

Orally administered emu oil decreases acute inflammation and alters selected small intestinal parameters of mucositis.

Mucositis resulting from cancer chemotherapy is a serious disorder of the alimentary tract. Emu oil has demonstrated anti-inflammatory properties of arthritis and wound healing, however, its effect on the intestine remain unknown. We investigated emu oil for its potential to decrease the severity of mucositis.

Mucositis is a common side-effect of cancer chemotherapy which drastically reduces the quality of life of patients undergoing treatment. Mucositis is a debilitating condition that can occur in all the regions of the gastrointestinal tract, however, it most commonly effects the mucosa of the mouth (oral mucositis) and small intestine (intestinal mucositis). It is characterised by erosion and deterioration of the mucosa with symptoms including severe pain and bloating, diarrhoea and nausea. The rate of infection and sepsis in mucositis patients is directly proportional to the severity of the condition. Mucositis remains one of the primary determinants of morbidity and mortality in patients undergoing treatment for cancer as a consequence of these secondary complications. Indeed, symptoms can progress to the stage whereby chemotherapy must be ceased. Currently there are no effective treatments for intestinal mucositis.

Clinical trials were carried out in a laboratory by the University of Adelaide and Emu Tracks. The promising anti-inflammatory effects displayed by emu oil in previous studies suggest the potential for therapeutic benefit in chemotherapy induced mucositis. Accordingly we hypothesised that emu oil ingestion would decrease the severity of intestinal damage induced by chemotherapy drugs potentially through the inflammation modulating effects of the oil.

Indications that the rate of recovery from mucositis could be improved with the intake of emu oil was established. This proof-of-concept study represents the first report of decreased intestinal inflammation following oral administration of emu oil. Emu oil altered specific parameters associated with induced damage from side effects of chemotherapy drugs. The decrease in acute inflammation is supported by previous studies in which topical application of emu oil reduced the severity of arthritis and dermal inflammation. It has been suggested that not only the anti-inflammatory properties of emu oil are significant in recovery but the components of emu oil, such as tocopherols, carotenoid and flavones, may exert anti-oxidant effects which may have impacted on levels of damaging reactive oxygen species which are generated in the first of five recognised stages of mucositis. The initial stage occurs immediately after the introduction of cytotoxins into the system, and it is these reactive oxygen species which are responsible for causing damage to cells, tissues and blood vessels.

In the present study Emu Oil had stimulated mucosal growth in the recovery phase of mucositis. Future studies, building on the positive indications found in this efficacy study, would benefit from the examinations of different emu oil doses. Emu Oil was able to decrease chemotherapy-associated inflammation in the small intestine, and alter the mucosal architecture in the recovery phase of mucositis. The promising results from the present study indicate that a further investigation of emu oil as a nutritional supplement to promote healing of the damaged intestine, following the resolution of cancer treatment, is required.

Further research is now being conducted to confirm the benefits of Emu Oil for conditions such as Irritable Bowel Syndrome, Crohn's Disease and other gastro-intestinal disorders. Early indications from this research look extremely positive and show Emu Oil to be highly beneficial.

This research work has been published in the British Journal of Nutrition. To read the full published research [click here.](#)