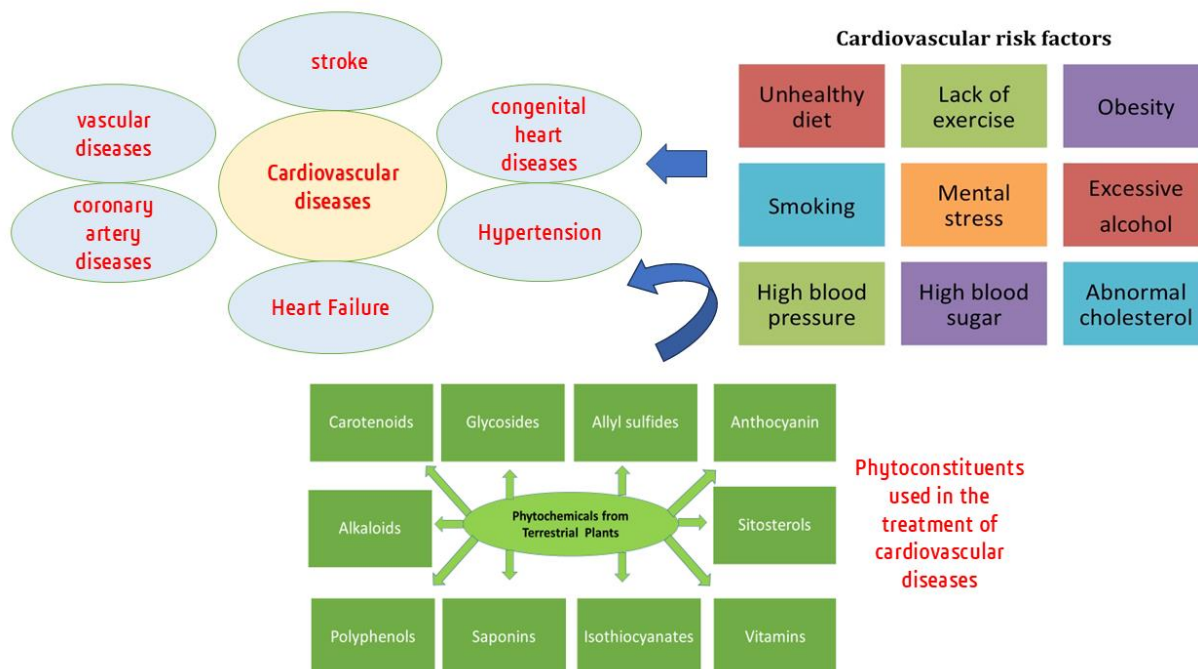


Chapter No. 3

CARDIOVASCULAR DISEASES AND PHYTOCONSTITUENTS: THE FUTURE PERSPECTIVESAmbreen Aleem^{*1}, Syed Adil Hussain Shah¹, Samia Latif Rana¹, Aqsa Aslam¹.

Department of Pharmacology, Faculty of Pharmacy, Bahauddin Zakariya University, Multan, Pakistan.

^{*}Corresponding author email: ambreen.aleem@bzu.edu.pk**GRAPHICAL ABSTRACT**

Abstract: A significant public health concern worldwide has recently arisen in the form of cardiovascular disease (CVD), also known as heart disease. People's lives are shortened, their quality of life is diminished, and national health expenditures are depleted by cardiovascular disease. Cardiovascular disease is associated with diabetes, obesity, inactivity, high blood pressure, smoking, poor diet, and excessive alcohol consumption. The risk of contracting COVID-19 is significantly increased for individuals with a history of cardiovascular disease. The risk of cardiovascular noncommunicable diseases is elevated by environmental stressors, including noise, air pollution, poor urban city planning, nocturnal artificial lighting, and climate changes. Cardiovascular diseases encompass a variety of conditions, such as hypertension, stroke, coronary artery disease, vascular diseases, and congenital heart illnesses. The World Health Organization (WHO) is advocating for the widespread use of traditional natural remedies in developing countries to address the increasing incidence of chronic maladies, such as cardiovascular disease (CVD). Consequently, it is imperative to investigate herbal cardiovascular medications. Cardiovascular and lipid-lowering activity is exhibited by *Allium cepa* (onion), *Terminalia arjuna* Wight, *Ocimum sanctum* L. (Tulsi), *Curcuma longa* L. (turmeric), *Commiphora mukul* Engl. (guggul), and *Trigonella foenum-graecum* (fenugreek).

The chemical structure and function of phytochemicals, which encompass polyphenols, flavonoids, terpenoids, alkaloids, and plant sterols, are diverse. Eugenol, curcumin, carotenoids, tocotrienols, cucurbitacins, sulforaphane, naringenin, resveratrol, quercetin, and catechin are among the phytochemicals that are used as cardioprotective agents. Additional preventative and therapeutic options for cardiovascular disease will be provided by ongoing research into the mechanisms of action and medical applications of these compounds. These perspectives underscore endeavors to develop cardiovascular disease therapies that are more effective and specific by utilizing phytochemicals and other natural products.

Keywords: Cardiovascular diseases, Cardioprotective phytoconstituents.

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