

Labelling foods as ‘low in salt’ may not reduce actual salt intakes

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Front-of-pack labels which emphasize salt reduction can negatively affect taste perception and salt use, according to researchers from Deakin University, Australia and Unilever R&D, the Netherlands.

Previous research suggested that although Australian consumers are aware of the relationship between diet and health, they do not appear to be worried about their sodium intake or are necessarily aware of the upper limit of daily sodium intake. Various initiatives intend to help consumers make healthier choices, such as front-of-pack nutrition claims (e.g. “low in salt”) or health logos (e.g. the Australian Heart Foundation “Tick”). However, research has yet to determine how nutrient labels and health logos influence consumers’ perception of reformulated products such as those with less sodium. The study at hand investigated the effect of nutrient labels and health logos on expected and perceived liking and salt intensity of sodium-reduced soups.

The study involved 50 participants (33 women, 17 men), more than half of which had stated that health labels affect their food choices. Three variations in sodium content of a commercially available chicken noodle soup were tested: the benchmark product with no sodium reduction; 15% sodium-reduced soup; and 30% sodium-reduced soup. The remaining ingredients were the same. Each of the soup products was labelled with one of three labels: no health label; a nutrient label stating “Now reduced in salt, great taste”; or the “Tick” health logo. On three separate days, participants tasted three soups with the three different labels in random order, with the option to add salt at their discretion from a salt shaker. Expected and perceived saltiness were measured with a 9-point just-about-right scale (1= ‘not salty enough at all’, 5= ‘just about the right amount of salt for me’, 9= ‘far too salty for me’), whereas expected and perceived liking were measured with a 9-point hedonic scale (1= ‘not liked at all’ to 9= ‘extremely liked’).

Participants were shown the packaged soup and asked what they expected of it in terms of liking, desire and saltiness. Soups were then freshly prepared from the shown packs. While tasting each soup, the study participants were requested to rate it on perceived liking and salt intensity. After tasting a spoonful, they were permitted to add as much salt as they wanted from the salt shakers. Between different soups, participants had to rinse their mouth with water. In total, all participants sampled all nine combinations of soup and label.

For all types of soup, more participants added table salt when the soup carried the reduced-salt label compared to when the same soup carried either the health logo or no label. Those who did add salt, additionally added more salt when soups carried the reduced-salt label, independent of the actual sodium content of the soup. When 30% sodium-reduced soup was labelled with a reduced-salt label, participants over-compensated the reduction in sodium by adding table salt beyond benchmark levels.

The mere exposure to the reduced-salt label resulted in lower expectations and lower actual taste experience of the soups in terms of liking and saltiness. The perceived saltiness of the soups with a salt-reduction label was lower than would be expected based on the actual amount of salt in the soup.



Providing the health logo or no label had no such influence on taste perception.

An important finding of the study was that only 28% of the participants added salt to the 15% sodium-reduced soups, indicating that such a reduction may be feasible to implement if consumers are not made aware of the modification.

Limitations of the study were that it was carried out in a laboratory setting and that participants (mostly below 40 years of age and well educated) were not representative of the Australian population.

More information

[Liem DJ et al. \(2012\). Health labelling can influence taste perception and use of table salt for reduced-sodium products. Public Health Nutrition. Published online: 08 March 2012. doi:10.1017/S136898001200064X](#)