simplifications but also the misconceptions that are still widespread.

The content addresses the key elements of this dietary model: the role of foods distinctive to the Italian culinary tradition and their nutritional characteristics; meal balance and the overall diet; preparation and cooking techniques that preserve nutritional value; seasonality and biodiversity; and the relationship between shared meals, conviviality, lifestyle and health.

Special attention is also given to the contribution Italian cuisine can make at different stages of life, in food service settings, and in strategies to prevent disease and promote public health. Each chapter draws on the available scientific evidence and uses examples from the Italian culinary tradition to translate scientific knowledge into clear and practical guidance.

Taking a multidisciplinary approach, the handbook aims to promote Italian cuisine as an expression of this dietary model. It highlights its potential to improve health and support more sustainable food systems while preserving the rich traditions and quality of the elements that define its identity.



ITALIAN CUISINE AS CULTURAL HERITAGE AND A MODEL OF HEALTHY EATING

Part 1

The link between Italian tradition and the Mediterranean Diet



Italian cuisine is a culinary heritage in which culture, local landscapes, traditions and everyday practices come together in a dietary model that is rich in nutritional aspects and beneficial to our health.

Despite the wide variety of **regional traditions**, many of its distinctive features are clearly reflected in the **principles of the Mediterranean Diet**, one of the most extensively studied dietary patterns by national and international scientific research due to its role in preventing various diseases and reducing their complications.

Observational studies conducted across different populations have repeatedly linked greater adherence to the Mediterranean Diet with lower overall mortality and a reduced risk of developing several **non-communicable chronic diseases**, particularly **cardiovascular diseases** and **type 2 diabetes**. These associations are also supported by intervention studies and randomised clinical trials, which have enabled a more direct assessment of the effects of the Mediterranean model on key risk factors and health outcomes.

The evidence available is particularly robust with regard to **cardiovascular health**. Greater adherence to the Mediterranean model has been linked to an improved **lipid profile**, better control of **blood pressure** and positive effects on various indicators of **oxidative stress** and **inflammation**. These effects are also essential for **metabolic health**. The Mediterranean Diet has been linked to a lower risk of **type 2 diabetes** and better **glycaemic control** and cardiometabolic parameters. These findings are biologically plausible in view of the optimal combination of nutrients and bioactive compounds that characterises this model.

Another key benefit associated with the Mediterranean Diet is its role in **weight management**. Overall, the evidence available suggests that greater adherence to the Mediterranean model does not promote weight gain and may contribute both to the prevention of excess weight and to weight loss, particularly when accompanied by moderate energy restriction and physical activity. This effect is crucial, considering that excess weight increases the risk of developing metabolic and chronic diseases.

> The more closely people follow the Mediterranean Diet, the lower their risk of gaining weight. A review of six studies involving more than 244,000 adults found that those who adhered most closely to this dietary model have a lower risk of obesity and being overweight.
>
> (Lotfi et al., 2022)

Further scientific evidence relates to the link with **cancer**, **healthy ageing**, **cognitive function** and **neurodegenerative health**. In these fields, numerous observational studies and several systematic reviews suggest favourable associations, although the degree of certainty and strength of the evidence vary across outcomes. The reliability of scientific conclusions depends on the outcome examined, study design and the ability to control and account for the numerous **lifestyle**-related confounding factors.

Although the **Mediterranean Diet** is not specific to any single national cuisine and has evolved over time among different populations across the Mediterranean region, **Italian culinary tradition** remains one of its **most recognisable historical expressions**. Many traditional Italian dishes illustrate how the nutritional principles of the Mediterranean Diet can be reflected in **simple dishes deeply rooted in local culture**. These are often associated with social customs, culinary knowledge, preparation techniques, seasonality, shared meals and the passing down of food traditions from one generation to the next.

These aspects are also particularly important for long-term **adherence**. For a dietary pattern to deliver health benefits for the population as a whole, it must be **sustainable over time**. Taste, familiarity, **accessibility of ingredients**, culinary skills and the convivial dimension are therefore far from marginal aspects, but rather can help make dietary choices sustainable in practice and easier to incorporate into **everyday life.**



The importance of Italian cuisine for health lies in the **quality of the foods** and their preparation, and in the structure of the dietary model that tradition has helped to shape.

This model is characterised by a predominance of plant-based foods, variety, moderation, extra virgin olive oil as the main fat for dressing, an adequate presence of pulses and cereals, preferably wholegrain, and a balanced intake of animal-based foods.

It is precisely this convergence between culinary tradition, the Mediterranean model and scientific evidence that underpins current interest in Italian cuisine as both cultural heritage and a potential means of promoting health. Its value therefore stems not only from its continuity with the past, but also from the possibility of recognising, within that tradition, dietary principles that scientific research has progressively linked to the prevention of major chronic diseases and the **promotion of a longer, healthier life**.

The **evidence** in support of the Mediterranean model does not come solely from studies conducted abroad. A substantial body of Italian epidemiological research, in particular the **Moli-sani, EPIC-Italy and ILSA cohorts**, has documented associations between greater adherence to the Mediterranean Diet and various favourable health outcomes, including lower mortality. These observations are complemented by Italian randomised intervention studies which have shown beneficial effects of the Mediterranean model on **cardiometabolic risk factors, endothelial function, inflammation, glycaemic control and anthropometric parameters**.

Overall, these findings provide an Italian evidence base that complements and strengthens broader international research on the Mediterranean model, supporting efforts to promote Italian cuisine both in Italy and around the world.



THE DISTINCTIVE INGREDIENTS OF ITALIAN CUISINE

Part 2

A wealth of ingredients to promote health



Italian cuisine is characterised by an extraordinary wealth of ingredients, thanks to the country's climatic, geographical and cultural diversity.

It would be impossible to describe every food that contributes to the identity of Italian cuisine. Furthermore, no single food is responsible for the health benefits associated with Italian cuisine. These benefits stem from the combination of dietary choices, recipes and eating habits that characterise it.

However, certain foods are particularly distinctive elements of the Italian gastronomic tradition, both because of their widespread use in the various regional cuisines and because of the role they play within a dietary model consistent with the principles of the Mediterranean Diet. Current scientific evidence helps us better understand their contribution to overall diet quality. However, their health effects cannot be considered in isolation; they must be assessed within the context of the overall dietary pattern.

The following sections describe some of the foods most representative of Italian cuisine, highlighting their nutritional role, their importance in gastronomic tradition and the contribution they can make, together with the other elements of the dietary model, to promoting health.



EXTRA VIRGIN OLIVE OIL



Extra virgin olive oil is one of the most distinctive elements of Italian cuisine and is the main fat used for dressing in the Mediterranean tradition. It is present throughout the entire national gastronomic heritage, characterising both simple and complex dishes, from vegetables to cereals, from pulses to fish. More than just an ingredient, extra virgin olive oil **links** different foods and helps shape the nutritional and sensory profile of Italian cuisine.

Scientific evidence supports the central role of extra virgin olive oil in the health benefits associated with the Mediterranean Diet. In addition to its high content of monounsaturated fatty acids, it is a natural source of vitamin E and of numerous bioactive compounds, including polyphenols and other components with antioxidant activity, which help to protect cells from oxidative stress and are associated with beneficial effects on cardiovascular and metabolic health.

