Coffea arabica: A wonder gift to medical science

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ABSTRACT

In recent times, focus on plant research has increased all over the world and a large body of evidence has collected to show the immense potential of medicinal plants used in various traditional systems. More than 13,000 plants have been studied in recent years. Coffee is the most frequently consumed functional food around the globe. The average consumption per capita in the United States is approximately 4.4 kg annually at a cost of $164.71 per individual. These statistics provide compelling motivation to investigate the consequences of such large-scale consumption of this beverage. Coffee also has a rich medical history. The therapeutic benefits of coffee are now supported by a rapidly growing and significant level of scientific validation. Coffee is a medium-sized tree of the Rubiacea family, living up to 25 years, and grows to a height of 6–15 m. Traditionally, different parts of the coffee plants are used for influenza, anemia, edema, asthenia and rage, hepatitis and liver troubles, externally for nervous shock, as a stimulant for sleepiness and drunkenness, as an antitussive in flu and lung ailment, as a cardiotonic and a neurotonic and for asthmas. The present review on *Coffea arabica* aims to compile data generated through the research activity using modern scientific approaches and innovative scientific tools in recent years and potential clinical applications of the functional food that is humbly known as the coffee bean. The data in the present review have been organized in various sections according to pharmacological activities. One section in the present review deserves special mention, i.e. on diabetes, as the World Health Organization stated diabetes as a basic health indicator. The number of patients with this ailment continues to increase at the rate of about 1 million new patients per year.

Key words: Caffeine, chlorogenic acid, coffee, diet, insulin sensitivity, prevention, type 2 diabetes

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INTRODUCTION

Coffee *(Coffea arabica)* is the second-largest worldwide commodity, overshadowed only by crude oil. Without question, coffee is the most frequently consumed functional food around the globe. In the United States alone, there are 108 million coffee consumers,[1] and these numbers represent only a fraction of the global population, large numbers of whom incorporate coffee as a staple in their cultural practices. The National Coffee Association reported that in 2000, 54% of the U.S. adult population drank coffee.[2] The average consumption per capita in the United States is approximately 4.4 kg annually, at a cost of $164.71 per individual. Among the U.S. coffee drinkers, the average consumption is 3.1 cups of coffee per day.[2] These statistics provide compelling motivation to investigate the consequences of such large-scale consumption of this beverage. What follows is a review of some of the most recent research into the active constituents and potential clinical applications of the functional food that is humbly known as the coffee bean Coffee also has a rich medical history. The therapeutic benefits of coffee are now supported by a rapidly growing and significant level of scientific validation. The epidemiologic significance of the research in the field of coffee cannot be overstated, considering the prevalence of coffee ingestion among the people of the world.

Coffee is a medium-sized tree of the Rubiacea family. The plants can live up to 25 years and grow to a height of 6–15 m. In the first century, it was cultivated in Arabic countries, and then later in Iran and India. The main producers of this plant currently are Brazil and Columbia.[3]

TRADITIONAL MEDICINAL USES

In Brazil, the decoction of the seed is taken