

Working for snack food: The role of dietary restraint

J.C.A.H. GIESEN, S. STRAFACI, C. NEDERKOORN, R.C. HAVERMANS, A. JANSEN. *Department of Clinical Psychological Science, Faculty of Psychology, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands.* janneke.giesen@psychology.unimaas.nl

The relative reinforcing value of snack food can be studied with a concurrent schedules task. In such a task, participants have the option to work for credits for either snack food or, e.g. fruit and vegetables. By increasing the price of snack food (i.e., the amount of work required for snack credits) one may determine at what point the participant stops working for this option. One factor thought to affect the relative reinforcing value of food is dietary restraint. Restrained eaters are concerned about their weight and, therefore, try to limit their intake of snack foods, but often fail in their attempts to restrict snack consumption. Successful dieting appears to require adherence to a strict set of dieting rules. We hypothesised that without such rules restrained eaters are more prone to work for snack food. Indeed, results show that restrained eaters work harder for snack foods as compared to unrestrained eaters and current dieters.

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Inducing impulsivity versus inhibition affects food intake in a sample of healthy women

R. GUERRIERI, C. NEDERKOORN, M. SCHROOTEN, A. JANSEN. *Department of Experimental Psychology, University of Maastricht, P.O. Box 616, 6200 MD Maastricht, The Netherlands.* r.guerrieri@psychology.unimaas.nl

Previous research has related impulsivity to increased food intake and obesity. However, the precise nature of this relationship is not clear. One possibility is that impulsivity causes overeating and hence contributes to overweight. To test this possibility, we induced impulsivity versus inhibition to see whether this would affect subsequent food intake. Participants performed the stop signal task with either an inhibition instruction or an impulsive instruction, and were then asked to do a taste test. We expected that inducing impulsivity, by training people to act impulsively during the task, would lead to more food intake during a subsequent bogus taste test compared to inducing inhibition. Restraint and current dieting were also measured. Restraint status had no effect, but dieting status turned out to be an important moderating factor: the non-dieters acted as expected and ate more after the impulsivity induction than after the inhibition induction. However, current dieters did the opposite and ate more after the inhibition induction. Possible explanations are discussed. At least for non-dieters, we can conclude that heightened impulsivity versus inhibition leads to higher food intake.

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Caffeine at levels found in decaffeinated beverages is behaviourally active

C. HASKELL, D. KENNEDY, A. MILNE, K. WESNES, A.B. SCHOLEY. *Human Cognitive Neuroscience Unit, Northumbria University, Newcastle Upon Tyne, NE1 8ST, UK.* crystal.haskell@unn.ac.uk

It has previously been assumed that levels of caffeine typically found in decaffeinated beverages have no behavioural effects. However, recent findings from our laboratory indicate that caffeine doses as low as 9 mg have psychoactive properties which can endure for several hours. The current study aimed to establish the lowest active dose of caffeine and to ascertain the duration of any effects. Twenty participants took part in this randomised, placebo-controlled, double-blind, balanced-crossover study assessing the effects of three different doses of caffeine (2.5, 5, and 10 mg) administered in fruit juice. Cognitive performance, mood, autonomic activity and salivary caffeine were assessed pre-dose and at 1, 3, 6 and 9 h post-dose. Compared with placebo, performance was impaired by 2.5 mg, whilst 5 mg had negative effects on mood and mixed effects on performance and 10 mg improved performance. A number of these effects were apparent at 9 h post-treatment. Given that the average cup of decaffeinated coffee contains 3–5 mg caffeine, these results demonstrate that decaffeinated coffee is not inert as previously believed and this has implications for research which utilises decaffeinated coffee as placebo. Effects of caffeine are also longer-lasting than previously thought with effects apparent 9 h post-dose. This finding may offer an alternative explanation to withdrawal models for differing results in the literature pertaining to baseline performance in consumers and non-consumers of caffeine.

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Manipulation of taste intensity does not affect the development of sensory-specific satiety

R.C. HAVERMANS, S. FILLA, N. GESCHWIND, C. NEDERKOORN, A. JANSEN. *Department of Clinical Psychological Science, Faculty of Psychology, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands.* r.havermans@psychology.unimaas.nl

The pleasantness of the sensory properties of a food declines during consumption of that food, a process termed sensory-specific satiety (SSS). Generally, SSS is ascribed to habituation; a decrease in overall responsiveness to a stimulus due to repeated presentations of that stimulus. In the present study, we investigated whether manipulations of taste intensity affects the development of SSS. Sixty participants were randomly divided into three groups: Increase, Decrease or Same. All participants were given five exposures to a specific taste. Each exposure comprised the smelling, tasting and consumption of strawberry lemonade. For group Increase, the intensity of the lemonade was increased with each exposure, whereas for group Decrease its intensity decreased with each exposure. Group Same received the same taste intensity with each exposure. We hypothesised—in line with a habituation account—that stronger SSS would occur in group Increase. Results, however, revealed no such group differences; strong SSS developed irrespective of any manipulation of taste intensity. These results, then, provide support for the notion that SSS is not the mere by-product of sensory habituation.

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