

Literature review finds no evidence to support detox diets for weight loss or detoxification

February 6 2015



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A critical review of the evidence surrounding popular detox diets has concluded that there is no compelling evidence to support the use of detox diets for weight management or toxin elimination.

Financial costs to consumers, unsubstantiated claims, and the potential

health risks of detox products has lead researchers to state that until further systematic evaluations of commercial detox diets are undertaken, they should be discouraged by health professionals.

Researchers Professor Hosen Kiat, Head of Cardiology at Macquarie University Hospital and the Australian School of Advanced Medicine, and Dr Alice Klein from the Cardiac Health Institute, have conducted a thorough review of studies assessing eight of the most popular detox diets, including long and short programs that recommend different combinations of fasting, supplements, food modification, and laxative use.

"Our biggest challenge was that commercial detox diets rarely identify the specific toxins they aim to remove, or the mechanisms by which they eliminate them, making it difficult to investigate their claims," said Professor Kiat.

"To the best of our knowledge, no rigorous clinical investigations of detox diets have been conducted. The handful of studies that have been published suffer from significant methodological limitations including small sample sizes, sampling bias, lack of control groups, reliance on self-report and qualitative rather than quantitative measurements."

Most concerning were the [potential health risks](#) identified as associated with the detox diets.

"In assessing one detox diet we found that, based on the average person's minimum daily energy requirement, it does not meet daily protein requirements for anyone who weighs more than 23 kg," said Professor Kiat.

"Other health risks of detox diets relate to severe energy restriction and nutritional inadequacy, as extreme fasting can lead to protein and

vitamin deficiencies, electrolyte imbalance, lactic acidosis, and even death. Detox dieters are also at risk of overdosing on supplements, laxatives, diuretics or even water."

The review also found that no current scientific studies have investigated the effectiveness of commercial detox diets for losing weight.

"In fact, studies in mice have shown that the stressfulness of energy restriction can produce long-term changes in stress neurocircuitry, leading to binge eating later on. This is yet to be established in humans."

Though there were a few preliminary studies that did suggest that certain nutritional components found in coriander, grapes and wine, and citrus fruits, may be useful for the elimination of toxic metals, but robust research is required for verification.

"The detox industry founds itself on the notion that chemicals can be neatly divided into 'good' and 'bad' categories. In reality it is the 'dose that makes the poison'," said Professor Kiat.

"Consumers should also keep in mind that the human body has evolved highly sophisticated mechanisms for eliminating toxins. The liver, kidneys, gastrointestinal system, skin and lungs all play a role in the excretion of unwanted substances, without chemical intervention.

"However, considering the vast number of synthetic chemicals to which we are exposed, this is an interesting and worthwhile area of research."

The researchers hope that the review will encourage systematic evaluations of commercial detox diets, so an evidence base can be established to inform future legislation.

More information: Klein A.V. & Kiat H. (2014) "Detox diets for

toxin elimination and weight management: a critical review of the evidence." *J Hum Nutr Diet*. [DOI: 10.1111/jhn.12286](https://doi.org/10.1111/jhn.12286).

Provided by Macquarie University

Citation: Literature review finds no evidence to support detox diets for weight loss or detoxification (2015, February 6) retrieved 19 April 2024 from <https://medicalxpress.com/news/2015-02-literature-evidence-detox-diets-weight.html>

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