IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 25, Issue 2 Ser. 1 (February. 2026), PP 16-19
www.iosrjournals.org

"Yoga" And Its Benefitial Effect On Cardiovascular System"

Jeyashri M, Manopriya T, Rekha.K, And, Sheriff D.S
Department Of Physiology,
Dhanalakshmi Sreenivasan Medical College And Research Institute
Samayapuram, Tamilnadu
Anna Medical College, Mauritius

Abstract
Yoga is an unconventional form of physical exercise that has been practiced over a long time in the Indian subcontinent. It has gained immense popularity all over the world. Its possible contributions to healthy living have been studied. Cardiovascular disease continues to be the leading cause of morbidity and mortality around the world. The clinical effects and the benefits of yoga on cardiovascular system are reviewed and the potential role of yoga in rehabilitation of heart.
Keywords - *Yoga, cardiovascular disease, rehabilitation of heart*

Date of Submission: 25-01-2026 Date of Acceptance: 05-02-2026

I. YOGA – Meaning And Definition

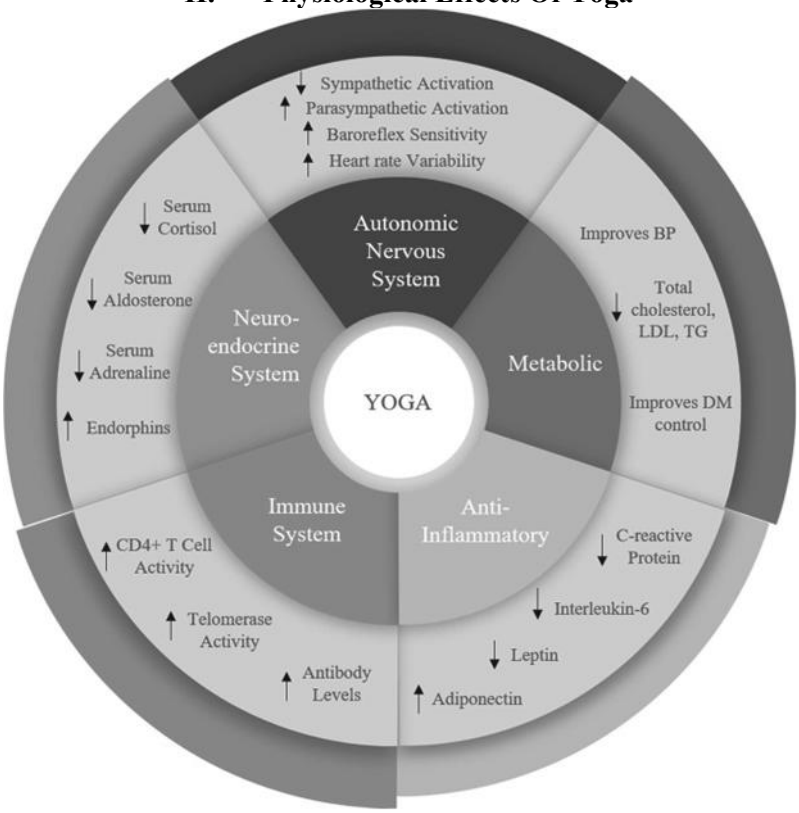
"YOGA" is a Sanskrit term meaning "union" or "connection".

It refers to the union of the soul i.e., "atman" to the god i.e., "parmataman". It is the combination of physical postures "asana", breathing exercises "pranayama" and meditation "dhyana" which are performed to attain harmony between the body, mind, and soul with the ultimate goal of liberation "moksha" of the soul. [1-3]

