

EXERCISE AND NUTRITION FOR HNC

A SYSTEMATIC REVIEW

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ABSTRACT

- **Introduction:** Physical exercise interventions may positively impact body composition, physical functioning, quality of life and fatigue management, while nutrition interventions has shown to improve nutritional status and quality of life during radiotherapy (RT). However, previous reviews have focused on clinical trials consisting of a single intervention (either physical exercise or nutrition), and there is a need to examine the impact of combined interventions in patients with HNC.
- **Objectives:** The overall aim was to summarize and evaluate the scientific literature on clinical interventions consisting of physical exercise and/or nutrition during treatment for patients with HNC.
- **Methods:** Electronic searches were performed by a trained librarian on June 27 2016 in MEDLINE, EMBASE, CINAHL and Cochrane Library. Additionally, the bibliographies of included studies and relevant systematic reviews were reviewed. The searches consisted of combinations of controlled terminology and free-text terms expressing the concepts (1) head and neck cancer and (2) exercise and (3) nutrition.
- **Results:** The database searches retrieved a total of 1681 records, that were reduced to 220 records after removal of duplicates and exclusion of irrelevant records by title. After screening of abstracts, 23 records met the inclusion criteria and were screened in full-text.
- **Conclusion:** To be presented at the conference

RESULTS

Twelve papers met the inclusion criteria and are included. Ten papers used nutrition as the intervention and two trials physical exercise as the only intervention. Seven of the interventions had **RCT design** (n=2 physical exercise; n=5 nutrition) and included between 15 and 134 patients. Four had a **prospective single armed study design** (included between 18 and 190 patients) and one study had a **prospective non-randomised study design** with two arms (n=64).

Physical exercise during radiation seem safe and feasible. However, the results on effects on quality of life, body mass and function are limited.

In many of the nutritional interventions there have been a lot effort to provide dietary advice and nutritional supplements. However, the patients still loose weight.

METHODS

Studies were eligible for inclusion if the following inclusion criteria were met: (1) a prospective clinical trial design (randomized controlled trials (RCTs), quasi-RCTs, cohort studies, pre-post studies and case control studies), (2) patients aged ≥ 18 years with a head and neck cancer diagnosis and starting active cancer treatment at trial entry, (3) repetitive physical exercise (>1 session) consisting of muscle strength exercises or aerobic exercises or a combination of both, (4) nutrition interventions consisting of diet counselling, oral nutrition supplements or enteral nutrition alone or in combinations and (5) published in peer reviewed journals and written in English language.

CONCLUSIONS

In conclusion, twelve studies are included in this review. Most of the randomized studies have a small number of included patients and are feasibility studies. Therefore, it is clinically difficult to draw conclusions on effects.

Future large scale randomized studies with a combination of nutrition and physical exercise both during and after radiation are warranted.

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