



# What Nutritional Contribution Do Edible Flowers Make?

**W**HEN ONE THINKS OF THE term “edible portion” or the part of the food commonly eaten, flowers of ornamental plants may not automatically come to mind. Historically, however, flower cookery has been traced back to civilizations of antiquity. The culinary use of flowers has varied from culture to culture. The Chinese incorporated flowers as ingredients in a wide variety of recipes, and flower usage can be traced back as far as 3000 BCE. Early reports indicate that in Ancient Rome, the edible flowers of violets and roses were used in dishes, and lavender was used in sauces.<sup>1,2</sup> The large blossoms produced by pumpkin and squash plants have a long history as a popular food among Native Americans. The Zuni tribe was particularly known for their love of squash blossoms. Blossoms were gathered in the morning before the flowers opened, and eaten fresh, fried, added to soup, or dried and saved for winter.<sup>3</sup> Edible flowers were especially popular in the Victorian era in England. After falling out of favor for many years, cooking and garnishing with flowers is enjoying a revival.

The renewed interest in cooking and garnishing with flowers has also prompted the interest of researchers in the nutritive value of edible flowers. Rop and colleagues, who recently wrote that the global demand for more attractive and tasty food could be enhanced by edible flowers, completed a study focusing on the nutritive value of 12 species of edible flowers of ornamental plants.<sup>4</sup> They found the flower species with the highest mineral content were chrysanthemum, dianthus, or

viola. The most abundant element was potassium. As the colors of fruits and vegetables suggest the presence of phytochemicals, so do the colors of edible flowers. One class of non-nutritive health-promoting compounds in flowers receiving recent attention is polyphenols or phenolics. A study published in the *Journal of Food Science* on common edible flowers in China found that some of the flowers were rich in polyphenols, which are known to have biological activity and high antioxidant capacity.<sup>5</sup> As research further defines the health benefits of physiologically active components in flowers, they may, as the researchers suggest, have the potential to be used as an additive in foods to help prevent chronic disease and prevent food oxidation. The US Department of Agriculture Nutrient Database includes nutrient composition information for some edible flowers, including pumpkin flowers, sesbania flower, broccoli flower clusters, and white-flowered calabash.<sup>6</sup>

One of the biggest concerns regarding edible flowers is whether they are safe to consume. Fortunately, some of the Cooperative Extension offices available through more than 100 land-grant universities have resources to guide consumers on this topic. Edible flowers can add distinctive flavor and a unique splash of color to foods, but not all flowers are safe to eat. While many flowers are safe and edible, including the flowers of most culinary herbs, proper identification is essential. Flowers from florists, nurseries, or garden centers may have been treated with pesticides not labeled for food crops and should not be used even as a garnish. People with hay fever, asthma, or allergies should be cautious because allergic reactions can be triggered by the pollen of specific plants.

Clients may want to grow their own edible flowers, but they are increasingly found at gourmet food shops, farmers' markets, and other specialty shops, as well as online.<sup>7</sup> Considering that edible flower consumption is on the upswing, further research is

warranted into their nutritive and non-nutritive value, as well as other potentially beneficial compounds they may contain.

## References

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