> Olive oil is one of the most extensively studied foods. A review bringing together 31 meta-analyses, which are studies that in turn combine the results of the available research, supports benefits for the heart and cardiovascular risk factors, for certain cancers, diabetes and overall mortality
>
> (Chiavarini et al., 2024)

Numerous observational studies and intervention trials have shown that the regular consumption of extra virgin olive oil, as part of a Mediterranean dietary model, is associated with a reduced risk of cardiovascular diseases and other chronic conditions, as well as lower overall mortality.

The importance of extra virgin olive oil in Italian cuisine does not, however, lie solely in its nutritional properties. It also plays a fundamental culinary role, enhancing the flavour and sensory qualities of dishes and encouraging the regular consumption of plant-based foods such as vegetables, pulses and cereals.

The lipid component also promotes the intestinal absorption of numerous fat-soluble compounds found naturally in plant-based foods, including carotenoids such as lycopene in tomatoes and β-carotene in carrots and green leafy vegetables, as well as fat-soluble vitamins. The traditional pairing of extra virgin olive oil with vegetables is widespread in Italian cuisine. It is not only a culinary choice, but it also helps improve the bioavailability of numerous bioactive compounds. A prime example is the pairing of **tomatoes and extra virgin olive oil**, found in iconic dishes such as **pasta with tomato sauce**, **bruschetta** and **caprese salad**, where the dressing not only enhances the sensory qualities of the dish but also promotes the absorption of lycopene and other protective compounds.

Extra virgin olive oil traditionally replaces other fats used in cooking and dressings, making it the main source of added fat in Italian cuisine. Its use, both raw and in everyday cooking, helps to define a dietary model consistent with current nutritional recommendations, without compromising on flavour or the simplicity of preparation.

It should, nevertheless, be consumed as part of a varied and balanced diet, in accordance with the **recommended portion sizes**. For example, for a 2,000-kcal diet the suggested intake is three 10 mL portions per day.

PASTA



Pasta is one of the most iconic foods of Italian cuisine and one of the elements that best expresses its nutritional principles. Available in numerous regional variations, it is much more than just a source of carbohydrates: it forms the basis of an infinite variety of dishes that make the most of different ingredients and help create balanced, varied meals consistent with the principles of the Mediterranean Diet.

One of pasta's main strengths is its **remarkable versatility**. Italian culinary tradition has progressively paired it with vegetables, pulses, fish, aromatic herbs, extra virgin olive oil and, on occasion, with meat and cheese, creating dishes that combine foods from **different groups**. Dishes such as **pasta and beans**, **pasta and chickpeas**, **pasta with tomato sauce**, **pasta with sardines** and **orecchiette with turnip greens**, as well as numerous regional vegetable-based recipes, show how pasta is the meeting point of the distinctive elements of Italian cuisine, helping to create nutritionally complete meals.

> Not all foods containing carbohydrates raise blood sugar in the same way. To measure this in products on the market, researchers tested 141 Italian foods, pasta included, selected from those that provide over 80% of the carbohydrates in our diet.
>
> (Scazzina et al., 2016)

Pasta mainly provides complex carbohydrates, a key source of energy in a balanced diet. Another distinctive feature is its generally medium-to-low glycaemic index, which is lower than that of many other starchy foods. This is partly due to the particular structure of pasta, which makes its starch less readily accessible to digestive enzymes.

In addition to supplying carbohydrates, pasta also provides a share of plant-based protein, and its value in Italian cuisine cannot be interpreted in isolation but must be considered within the context of the dishes in which it is used. Combining it with pulses improves the overall protein quality of the meal, pairing it with vegetables increases the intake of fibre, vitamins and bioactive compounds, while the use of extra virgin olive oil helps to enrich the nutritional profile and promotes the bioavailability of various fat-soluble compounds.

Pasta is also **affordable**. Its low cost has contributed to and favoured its widespread popularity across all social groups for centuries and still makes a balanced diet more accessible to people with limited financial resources.

The richness of Italian cuisine is also reflected in the extraordinary **variety of shapes** and preparations that characterise pasta. From **fresh pasta** to **dried pasta**, through to the numerous **regional specialities**, every area has developed recipes linked to local produce, agricultural traditions and seasonal availability. This gastronomic biodiversity shows how Italian cuisine adapts to different regional contexts and makes the most of local resources while maintaining a balanced dietary approach.

When included in a varied diet rich in plant-based foods and consumed in the recommended portions, pasta continues to be one of the foods that best expresses Italian cuisine's ability to combine simplicity, affordability, tradition and nutritional quality.

FRUIT AND VEGETABLES



Fruit and vegetables are among the cornerstones of Italian cuisine and the Mediterranean Diet. Their daily presence, the remarkable variety of species and cultivars, and their strong link to seasonality and the local area all help to make Italian cuisine **one of the dietary models richest in plant-based foods**. From leafy vegetables to fruiting vegetables, from citrus fruits to berries, Italy's plant biodiversity is a gastronomic and nutritional heritage of great value.

From a nutritional point of view, fruit and vegetables provide water, dietary fibre, vitamins, minerals and a wide range of phytochemicals, including polyphenols, carotenoids and glucosinolates, which are associated with numerous health benefits.

> Cooking does not always reduce the value of fruit and vegetables. Some useful substances, such as vitamin C, may decrease; others, such as the carotenoids in tomatoes and carrots, become easier to absorb. It depends on how, for how long and at what temperature they are cooked.
>
> (Narra et al., 2024)

Regular and varied consumption of these foods is associated with a lower risk of cardiovascular diseases, type 2 diabetes, certain cancers and all-cause mortality. For this reason, major dietary guidelines recommend eating fruit and vegetables daily, at every meal.

In Italian cuisine, **fruit and vegetables are much more than just side dishes**; they often form **the heart of traditional dishes**. Dishes such as **minestrone**, **caponata**, **ribollita**, **vignarola**, **prosciutto and melon** and **aubergine parmigiana** show how plant-based foods feature prominently in balanced recipes rooted deeply in regional traditions.

Among the vegetables that symbolise Italian cuisine, the **tomato** undoubtedly occupies a prominent place. As well as being one of the main dietary sources of lycopene, a carotenoid with protective and antioxidant properties, it is an example of how culinary tradition can make the most of the nutritional qualities of food. Preparing **tomato passata**, **sauces and peeled tomatoes**, as is common in Italian cuisine, can **increase the bioavailability** of lycopene compared with that in fresh tomatoes.

The rich diversity of Italian cuisine is also reflected in the **wide variety of local fruits and vegetables** found in different **areas**. The numerous examples include the **PGI Pachino Tomato**, the **PGI Sorrento Lemon**, the **PGI Sicilian Blood Orange**, the **PGI Treviso Red Radicchio**, the **PGI Valtellina Apple**, the **Romagna Shallot** and many other products that bear witness to the link between agricultural biodiversity, territory and gastronomic tradition. **Citrus fruits**, in particular, characterise many sweet and savoury dishes from southern Italy, contributing not only to the intake of vitamin C and other bioactive compounds, but also to enriching the sensory profile of the dishes. Similarly, vegetables such as **cabbage, savoy cabbage, chicory and turnip greens** are signature ingredients in many regional cuisines and provide fibre, folates and numerous phytochemicals of interest for health, including glucosinolates, which are particularly characteristic of the Brassicaceae family, and various polyphenolic compounds.

This biodiversity allows a more diversified intake of vitamins, minerals and bioactive compounds, contributing to the overall nutritional quality of the diet and representing one of the distinctive elements of Italian cuisine.

