

## Effect of Dietary Salt on the Risk of Esophageal Cancer: A Meta-Analysis

Kondwani Joseph Banda

Registered Nurse / Midwife, Endoscopy Unit, Kamuzu Central Hospital, Africa



### Abstract

**Background:** Esophageal cancer (EC) is the 8th most common cancer and the 6th cause of cancer deaths with two main histological types: EAC and ESCC. High intake of salt has been found to increase risk of gastric cancer while Chinese-style salted fish has shown to increase the risk of EC. However, the role of dietary salt on the risk of EC is not clear. Available evidence from epidemiological studies is inconclusive with conflicting results. The purpose of this study was to evaluate the effect of dietary salt on the risk of EC by conducting a meta-analysis.

**Methods:** A systematic literature search was done from PubMed, Medline, Embase, Google Scholar, Cochrane library and reference lists to identify relevant studies. Pooled OR for the highest intake versus lowest intake categories and 95% Confidence Interval (CI) were calculated using the random-effects model. A  $X^2$ -based test using Cochran's Q statistic and I<sup>2</sup> Statistic were used to identify and quantify heterogeneity. Publication bias was assessed using Begg's adjusted rank correction test and the trim and fill methods.

**Results:** A total of 3238 studies were identified from PubMed, Medline, Embase, Google Scholar, reference lists and Cochrane library. 13 case-control and 2 cohort studies investigating the effect of dietary salt on the risk of EC were included in the meta-analysis. No evidence of publication was observed. **Conclusion:** The results of the meta-analysis suggests that low intake of dietary salt in the general population would be beneficial for reduction of EC. Prospective cohort studies, standard measured dose of dietary salt and adjustment of potential confounders such as alcohol and energy intake should be considered in future.



### Biography

Kondwani Joseph Banda – is a 2nd Year PhD Student who is currently studying at Taipei Medical University in Taiwan. He has previously worked at Mzuzu Central Hospital and Kamuzu Central Hospital in Malawi, Africa as a surgical and endoscopy nurse for 6 years. Over the years, he participated in the administrative management of the hospital, clinical teaching and assessments of student nurses from Kamuzu College OF Nursing and Luke DaeYang University. Kondwani Joseph Banda is Registered Nurse / Midwife R.N.M and Specialized Endoscopy Nurse. He holds a Bachelor degree in Nursing and Midwifery from Mzuzu University and a master's degree in Nursing – Community Care from Taipei Medical University.

### Publications

1. Associations of dietary carbohydrate and salt consumption with esophageal cancer risk: a systematic review and meta-analysis of observational studies
2. The Construction and Evaluation of Executive Attention Training to Improve Selective Attention, Focused Attention, and Divided
3. Attention for Older Adults With Mild Cognitive Impairment: A Randomized Controlled Trial
4. Youth delegates at Zambian climate conference take lessons home to their communities
5. The Construction and Evaluation of Executive Attention Training to Improve Selective Attention, Focused Attention, and Divided Attention for Older Adults With Mild Cognitive Impairment: A Randomized Controlled Trial

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