

In-shell pistachios: The original 'slow food?'

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Two studies published in the current on-line issue of the journal *Appetite* indicate that consuming in-shell pistachios is a weight-wise approach to healthy snacking, offering unique mindful eating benefits to help curb consumption and decrease calorie intake.

The first study found that participants who consumed in-shell [pistachios](#) ate 41-percent fewer calories compared to those who consumed shelled pistachios. The second study revealed that pistachio nut shells can provide important "visual cues" as a reminder of consumption that translate into reduced [calorie consumption](#). Both studies further underscore that in-shell pistachios, which are one of the lowest calorie nuts, are a practical, everyday snack for weight management.

"In-shell pistachios are the original 'slow food.' The findings of these studies demonstrate that pistachios, as one of the only in-shell snack nuts, help slow consumption; and further, that the empty shells offer a visual cue, reducing [calorie intake](#)," said behavioral eating expert and study author, James Painter, Ph.D., R.D., Chair of the School of Family and Consumer Sciences at Eastern Illinois University. "In fact, the term 'Pistachio Principle' has been coined to describe a simple technique that can be used to help fool yourself full."

In-Shell Pistachio Consumption Curbs Calories by 41-Percent Compared to Shelled Pistachios

The first study published in *Appetite* involved 140 university students assigned to consume either in-shell pistachios or shelled pistachios during class time. Both groups of students were provided a 16-ounce cup and asked to self-select a portion of pistachios to consume during class. Each student's cup of pistachios was weighed before consumption began. As students left the classroom, the remaining pistachios were weighed and recorded; total weight and calories from the consumed pistachios was also calculated. Those who chose shelled pistachios consumed an average of 211 calories while those who chose in-shell pistachios

consumed an average of 125 calories, a 41-percent decrease in calorie intake.

The second study published examined the potential role of pistachio shells as visual cues of intake. Study subjects included 118 faculty and staff from a Midwestern university, all of whom were provided a pre-weighed 16-ounce bowl filled with four ounces of in-shell pistachios to keep on their desk over the course of two workdays separated by a day of no pistachio consumption. Participants were told they could consume pistachios at their leisure during the day and were also provided a second 16-ounce bowl to discard the pistachio empty shells.

The subjects were randomized using a crossover design to one of two groups. For the first group, the bowls with pistachio shells were not emptied until the end of the day. For the second group, the bowls with pistachio shells were emptied every two hours. Pistachios were added in two-ounce increments if the amount in the bowl had been reduced to approximately half or less of the starting amount.

"When leftover pistachio shells remained on the desk throughout the day, calorie consumption of pistachios decreased by 22-percent compared to when nut shells were routinely removed," said Painter. "Choosing in-shell pistachios instead of shelled nuts is a simple way to decrease calorie consumption without restriction. This is in keeping with existing research showing that when a person has [visual cues](#) of 'leftovers,' such as pistachio shells, they can see how many or how much they have eaten, helping to control portion size and consumption."

Pistachios - "The Skinny Nut" - Support Weight Management

This new data reinforcing the mindful eating benefits of in-shell pistachios adds to the existing body of research supporting pistachio's weight management benefits. According to researchers at the University of California Los Angeles, choosing to snack on pistachios rather than pretzels supports

body mass index (BMI) goals. And research conducted by the Agricultural Research Service (ARS) of the United States Department of Agriculture (USDA) and recently published in the *British Journal of Nutrition* found that fat in pistachios may not be completely absorbed by the body, indicating that pistachios may actually contain fewer calories per serving than originally thought.

In addition to the data on pistachios, a recent study by researchers at Harvard University found that consumption of nuts, as well as vegetables, whole grains, fruits and yogurt, was inversely associated with weight gain with nuts exhibiting a (-).57 pound effect on body weight.

Pistachios are one of the lowest calorie nuts with 160 calories per 30 gram serving (approximately 1 ounce). They also offer the most nuts per serving, providing about 49 kernels per 30 gram serving (approximately 1 ounce), when compared to other popular snack nuts - comparatively, almonds have 23 in a serving, walnuts 14 halves and cashews, 18. Pistachios are also a good source of fiber and protein.

More information: Li Z, Song R, Nguyen C, Zerlin A, Karp H, Naowamondhol K, Thames G, Gao K, Li L, Tseng CH, Henning SM, Heber D. *Journal of the American College of Nutrition*. 2010;29(3):198-203.

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