NUTS



Walnuts, almonds, hazelnuts, pistachios and pine nuts have been part of the Italian food tradition for centuries and are yet another example of the close link between cuisine, territory and biodiversity. These products are eaten on their own or used as ingredients in many regional dishes, from sauces and condiments, such as **pesto**, to savoury and sweet dishes, including **torta della nonna made with pine nuts**, **amaretti**, **hazelnut cream** and **pistachio ice cream**. Here too, the variety of produce reflects that of the regions, with numerous cultivars and traditional products found throughout the Italian peninsula. Examples among the many regional products include the **PGI Piedmont Hazelnut**, the **PDO Bronte Green Pistachio** and the **Avola Almond**, alongside many other local products.

From a nutritional point of view, nuts are characterised by **a high nutrient density**: they mainly provide unsaturated fatty acids, plant-based protein, fibre, vitamins and minerals, as well as numerous bioactive compounds, including polyphenols and phytosterols. The composition varies between species, however: walnuts, for example, stand out for their content of α-linolenic acid, a plant-based omega-3 fatty acid, while almonds and hazelnuts are particularly rich in monounsaturated fatty acids and vitamin E.

> Eating about 30 grams of nuts a day—roughly a handful—has been associated with a roughly 20% lower risk of heart disease. This finding comes from 28 large studies that followed almost 1.9 million people over time. In 18 experimental studies, nuts also lowered cholesterol, although this association was described as probable.
>
> (Arnesen et al., 2023)

The scientific evidence available links the regular consumption of nuts, as part of a balanced diet, to beneficial effects, particularly on **cardiovascular health**, with benefits for the lipid profile and an association with a lower risk of cardiovascular events. Despite their high energy density, consumption in the recommended portions should therefore not be interpreted simply in terms of calorie intake, but once again within the context of the overall quality of the diet.

Their presence in Italian cuisine shows, in particular, how foods of high nutritional quality can be incorporated into simple dishes that are deeply rooted in their local areas.



FISH



Fish is an **important component of Italian cuisine**, although its role varies considerably from one part of the country to another, depending on geographical characteristics and local traditions. From the Mediterranean coasts to the great lakes of the north, and on to inland waterways, the availability of different species has contributed to the development of a remarkable variety of regional dishes, making fish one of the foods that best expresses the link between diet, territory and gastronomic culture.

From a nutritional point of view, fish is a **source of protein** of high biological value that is highly digestible, providing **B vitamins**, **vitamin D**, **iodine**, **selenium** and other essential micronutrients. The species richest in lipids, such as **oily fish** and **salmon**, also provide significant amounts of **long-chain omega-3 polyunsaturated fatty acids**, which play a role in maintaining **cardiovascular health** and **normal brain function**. For these reasons, nutritional guidelines recommend regular consumption of fish (at least 2 portions a week) as part of a varied and balanced diet.

DHA, an omega-3 fatty acid found mainly in oily fish, contributes to normal brain function. This was recognised in 2010 by the European Food Safety Authority, which set a reference intake of 250 mg a day

(EFSA, 2010)

Italian cuisine makes good use of fish in typically simple preparations that preserve its nutritional value and flavour. **Baking, cooking en papillote, steaming or stewing**, combined with the use of **extra virgin olive oil, aromatic herbs, citrus fruits and seasonal vegetables**, make it possible to create balanced dishes without resorting to condiments that are excessively high in fat or salt.

Another distinctive element of the Italian tradition is the consumption of a **wide variety of fish species**. Alongside fish of greater commercial value, many regional recipes also use lesser-known local species, helping to diversify the diet and preserve a gastronomic heritage deeply rooted in the territory. **Sarde a beccafico**, **brodetto**, **cacciucco**, **lake fish dishes** and numerous other preparations demonstrate how Italian cuisine has integrated fish consumption into a balanced dietary model, in which foods of animal origin are traditionally accompanied by cereals, vegetables and extra virgin olive oil.

In this context, fish is **one of the main sources of protein** in the Mediterranean Diet. Alongside other foods typical of Italian cuisine, it contributes to a varied, balanced and health-promoting dietary pattern.



PULSES



More pulses, less cholesterol? The experimental studies analysed show, with a moderate degree of certainty, that increasing pulse consumption can reduce total cholesterol, LDL cholesterol and fasting blood glucose levels.

(Hossain et al., 2024)

Pulses are **one of the cornerstones of Italian cuisine** and of the Mediterranean tradition. For centuries, pulses have been part of the diets of Italy's different regions. Their **versatility**, **affordability** and ability to combine harmoniously with cereals, vegetables, aromatic herbs and extra virgin olive oil have made them a key ingredient in many traditional dishes. Even today, they are one of the main plant-based **sources of protein** and one of the foods that best express the nutritional balance of Italian cuisine.

From a nutritional point of view, pulses provide **plant-based proteins**, **complex carbohydrates**, **dietary fibre**, **B vitamins and minerals such as iron**, **potassium and magnesium**. Their regular consumption is associated with **better glycaemic control**, **lower LDL cholesterol levels** and reduced **cardiovascular risk**. It may also help promote satiety and support **gut health**, partly through its beneficial effects on the gut microbiota. For these reasons, nutritional guidelines recommend their frequent consumption as part of a balanced diet.

In Italian cuisine, however, the value of pulses goes well beyond their nutritional composition. Gastronomic tradition has made the most of them in a wide variety of recipes that combine them with other foods characteristic of the Mediterranean Diet. Dishes such as **cazzarielli pasta with beans**, a traditional recipe from Abruzzo and Molise, Ligurian **mesciua**, Venetian **risi e bisi**, Apulian **broad beans and chicory** and the numerous **soups made with pulses and cereals** found throughout the peninsula are examples of complete dishes in which simple ingredients are combined to create balanced, tasty preparations deeply rooted in local traditions.

Italy also boasts an extraordinary biodiversity of pulses, as shown by the numerous traditional products protected at national and European level. These include, for example, the **Lamon Bean PGI from the Belluno Valley**, the **Sorana Bean PGI**, the **Castelluccio di Norcia Lentil PGI**, the **Serra de' Conti Grass Pea TAP** (Traditional Agri-Food Product), the **Navelli Chickpea TAP** and many other local varieties that help to preserve Italy's agricultural and gastronomic heritage. This wealth of varieties reflects the deep link between territory, biodiversity and food culture that characterises Italian cuisine.

In addition to their nutritional benefits, pulses are an **affordable source of protein** that is also **environmentally sustainable**. Their cultivation also helps to improve soil fertility thanks to their ability to fix atmospheric nitrogen, while their inclusion in the diet promotes greater **diversification of protein sources**, in line with the latest nutritional recommendations, which also aim to reduce environmental impact.

Owing to their versatility, nutritional value and deep roots in regional traditions, pulses are one of the foods that best sum up the ability of Italian cuisine to combine health, simplicity, sustainability and the promotion of the territory.

MILK AND DAIRY PRODUCTS



Milk and dairy products have **long been part of Italian cuisine**, closely linked to the **diversity of its regions** and to local livestock-farming traditions. From the Alps and the Apennines to southern Italy and the islands, dairy production has given rise to an extraordinary **variety of cheeses and fermented products**, many of which carry **PDO or PGI status**, **or are recognised as Traditional Agri-food Products** (**TAPs**), helping to define the country's gastronomic identity.

