

Relationship between tongue strength, lip strength, and nutrition-related sarcopenia

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Video Abstract

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Abstract

Though a seemingly simple task, eating requires a coordinated effort between multiple oral muscles, such as those found in the tongue and lips. A new study conducted by researchers in Japan has found a link between the strength of these muscles and a condition called 'nutrition-related sarcopenia'. From childhood through young adulthood, your muscles continually grow larger and stronger. At some point in mid-life, however, this trajectory switches course and many muscles begin to deteriorate, a progression termed sarcopenia. While this muscle loss is a natural part of the aging process, malnutrition has been suggested to amplify the problem. And, because nutritional intake involves oral function, degeneration of these muscles may play a role. In hopes of clarifying this relationship, the team evaluated more than 200 patients over the age of 65 for malnutrition and assessed factors such as tongue strength, lip strength, and the amount of food they ate. The researchers found that, regardless of food intake level, tongue and lip strength were negatively associated with the presence of nutrition-related sarcopenia. That is, patients with this condition showed significantly reduced strength of both muscle groups. What's more, the muscles seemed to get weaker with lower food intake over the previous 3 months, suggesting malnutrition may lead to reduced oral strength. Of course, the authors caution, the converse of this may also be true: weaker oral muscles could result in eating less. While a direct causal relationship could not be demonstrated in this study, these results suggest that tongue strength and lip strength may be useful indicators for detecting the presence of nutrition-related sarcopenia. In addition, increasing the strength of these muscles by directed exercise may be an important factor in improving – and preventing – this condition in older patients.