

An Introduction to Systematic Reviews: Effects of Green Tea Polyphenols on Diet-Induced Obesity and Intestinal Microbiota

The obesity epidemic is a major public health concern worldwide. In the U.S, nearly 4 out of 10 adults and 2 out of 10 children are obese. Diet supplements are widely used as one possible countermeasure. Epigallocatechin gallate (EGCG), one of the major polyphenols present in green tea, can be found in supplement form. Indeed, green tea polyphenols, such as EGCG, inhibit diet-induced obesity and have the potential to alter intestinal microbiota composition. Our research question is: Do green tea polyphenols reduce diet-induced obesity by modulating the intestinal microbiota?

To answer this question, we are carrying out a systematic review—a formal research study that follows a clear, predefined structure to find, assess, and analyze studies that have all tried to answer a similar question. Here, we show its completed first step: the search for evidence, which is based on a strategy able to find all relevant studies. We searched four databases using a string of keywords organized in Boolean logic, and identified a total of 67 studies, including duplicates. We excluded all studies that did not address all three facets included in our research question (green tea polyphenols, obesity, and microbiota) and all review articles. After the exclusion process, 14 articles were selected as the most relevant to address our research question. The next step will be to analyze their findings while considering any biases or discrepancies which might be present.

Keywords:

Epigallocatechin gallate

Green tea polyphenols

Diet-induced obesity

Microbiota