From a nutritional point of view, **milk**, **yoghurt and cheese** are an important **source of protein** of high biological value, containing adequate amounts of all the **essential amino acids**, **as well as highly bioavailable calcium**, which is essential for maintaining **healthy bones** and **teeth**. They also provide phosphorus, vitamin B12 and, depending on the product, other vitamins and minerals of nutritional interest. Fermented products, such as yoghurt and numerous traditional Italian cheeses, also have distinctive nutritional characteristics resulting from the **fermentation process**, one of the oldest food processing techniques, which has contributed to the development of Italy's rich dairy tradition.

In recent years, research has shown that the effects of dairy products on health do not depend solely on the content of individual nutrients, but also on their structure, i.e. the complex matrix of the food and the interactions between its components. This approach has contributed to a more comprehensive assessment of the role of dairy products within a balanced diet.

It is important to remember, however, that many cheeses also contain significant amounts of saturated fat and sodium. This is why current nutritional recommendations suggest **moderate consumption**, with the frequencies and portion sizes set out in the guidelines, according to energy requirements.

In Italian cuisine, **cheese is rarely the only ingredient in a meal**. It is more often used as an ingredient in, or served alongside, dishes that also include cereals, vegetables or pulses, helping to enrich their nutritional value and flavour. Dishes such as **pizzoccheri from Valtellina**, **gnocchi alla romana**, **pasta alla Norma** and numerous other regional recipes illustrate how cheese is incorporated into balanced dishes that are deeply rooted in gastronomic traditions.

Italy is also one of the countries with the richest dairy biodiversity in the world. Examples among the numerous traditional products include **PDO Parmigiano Reggiano**, **PDO Grana Padano**, **PDO Pecorino Romano**, **PDO Gorgonzola** and **PDO Mozzarella di Bufala Campana**, as well as hundreds of other specialities that bear witness to the deep link between dairy production, territory and gastronomic culture.

When consumed in the recommended quantities and as part of a varied and balanced diet, yoghurt and cheese are important components of Italian cuisine, contributing to the intake of essential nutrients and to the extraordinary wealth of Italy's gastronomic heritage.

How much milk and how much cheese? The Italian guidelines recommend 3 portions of 125 ml or 125 g of milk or yoghurt every day, and 3 portions of cheese a week: 100 g if fresh, 50 g if aged.

(CREA, Guidelines 2018)

AROMATIC HERBS AND SPICES



Aromatic herbs and spices are another distinctive element of Italian cuisine, helping to define its sensory identity and enhancing the flavour of ingredients without masking their natural qualities. **Basil, rosemary, sage, oregano, parsley, thyme, bay leaves and wild fennel** are just some of the herbs that characterise Italy's regional traditions and that have accompanied the preparation of numerous traditional dishes for centuries.

In addition to their gastronomic role, aromatic herbs can contribute to improving the nutritional quality of the diet. They **enhance the flavour of dishes**, helping to **reduce the amount of salt added**, in line with nutritional recommendations aimed at reducing salt intake to **prevent high blood pressure** and **cardiovascular disease**.

Aromatic herbs also provide **numerous bioactive compounds**, including **polyphenols**, **terpenes and essential oils**, which have antioxidant and anti-inflammatory properties. Although the quantities normally consumed are modest and their direct nutritional contribution is limited, using them daily helps increase dietary variety and illustrates how Italian cuisine makes use of natural flavourings rather than relying on seasonings that are higher in salt or fat content.

The extraordinary wealth of aromatic species also reflects the biodiversity of Italy's regions. **Basil**, the **star of Ligurian pesto**, **oregano**, which characterises numerous dishes from southern Italy, **rosemary**, used with meat, potatoes and **focaccia**, **sage** in dishes from northern Italy, **wild fennel** in traditional Sicilian recipes and bay leaves, frequently used when cooking pulses, all illustrate the close link between botanical heritage, regional traditions and gastronomic culture.

> The Italian guidelines recommend that adults consume less than 5 grams of salt a day, roughly one teaspoon. Flavouring with aromatic herbs and spices is one of the suggested ways to stay below this threshold.
>
> (CREA, Guidelines 2018)



WINE



Wine is a deeply rooted presence in Italian cuisine and food culture. For centuries, wine has accompanied meals and social occasions and has featured in numerous traditional dishes, making it one of the products that best expresses the link between food, territory, agriculture and local identity. The extraordinary diversity of grape varieties and winemaking techniques has created a **unique oenological heritage**, closely intertwined with the culinary traditions and the history of Italy's various regions.

Wine has also traditionally featured in the **Mediterranean dietary pattern**, where it was generally consumed **with meals**, **in social settings and, above all**, **in small amounts**. This point deserves particular attention because, from a nutritional point of view, wine is not an essential component of the Mediterranean Diet, with **moderation** being the key when it comes to alcoholic beverages. Any consumption should therefore be considered within the overall context of the diet, taking into account individual characteristics and situations in which alcohol consumption is not recommended or should be avoided.

Wine contains numerous compounds derived from grapes and from the processes of **fermentation and ageing.** The polyphenolic component has always attracted particular interest, especially in red wines, in which the maceration of the skins and seeds promotes the extraction of flavonoids and other phenolic compounds. These include fairly high amounts of anthocyanins, flavonols, phenolic acids, stilbenes and flavan-3-ols, including procyanidins (also known as tannins). These compounds have been extensively studied for their biological effects, particularly for their **antioxidant properties** and their potential interactions with vascular function, inflammatory processes and the gut microbiota. The **presence of polyphenols** therefore makes wine an interesting food matrix from the point of view of nutritional research, but **this should not lead to its consumption being attributed a health value, given the presence of alcohol.** Similar polyphenolic compounds are in fact present, often in greater quantities and without exposure to ethanol, in grapes, berries, cocoa, tea and numerous other plant-based foods characteristic of a balanced diet. The possible beneficial effects observed in some studies of moderate wine consumption must also be interpreted with caution, as they may depend on the consumers' overall lifestyle and dietary patterns.

The value of wine in Italian cuisine therefore lies above all in its **cultural, gastronomic and territorial dimension**. From **Barolo** to **Chianti**, from **Amarone** to **Etna Rosso**, from **Verdicchio** to **Fiano**, through to thousands of local wines, Italian viticulture bears witness to extraordinary biodiversity and a deep relationship between environment, tradition and production expertise. Wine is also used directly in the **preparation of numerous dishes**, from **braised meats** to **risottos**, from **marinades** to **sauces**, contributing to the aromatic and sensory profile of the national cuisine.

Within its historical and gastronomic context, wine is therefore closely intertwined with Italian and Mediterranean food traditions. The presence of polyphenols makes wine an interesting subject of scientific research, but does not eliminate the risks associated with alcohol. Its place in a balanced dietary model can therefore only be that of optional, informed and very moderate consumption, linked mainly to the pleasure of food and **shared meals**, rather than to the pursuit of nutritional benefits.

Eight ingredients, one model.

No single food, on its own, explains the benefits of Italian cuisine: what matters is how foods are combined and the balance of the diet.

Extra virgin olive oil



Contains
Monounsaturated fats, especially oleic acid, polyphenols and vitamin E.

Promotes
The absorption of lycopene and β-carotene. In place of saturated fats, it lowers LDL cholesterol.

How much
4–5 portions of 10 ml a day in a 2,000-kcal diet, as the main dressing.

Pasta



Contains
Complex carbohydrates and a share of plant-based protein. Medium-to-low glycaemic index.

Promotes
Complete meals when combined with pulses and vegetables. A lower glycaemic response than bread.

How much
Every day, alternated with other cereals. Reference portion 80 g uncooked.

