Introduction Use of non-steroidal anti-inflammatory drugs (NSAIDs) has been associated with a reduced risk of several cancers. We conducted a systematic literature review to investigate the association between NSAID/aspirin use and risk of head and neck cancer (HNC).

Method Medline, Embase, PubMed, Cochrane Library and Web of Science were systematically searched using terms for NSAIDs/aspirin, HNC and observational/intervention study designs.

Results Of 9268 articles identified, two population-based prescribing database studies and three case-control studies met the selection criteria. The studies investigated different HNC sites. Only one study found a significantly protective effect of aspirin use for HNC risk (OR 0.75, 95% CI 0.58 to 0.96) and one showed a significantly increased risk of oral/oropharyngeal cancer with non-low-dose aspirin NSAID use (OR 3.5, 95% CI 1.5 to 6.7).

Conclusion No definitive conclusion on the effect of NSAIDs/aspirin on HNC risk was possible. Further robust large-scale studies are required to clarify any possible association.