

# Chocolate and caffeine may boost cognitive, motor skills

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A chocolate bar might help you negotiate your next business deal, say Clarkson University researchers who are teaming up for a series of studies on the effects of caffeine, cocoa and dark chocolate on cognitive

function and fatigue.

Assistant Professor of Physical Therapy & Physician Assistant Studies Ali Boolani is researching the effects of synthetic versus natural caffeine and adaptogens on the mind and body. His research focuses on the effects each has on cognitive function, mood, fine motor task performance, blood pressure and heart rate.

Along with Associate Professor of Chemistry & Biomolecular Science Costel Darie, the researchers will administer a 100 milligram shot of caffeine to participants. Before and after the caffeine dose, they will measure cognitive and motor function as well as levels of cortisol, a hormone released in response to stress and low blood sugar.

Boolani and his team will collect saliva samples from participants to measure the amount of cortisol, and researchers will then analyze the samples to see if there are changes in the [cortisol levels](#).

"We're going to use this opportunity to design new methods for cortisol and [caffeine](#) detection that are much faster and hopefully cheaper," Darie said.

In another study, Boolani and Darie are collaborating to study the impact of alkalized cocoa on cognitive function, mood, fine motor skills, and the gait and sway of adults 65 and older. The research will examine whether this cocoa reduces the effects of cognitive [fatigue](#) in older adults.

"What I'm concerned with here is how does this particular [cocoa](#) impact changes in mood and cognitive function, as well as cortisol levels in saliva," Boolani said.

Need a boost before a big business meeting? Clarkson researchers also

are examining how chocolate can have an effect on negotiation skills.

In Clarkson's School of Business, Assistant Professor of Accounting Gilberto Marquez-Illescas and Associate Professor of Consumer & Organizational Behavior and Associate Dean of Graduate Business Programs Stephen Sauer are researching how the flavonoids and theobromine in [dark chocolate](#) have an impact on cognitive function and fatigue during business transactions. They are teaming up with Boolani and Darie to put the science to the test.

Marquez-Illescas said people who are fatigued might be more likely to release private information while negotiating, which decreases their bargaining power. He said the scientific approach to this research will help businesses better understand how negotiation behavior influences business deals.

"If people are more fatigued, they are going to share private information because they are more interested in closing than in final outcomes," he said.

Provided by Clarkson University

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