Fruit and vegetables



Contains
Fibre, vitamins, minerals, polyphenols and carotenoids, with few calories.

Promotes
Satiety and regular bowel function. High consumption is associated with a lower cardiovascular risk.

How much
At least 5 portions a day, seasonal and of different colours.

Nuts



Contains
Unsaturated fats, plant-based protein, fibre, minerals. Plant-based omega-3s in walnuts, vitamin E in almonds.

Promotes
A better lipid profile. Regular consumption is associated with a lower cardiovascular risk.

How much
A 30 g portion, several times a week, instead of sweet or salty snacks.

Fish



Contains
Protein of high biological value, vitamin D, iodine, selenium. EPA and DHA in oily fish.

Promotes
Normal heart function, thanks to EPA and DHA. It is an alternative to red meat.

How much
At least 2 portions a week, preferably oily fish.

Pulses



Contains
Plant-based protein, fibre, iron, calcium, magnesium and folates.

Promotes
Better glycaemic control and lower LDL cholesterol levels.

How much
Several times a week, also as a main course instead of meat.

Milk and dairy products



Contains
Protein of high biological value, calcium, vitamin B12. Cheese also contains saturated fat and sodium.

Promotes
Bone health, thanks to their calcium and protein content.

How much
Milk and yoghurt every day. Cheese in moderation.

Aromatic herbs and spices



Contains
bioactive compounds such as polyphenols.

Promotes
Less use of salt. They add flavour to dishes without adding sodium.

How much
To taste, to stay below the 5 g of salt a day recommended by the WHO.



BALANCING MEALS AND THE OVERALL DIET

Part 3

Food combinations and appropriate portions



Italian cuisine is characterised by a wide variety of ingredients and preparations, but its main strength lies in its ability to combine different foods within the same meal, resulting in a balanced, nutritionally complete dietary model consistent with the principles of the Mediterranean Diet.

The benefits associated with Italian cuisine cannot be attributed solely to the properties of individual foods, but stem primarily **from the overall balance of the diet**, the frequency of consumption of the various food groups and the traditional **combinations of ingredients** that characterise many dishes of Italian gastronomy.

Italian culinary tradition offers numerous examples of this nutritional integration. Dishes such as **pasta and beans**, **pasta and chickpeas**, **rice and peas**, **minestrone**, **soups made with cereals and pulses**, or numerous regional dishes based on cereals, vegetables and sources of protein, are examples of how ingredients from different food groups are combined harmoniously, helping to improve the overall nutritional profile of the meal. Similarly, simple dishes such as pasta with tomato and extra virgin olive oil show how the combination of cereals, vegetables and plant fats can form the basis of a nutritionally balanced meal rich in bioactive compounds. The balance of Italian cuisine is also reflected in the **structure of the meal**.

Traditionally, an Italian meal combines foods from different groups rather than focusing on a single food, with plant-based foods playing a predominant role, extra virgin olive oil as the main source of fat, and a moderate and varied intake of the different sources of protein.

This approach promotes dietary variety and helps ensure an adequate intake of macronutrients, micronutrients, fibre and numerous bioactive compounds.

The balance of Italian cuisine depends not only on the quality and combination of foods, but also on the quantities consumed. The traditional emphasis on moderation in Italian meals—not deprivation, but appropriate portion sizes—is consistent with the principles of the Mediterranean Diet and current dietary recommendations. From this perspective, variety, the complementarity of foods and appropriate portion sizes together define the overall quality of the diet.

In addition to appropriate portion sizes, another characteristic of Italian cuisine is the frequency with which different foods are consumed. The Italian gastronomic tradition does not envisage the daily consumption of all foods, but promotes the rotation of protein sources, featuring pulses, fish, dairy products, eggs and meat at frequencies consistent with the latest nutritional recommendations and scientific evidence on the relationship between diet and health. At the same time, cereals, fruit, vegetables and extra virgin olive oil form the basis of the daily diet, helping to define a predominantly plant-based model, without excluding foods of animal origin.

➜ Every day, every week, in moderation. The new pyramid of the Italian Society of Human Nutrition places at its base, for daily consumption, fruit, vegetables, wholegrain cereals, pulses, milk or yoghurt and extra virgin olive oil. Cheese, white meat, eggs and potatoes are for weekly and moderate consumption. Added sugars, salt and alcohol should be limited
(Sofi et al., 2025)



PREPARATION TECHNIQUES AND COOKING METHODS

Part 4

Simple preparations that preserve the value of food



Italian cuisine stands out for a culinary tradition that celebrates the quality of its raw ingredients through generally simple preparations, in which a few ingredients are combined to create dishes that are nutritionally and sensorially balanced.

Preparation techniques are therefore a key element in the health benefits associated with Italian cuisine, as they **influence the nutritional value of foods, the bioavailability of certain nutrients and bioactive compounds and, more in general, the overall quality of the diet**.

The latest scientific evidence suggests that many of the cooking techniques traditionally used in Italian cuisine, such as **boiling**, **steaming**, **stewing**, **baking or grilling**, generally **preserve the nutritional value** and **sensory qualities** of foods.

The use of simple preparation methods also brings out the intrinsic qualities of the raw ingredients, reducing the need for added ingredients or particularly elaborate preparations.

Italian cuisine is indeed characterised by the use of culinary techniques aimed at enhancing ingredients rather than radically altering their characteristics. The quality of the raw ingredients, the simplicity of the preparations and the balance between ingredients are the distinctive features of a gastronomic tradition in which flavour stems mainly from the quality of the food and the balance of flavours. Iconic dishes of Italian cuisine, such as **bruschetta with tomatoes** or **caprese salad**, show how it is possible to create tasty dishes consistent with the principles of a balanced diet through **essential recipes**, in which a few ingredients are skilfully combined and enhanced.

This approach is fully consistent with current dietary recommendations to **reduce sodium intake** as a strategy to help prevent high blood pressure and cardiovascular disease.

Italian preparation techniques are therefore not only part of the country's culinary heritage, but also a practical tool to apply the principles of the Mediterranean Diet through simple, tasty and nutritionally balanced dishes that are easy to apply in everyday life.

➜ How you cook matters. Boiling is the method that tends to cause the greatest loss of water-soluble vitamins, such as vitamin C and folates; steaming and microwaving retain more of them. In soups, where the cooking liquid is also eaten, these vitamins stay in the dish.
(Fabbri and Crosby, 2022)



SEASONALITY, BIODIVERSITY AND SUSTAINABILITY

Part 5

A model that is good for people and for the environment



Seasonality and biodiversity are distinctive elements of Italian cuisine and help define its nutritional, cultural and environmental value.

Italian gastronomic tradition has developed by making the most of the seasonal availability of food, the wealth of local produce and the country's extraordinary agri-food biodiversity, giving rise to recipes deeply rooted in the various geographical and production contexts.

Dishes such as **asparagus risotto**, **savoy cabbage soup**, **Roman-style artichokes**, **pasta with fresh broad beans**, **radicchio risotto** and the numerous dishes featuring **mushrooms, chestnuts and pulses** typical of Italy's various regions bear witness to the deep link between traditional cuisine, seasonality and territory.

The latest scientific evidence suggests that greater dietary variety, based on the consumption of seasonal produce and a wide diversification of plant sources, helps to improve the overall quality of the diet, promoting a more adequate intake of vitamins, minerals, dietary fibre and numerous bioactive compounds. At the same time, the protection of agri-food biodiversity is a fundamental resource for the resilience of food systems, food security and the preservation of the national agricultural and gastronomic heritage.

