

# Edible Insects and their Health Benefits

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## Introduction

Insects have long been a source of food for roughly 2 billion people around the world, and they are still a part of many people's diets. Many components important to human nutrition are found in insects, including lipids, proteins, fibre, vitamins, and minerals. Many edible insects have nutritional profiles that are comparable to those of other commonly consumed animal and plant diets. Most edible insects meet daily calorie and nutrient requirements, according to Halloran et al., since they contain polyunsaturated and monounsaturated fatty acids, essential amino acids, zinc, iron, and fibre. They may also be used as a protein substitute for other animal proteins such as chicken, beef, and fish. Most insects, particularly crickets, consume enough histidine, isoleucine, leucine, lysine, threonine, tryptophan, and valine to meet or exceed adult requirements for most important amino acids. The protein content of the edible insects is higher than that of soybeans, a common plant protein source. Chitin, which is found in the exoskeletons of a variety of insects, is also a good source of fibre and may help the immune system [1]. Micronutrients such as B vitamins, zinc, and iron are abundant in many insects. Insects can be processed into a variety of forms, including pastes, powders, and meals, which extends their shelf life and allows them to be easily substituted in cooking and baking with no change in flavour, texture, or appearance. Insects can also be used to separate nutrients including vitamins, minerals, lipids, and proteins, allowing them to be used as nutritional supplements [2].

## Description

The utilisation of insects as a food source has a number of nutritional and environmental benefits. Insects may even be a more cost-effective source of high-quality protein and micronutrients, which could help to solve global protein and micronutrient deficits. Furthermore, edible insects' potential health benefits, such as their ability to promote immunological function, suggest that they could be employed as dietary supplements and substitutions in human diets to improve health and wellness. Alternative food sources that may supply equivalent nutrition and act as alternatives for animal meals must be investigated as the problem of sustainable food sources becomes more significant due to the environmental imprint of animal and plant proteins. The literature on house crickets and other edible insects as protein replacements in human diets is currently lacking. The goal of this study is to learn more about the nutritious makeup of edible insects, as well as their possible usage as meat alternatives or dietary supplements, health and wellness advantages, and potential function in exercise performance. Despite the environmental and economic advantages of insect-based foods, only a small number of studies have looked at their possible health-promoting effects for human consumption or animal feed. Other studies have looked at the nutritional makeup of edible insects and compiled data on their nutrient diversity [3].

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Edible insects have relatively high amounts of elements that are important in the human diet, and it is believed that, depending on the species, edible insects contain up to 80% of all required nutrients. In terms of carbohydrate, calories, saturated fat, and sodium, edible insects like the house cricket have been found to be much more nutritious than traditional diets like beef and chicken [4,5].

## Conclusion

Incorporating edible insects into human meals has the potential to benefit the environment as well as human health. Resources such as land and water may be conserved, greenhouse gas emissions could be decreased, and food security challenges might be addressed by substituting edible insects for other animal and plant feeds. Edible insects like the house cricket have a nutrient profile that includes enough essential amino acids, unsaturated fats, fibre, vitamins, and minerals, such as vitamin B12, iron, zinc, and calcium, to make them a viable alternative to animal and plant foods like pork, chicken, and beef in human diets. Edible insect's nutrient composition may allow them to boost human health through intake by enhancing gastrointestinal health, increasing immunological function, lowering the risk of bacterial infection, and even reducing chronic inflammation linked to cancer and cardiovascular disease. Edible insects have a wide range of potential nutritional and environmental benefits, and there are several paths for additional research into their use in human diets.

## Conflicts of Interest

The authors declare no conflict of interest.

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