Prioritising fresh, seasonal foods, respecting biodiversity, limiting food waste and steering dietary choices towards more sustainable models is therefore not a goal separate from health, but an integral part of a model capable of promoting both the wellbeing of the individual and that of the planet.

A recent systematic review has shown that the vast majority of comparative studies recognise the Mediterranean Diet as a **sustainable dietary pattern**, with favourable results particularly **in terms of greenhouse gas emissions** and **land use**, although the effects may vary depending on the indicator considered. Evidence from the Italian population confirms the association between greater adherence to the Mediterranean model and a lower carbon footprint and, in some cases, a lower water footprint too.

Italian cuisine also promotes a **dietary model closely linked to the territory**, through **the use of local, seasonal and traditional products**, many of which are protected by quality schemes such as **PDO, PGI and TSG.** These products are not only part of the country's gastronomic and cultural heritage; they also support local supply chains, preserve biodiversity and contribute to the economic sustainability of rural communities.

Another distinctive element of the Italian gastronomic tradition is the ability to **make full use of food, reducing waste through recipes born from the reuse of ingredients and leftover dishes.** Traditional dishes such as **panzanella**, **pappa al pomodoro**, **frittata di pasta**, **pancotto** and **canederli** show how the reuse of food has long been a sustainable practice, one that is now fully in line with the latest recommendations aimed at reducing food waste and promoting more sustainable food systems.

→ Eating the Mediterranean way is also good for the environment. A review of 35 studies compared the Mediterranean Diet with other dietary models: in 9 out of 10 studies it proved sustainable, and those who follow it more closely generally have a lower environmental footprint.
(Lorca-Cámara et al., 2024)



CONVIVIALITY, LIFESTYLE AND WELLBEING

Part 6

The value of shared meals and an active lifestyle



Italian cuisine is the expression of a lifestyle in which food represents much more than a mere source of nutrients.

The benefits associated with this dietary model stem not only from the quality of the food and its preparation, but also from the way in which meals are organised, prepared and eaten.

Sharing meals, the time devoted to preparing them, seasonality, physical activity and, more generally, respect for daily rhythms are all elements that together help define a lifestyle consistent with the principles of the Mediterranean Diet.

The health benefits associated with this model stem from the combination of diet, eating habits and everyday behaviours, rather than from the mere presence or absence of individual foods.

Among these elements, **conviviality** and sharing meals are one of the most distinctive characteristics of Italian cuisine. The latest scientific evidence suggests that regularly eating meals in company is associated with better diet quality, greater adherence to the principles of the Mediterranean Diet, higher consumption of plant-based foods and better indicators of psychological wellbeing and quality of life. **Sharing meals** also promotes the **transmission of culinary traditions** and healthy eating habits between generations, contributing to **food education** from early childhood.

Staying physically active is another essential component of the Mediterranean lifestyle. Historically, Italian cuisine developed within a context of active daily life, in which diet and movement were complementary aspects of a single way of life. Even today, the main international recommendations emphasise that a healthy diet and adequate physical activity should be regarded as integrated strategies for the prevention of chronic diseases and the promotion of health.

Promoting Italian cuisine therefore means celebrating not only its dishes and ingredients, but also the **lifestyle** that traditionally accompanies it. Rediscovering the **value of shared meals**, encouraging opportunities for conviviality and combining diet with an active lifestyle help reinforce the health benefits associated with the principles of the Mediterranean Diet.

➜ Not only what, but how we eat. According to a recent study, part of the benefits of the Mediterranean Diet comes from conviviality. This is why public health initiatives that encourage shared meals and reduce loneliness are recommended.
(Bernardi and Visioli, 2024)



MYTHS AND MISCONCEPTIONS ABOUT ITALIAN CUISINE

Part 7

Four common beliefs disproved by the evidence



Italian cuisine is often the subject of widespread beliefs that are not supported by current scientific evidence. This chapter analyses some of the main misconceptions about the foods and dishes most representative of the Italian tradition by comparing them with the available scientific evidence.

Four myths at a glance

MYTH 1 (p. 58)

"Pasta makes you fat"

Not supported by the evidence. Weight depends on the balance between energy intake and energy expenditure and on the quality of the diet, not on a single food.

MYTH 2 (p. 59)

"Extra virgin olive oil should be limited because it is high in fat and calories"

Quantity matters, not prohibition. Its value is not measured in calories alone: the Italian Society of Human Nutrition places it at the base of the new Mediterranean Diet Pyramid.

Note: One portion, about one tablespoon, 10 mL.

MYTH 3 (p. 60)

"A complete meal must include a first course, a main course, a side dish and fruit"

It is not the only possible structure. What matters is quality, variety and portions: a single-course dish can also be balanced.

MYTH 4 (p. 61)

"Plant proteins are of lower quality than animal proteins"

In the daily diet they complement each other. In a varied diet, proteins from different foods help to meet essential amino acid requirements.

Note: Cereals and pulses, the classic combination.

MYTH 1

"Pasta makes you fat"



What the science says

The belief that eating pasta inevitably leads to weight gain is not supported by current scientific evidence. Body weight depends on the overall balance between energy intake and energy expenditure and on the quality of the diet, not on a single food.

As part of a balanced diet inspired by the principles of the Mediterranean Diet, pasta is one of the main sources of complex carbohydrates and can contribute to the nutritional quality of the diet, particularly when combined with pulses, vegetables, extra virgin olive oil or other traditional preparations of Italian cuisine.

Overall, the epidemiological studies available show that regular consumption of pasta, as part of a balanced dietary model, is not associated with an increased risk of overweight or obesity. Clearly, however, the associations observed may vary depending on the quantities consumed, preparation methods, condiments used and overall dietary pattern.

➜ In low glycaemic index diets, pasta did not cause weight gain. On average, people following these diets lost about half a kilo more (0.63 kg) in 12 weeks than those following diets with a higher glycaemic index. The result brings together 32 comparisons involving 2,448 adults.
(Chiavaroli et al., 2018)

MYTH 2

"Extra virgin olive oil should be limited because it is high in fat and calories"



What the science says

Extra virgin olive oil is a food that, by its very nature, consists almost entirely of fat and, for this reason, has a high energy density (about 9 kcal per gram). However, its nutritional value cannot be assessed solely on the basis of its calorie content. The most robust scientific evidence indicates that **regular consumption of extra virgin olive oil**, as part of a balanced diet, is **associated with cardiovascular** and **metabolic health benefits**, thanks both to its high content of monounsaturated fatty acids and to the presence of numerous bioactive compounds, particularly polyphenols, tocopherols and other substances with antioxidant and anti-inflammatory activity.

The importance of extra virgin olive oil has also recently been reiterated by the **Italian Society of Human Nutrition (SINU)**, which has placed it **at the centre of the base of the new Mediterranean Diet Pyramid**, recognising it as one of the cornerstone foods of the Mediterranean model. This choice reflects both its historical role as the main dressing fat of Mediterranean populations and the well-established scientific evidence documenting its contribution to cardiovascular health. SINU also emphasises the importance of **choosing extra virgin olive oil**, and not olive oil in general, **because of its higher content of bioactive compounds**, encouraging consumers to also pay attention to the quality of the product. Like all dressing fats, extra virgin olive oil should be consumed in **quantities appropriate** to individual energy requirements. In practice, a portion conventionally corresponds to about one tablespoon (10 mL), making it easy to include olive oil in a balanced diet while benefiting from its nutritional and sensory qualities.

Limiting extra virgin olive oil solely because it is "fatty" or "high in calories" means overlooking its nutritional profile and the role it plays in a healthy, balanced diet.

➜ Dressing food with extra virgin olive oil does not cause weight gain if the diet is balanced. In the Spanish PREDIMED study, over 7,000 people followed a Mediterranean Diet for about 5 years without counting calories, with added extra virgin olive oil or nuts: their weight did not increase compared with those following a low-fat diet.
(Estruch et al. 2019)

MYTH 3

“A complete meal must include a first course, a main course, a side dish and fruit”



What the science says

The traditional structure of the Italian meal, with a first course (the main source of complex carbohydrates), **a main course** (a source of animal or plant protein), **a side dish and fruit** (sources of fibre and micronutrients), can be an **effective way** of **including** foods **from different groups** in the same meal, but it is neither a necessary condition for a balanced meal nor, in itself, an excessive way of eating.

Nutritional balance depends on the overall composition of the meal, the portions and the frequency with which the various foods are consumed over the day and the week. A meal made up of several courses can therefore be perfectly compatible with a balanced diet when the quantities are appropriate: for example, a portion of pasta or rice, followed by a small portion of a protein source accompanied by vegetables and fruit, makes it possible to include cereals, protein, vegetables and fruit in the same meal without necessarily resulting in excessive energy intake.

Similarly, **Italian cuisine offers numerous examples of single-course dishes** in which the same principles of balance are reflected in the combination of foods in a single preparation: pasta and pulses, soups made with cereals and pulses, pasta with fish and vegetables, or other dishes that combine a source of carbohydrates with a source of protein and plant components.

There is therefore no single correct structure for the Italian meal: first course, main course, side dish and fruit can all be part of a balanced meal, just as a single-course dish can be an equally valid alternative. What makes the difference is the quality and variety of the foods, how they are combined and, above all, appropriate portion sizes.

➜ How much is a portion? According to the Italian guidelines, uncooked: 80 g of pasta or rice, 100 g of meat or 150 g of fish, 200 g of vegetables, 150 g of fruit. With these quantities, even a meal with several courses remains balanced.
(CREA, Guidelines 2018)

MYTH 4

“Plant proteins are of lower quality than animal proteins”



What the science says

Plant proteins may differ from animal proteins in their essential amino acid composition and digestibility. However, this does not mean they are inherently inferior or unable to meet protein requirements effectively. Different plant foods have different amino acid profiles and, as part of a varied diet, proteins from different foods complement each other. The classic pairing of cereals and pulses, found in many traditional Italian dishes, makes it possible, for example, to combine complementary amino acid profiles. And this complementarity does not need to occur strictly in the same meal: what matters is the variety and the appropriate portions of the protein sources consumed over the day or otherwise present in the habitual diet. Furthermore, foods such as pulses, nuts and seeds do not only provide protein, but also contribute to the intake of fibre, vitamins, minerals and other components of nutritional interest. This is why, rather than distinguishing between "first-class" and "second-class" proteins, it is important to consider the variety of protein sources and the overall quality of the diet.

➜ Plant proteins are a foundation, not a fallback. In the new pyramid of the Italian Society of Human Nutrition, pulses are among the foods at the base of the diet, while dairy products, white meat and eggs are indicated for weekly and moderate consumption.
(Sofi et al., 2025)



ITALIAN CUISINE AT DIFFERENT STAGES OF LIFE

Part 8

From pregnancy to old age



Nutritional requirements vary throughout life, and depend on factors such as growth, pregnancy, adulthood and ageing.

In this context, one of the characteristics of Italian cuisine is its adaptability to these different requirements: the same ingredients can be combined, prepared and served in different forms, textures and portion sizes, making it possible to tailor the diet to age, physiological state and individual requirements. Cereals, pulses, vegetables and fruit, extra virgin olive oil, fish, dairy products, eggs and moderate amounts of meat can thus find a place in simple, appetising dishes that provide a nutritionally balanced diet through variety and complementary food choices.

This **flexibility** is **one of the main strengths of Italian cuisine** throughout life. **The structure of preparations can adapt to changes in energy and nutritional requirements**, while maintaining the common principles of variety, balance and rotation of foods. In this way, Italian cuisine can contribute not only to the adequacy of the diet at the different stages of life, but also to the prevention of the main risk factors for chronic diseases and, in old age, to the maintenance of functional ability and independence.

Stages of life at a glance

STAGE 1 (p. 66)

The first 1000 days of life

From conception to two years of age. Protein, folates, iron, iodine, calcium and long-chain omega-3s matter, while respecting food safety.

STAGE 2 (p. 67)

Childhood and adolescence

Supporting growth and building habits: the family meal is also food education.

STAGE 3 (p. 68)

Adulthood

Preventing chronic diseases through everyday choices: plant foods every day, extra virgin olive oil, alternating protein sources.

STAGE 4 (p. 69)

Older people

Combating malnutrition, muscle loss and frailty: portions, textures and protein suited to the individual.

STAGE 1

The first 1000 days of life

The first 1,000 days, from conception to a child's second birthday, are a particularly important period. During this time, the mother's diet and, subsequently, the child's diet can influence growth, development and future health. **Pregnancy** is characterised by specific nutritional requirements, particularly for protein, folates, iron, iodine, calcium and long-chain polyunsaturated fatty acids.

During pregnancy, the variety of foods and preparations typical of Italian cuisine makes it possible to **include different sources of nutrients** that are particularly important at this stage: vegetables and pulses contribute to the intake of folates and iron, milk and dairy products to that of calcium and high-quality protein, while fish is a source of iodine and, in some species, of long-chain omega-3 fatty acids. This variety can therefore help to build a nutritionally adequate diet, in compliance with specific food safety guidelines for pregnancy.

The scientific evidence is currently very robust for pregnancy, during which greater adherence to the Mediterranean model is associated with a **lower risk of gestational diabetes**, **pre-term birth, low birth weight and impaired foetal growth**. The evidence on breastfeeding and the early stages of infant feeding is more limited, but suggests that the mother's dietary model may play a role in the composition of breast milk and in the infant's early exposure to a favourable nutritional environment.

With complementary feeding, many traditional foods and preparations can be gradually adapted to the child's abilities through appropriate textures, quantities and preparation methods. Vegetable and pulse purées, cereals, small fish-based preparations, fruit and extra virgin olive oil make it possible to introduce a wide variety of flavours and foods early on, contributing to the early development of healthy family eating habits, while respecting the nutritional and safety requirements specific to this stage of life.

→ Eating the Mediterranean way during pregnancy reduces the risk of gestational diabetes, the type that can develop during pregnancy. A review of more than 107,000 women shows that, in experimental studies, those who followed this diet were 44% less likely to develop it
(Xu et al., 2024)

STAGE 2

Childhood and adolescence

During **childhood and adolescence**, an adequate diet must support growth and development, providing energy, good-quality protein, essential fatty acids, calcium, iron, zinc, iodine, vitamins and dietary fibre. The Italian tradition offers numerous ways to incorporate these nutrients into simple, varied meals. The interest in this model concerns not only its nutritional adequacy, but also the early acquisition of eating habits that are good for health. During childhood and adolescence, Italian cuisine can also play an educational role. The family meal is an occasion on which children and young people gradually come into contact with a variety of foods, recipes and flavours, and learn ways of putting together a meal that will influence their later food choices. Simple preparations such as pasta or rice with vegetables or pulses, soups, fish served with vegetables, eggs and dairy products make it possible to combine different sources of energy, protein, essential fatty acids, calcium, iron, vitamins and fibre in familiar dishes that are generally well accepted.

A recent systematic review and meta-analysis of intervention studies in children and adolescents found **improvements in systolic blood pressure** and blood **lipid profiles**, including **reductions in triglycerides**, **total cholesterol and LDL cholesterol**, and an increase in HDL cholesterol. These findings reinforce the importance of promoting, from childhood, a diet characterised by regular consumption of plant products and **fresh** or **minimally processed foods**. Familiarity with the flavours, preparations and conviviality of the meal is also an important factor in consolidating eating habits that are likely to continue into adulthood.

→ The benefits can already be seen in childhood. In 9 experimental studies involving 577 children and young people aged 3 to 18, those who followed a Mediterranean diet for a few months lowered their systolic blood pressure by almost 5 mmHg on average.
(López-Gil et al., 2024)

STAGE 3

Adulthood

In **adulthood**, Italian cuisine, in keeping with the Mediterranean dietary pattern, can play an important role in **preventing chronic diseases**. It is precisely at this stage of life that we have the **most robust evidence** on the association between this dietary model and cardiovascular and metabolic health, as well as body weight control, type 2 diabetes and mortality.

In this context, the strength of Italian cuisine lies in the possibility of translating nutritional recommendations into simple and accessible everyday choices. The rotation of protein sources, the daily presence of plant-based foods (such as fruit, vegetables and cereals), the use of extra virgin olive oil and the possibility of preparing single-course dishes, from pasta with pulses or vegetables to soups and fish dishes served with vegetables, make it possible to maintain variety and balance in everyday life.

➜ A review bringing together 18 meta-analyses and 238 experimental studies concludes that the Mediterranean Diet can reduce the risk of fatal cardiovascular events by between 10% and 67%, and that of non-fatal events by between 21% and 70%. The effect varies widely from study to study.
(Hareer et al., 2025)

STAGE 4

Older people

For **older people**, nutritional priorities partly change from those of adults. At this stage of life, preventing cardiovascular and metabolic disease is accompanied by the need to combat malnutrition, involuntary weight loss, the reduction of muscle mass and function, frailty and cognitive decline. An appropriate dietary pattern is particularly important for healthy ageing. In this context, one of the strengths of Italian cuisine is the adaptability of its preparations. Soups, broths, purées, preparations based on cereals and pulses, fish, eggs and dairy products can be adjusted in texture, portion size and nutritional density according to the appetite and the chewing and swallowing abilities of the older person.

Another important aspect in later life is an adequate intake of protein and energy. Fish, milk and dairy products, eggs and pulses, also combined with cereals, are sources of protein that can easily be included in traditional preparations.

The studies available indicate that greater adherence to the Mediterranean model, of which Italian cuisine is a prime example, is associated with a **lower risk of frailty and functional disability**. Evidence that it prevents sarcopenia (loss of muscle mass) or cognitive decline is less conclusive, though it does exist.

➜ A brain that ages better. People who follow the Mediterranean Diet more closely have a lower risk of cognitive decline (–18%), dementia (–11%) and Alzheimer's disease (–30%). These are observed associations, not proven effects.
(Fekete et al., 2025)



RESTAURANTS AND CANTEENS AS SETTINGS FOR FOOD EDUCATION

Part 9

Restaurants and canteens as places of food education



The growing popularity of eating out means that the catering sector now plays an increasingly important role in promoting health and spreading balanced dietary models.

Restaurants and canteens in schools, **workplaces**, **hospitals and care homes** are **ideal settings** for putting the principles of Italian cuisine into practice and improving the population's diet.

Italian cuisine offers many ways for the food service sector to promote healthy eating. These include a varied menu, a focus on plant foods, extra virgin olive oil as the main source of fat, cereals, pulses, vegetables and fish, seasonal ingredients, and the traditional attention to balanced meals. These principles can readily be applied to food served to the public.

The catering sector can also play an important **educational role**. Offering **balanced menus**, celebrating traditional recipes, promoting **local and seasonal produce**, paying attention to **appropriate portion sizes** and communicating the nutritional characteristics of dishes can help encourage **more informed dietary choices**, thus increasing adherence to the principles of healthy eating even outside the home.

Mass catering is particularly important as it reaches millions of people every day in schools, workplaces, hospitals and social care facilities. In these settings, meals are more than a service: they can also **support disease prevention** and **food education**, helping establish healthy eating habits from childhood. Projects carried out in workplace canteens indicate that a food offer inspired by the principles of the Mediterranean Diet, combined with strategies for education and guidance on food choices, can improve the quality of the diet and encourage the consumption of wholegrain cereals, pulses, plant-based foods and fish, with potential benefits for the main cardiometabolic risk factors. Italian experience also shows that such projects can lead to changes in dietary choices that are maintained over time.

Lastly, the catering sector is one of the main **tools for promoting Italian cuisine around the world**. By combining culinary tradition, nutritional quality, sustainability and innovation, the food service sector can promote not just individual dishes but a balanced dietary pattern.

➜ Small changes can shift choices. In an Italian workplace canteen, posters, placemats and leaflets on the Mediterranean Diet led 738 workers to choose more dishes with wholegrain cereals, pulses, fish and white meat, and fewer dishes with red meat and refined cereals. The change was still visible after three years.
(Vitale et al., 2018)



FROM KNOWLEDGE TO PREVENTION STRATEGIES

Part 10

From knowledge to prevention strategy



The growing prevalence of chronic non-communicable diseases highlights the need to promote dietary patterns that are effective, sustainable and culturally rooted.

Italian cuisine is a strategic resource for promoting public health and preventing major chronic diseases because it translates the principles of healthy eating into foods, recipes and eating habits that reflect the population's culture and traditions.

However, realising its health potential requires turning knowledge into action through coordinated efforts involving public institutions, healthcare services, schools and universities, researchers, health and nutrition professionals, and the food production sector. **Food education** and **training** are essential tools for transferring knowledge and skills, preserving the ability to prepare and put together balanced meals and encouraging **informed choices** throughout life.

Scientific research plays a central role, not only in consolidating and updating the evidence available on the links between Italian cuisine and health, but also in determining how best to communicate that evidence to the public and evaluating the effectiveness of health promotion initiatives. At the same time, innovation can help to respond to changes in lifestyles, consumption patterns and food systems, while maintaining a balance between gastronomic tradition, nutritional quality, accessibility and sustainability.

Equally strategic is the role of **scientific and institutional communication**, as well as communication through the **mass media** and **social media**, tools that today contribute decisively to shaping knowledge and perceptions about food. Clear, evidence-based communication that translates complex research into clear and accessible messages is essential for promoting health, **countering food and nutrition misinformation**, and explaining how Italian cuisine can contribute to public **wellbeing**.

From this perspective, investing in Italian cuisine means more than preserving a culinary tradition. It means bringing together research, education, training, innovation and communication to encourage eating habits that promote health. Italian cuisine can thus act as a bridge between scientific evidence and everyday habits, helping turn dietary recommendations into healthy, culturally familiar and sustainable eating habits.

➜ Italy is changing its habits too. Between 2000 and 2017, the availability of tropical oils in the country grew by 156%. Over the same period, fish (+26%) and nuts (+21%) also increased: a picture that shows how much eating habits are changing.

(Vitale et al., 2021)

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