Source Text	Approx. Date	Definition of Yoga
Vaisesika sutra	c. 4th century BCE	"Pleasure and suffering arise as a result of the drawing together of the sense organs, the mind and objects. When that does not happen because the mind is in the self, there is no pleasure or suffering for one who is embodied. That is yoga"
Katha Upanishad	last centuries BCE	"When the five senses, along with the mind, remain still and the intellect is not active, that is known as the highest state. They consider yoga to be firm restraint of the senses. Then one becomes un-distracted for yoga is the arising and the passing away"
Bhagavad Gita	c. 2nd century BCE	"Be equal minded in both success and failure. Such equanimity is called Yoga" "Yoga is skill in action" "Know that which is called yoga to be separation from contact with suffering"
Yoga Sutras of Patanjali	c. first centuries CE	1.2. *yogas chitta vritti nirodhah* - "Yoga is the calming down the fluctuations/patterns of mind" 1.3. Then the Seer is established in his own essential and fundamental nature. 1.4. In other states there is assimilation (of the Seer) with the modifications (of the mind).
Sravakabhumi, a mahayana buddhist Yogacara work	4th century CE	"Yoga is fourfold: faith, aspiration, perseverance and means"
Kaundiya's Pancarthabasya on the Pasapatasutra	4th century CE	"In this system, yoga is the union of the self and the Lord"
Yogasataka, a Jain work by Haribhadra suri	6th century CE	"With conviction, the lords of Yogins have in our doctrine defined yoga as the concurrence (*sambandhah*) of the three [correct knowledge (*sajjñana*), correct doctrine (*saddarsana*) and correct conduct (*saccaritra*)] beginning with correct knowledge, since [thereby arises] conjunction with liberation....In common usage this [term] yoga also [denotes the Self's] contact with the causes of these [three], due to the common usage of the cause for the effect."
Linga Purana	7th-10th century CE	"By the word 'yoga' is meant nirvana, the condition of Shiva."

Brahmasutra – bhasya of Adi shankara	c. 8th century CE	"It is said in the treatises on yoga: 'Yoga is the means of perceiving reality' (*atha tattvadarsanabhyupāyo yogah*)"
Yogabija, a Hath yoga work	14th century CE	"The union of apana and prana, one's own rajas and semen, the sun and moon, the individual Self and the supreme Self, and in the same way the union of all dualities, is called yoga. "

II. Physiological Effects Of Yoga



A lot of studies support the favorable neurohumoral effects of yoga such as decreased serum cortisol, catecholamines and aldosterone level. Yoga and meditation have been found to increase melatonin, gamma amino butyric acid and some other neurotransmitters.

There is a decrease in stress markers such as 8- hydroxy deoxyguanosine and an increase in endorphin levels. Yoga has been shown to have an anti-inflammatory and insulin sensitizing effects by increasing adiponectin levels and decreasing leptin resistance.[4-6]

III. Yoga As Stress Outlet

One of yoga's clearest benefits to the heart is its ability to relax the body and mind. Emotional stress can cause a cascade of physical effects including the release of cortisol and adrenaline which narrows the arteries and causes hypertension. The deep breathing and mental focus of yoga can offset this stress.Worry and depression commonly follow a cardiac event. As a part of overall treatment plan yoga can help manage this stress.[7]

IV. Yoga As Smoking Cessation Aid-[4-12]

"According to the data from the INTERHEART study, smoking ranks second only to hypercholesterolemia as the strongest risk factor for myocardial infarction.

By targeting stress and behavioral urges associated with the craving, yoga is increasingly being recognized as a promising complimentary therapy for smoking cessation."

"Bock et al studied the efficacy of yoga as a complimentary therapy for smoking cessation in 55 women who received an 8-week group based cognitive behavioral therapy and were randomized to either a twice weekly Vinyasa yoga program or wellness program (control group). Seven-day point-prevalence abstinence rates were significantly higher in yoga group compared with controls.

In a 2013 systematic review of 14 clinical trials, including 8 RCTs, on the effect of mind-body interventions on smoking cessation, Carim-Todd et alreported favorable changes in smoking behavior and

predictors of smoking behavior with these interventions. Of the 14 studies included in this meta-analysis, only 3 assessed the effects of yoga on smoking cessation. Chu et al, using published literature on risk factor reductions through diverse lifestyle interventions (ie, walking, Mediterranean diet, and group therapy smoking cessation) found in the base-case analysis, concluded that yoga was associated with the largest 10-yr CV disease risk reduction (maximum absolute reduction 17% for the highest-risk individuals)."

V. Yoga For Primary Prevention Of CVD

Modern lifestyle stresses have been shown to be a major contributory factor to many diseases including CVD. A US based study has demonstrated that mindfulness-based stress reduction (MBSR) such as yoga, reduced the average number of visits to primary care physicians in inner city areas suggesting that yoga may contribute to general health and particularly in cardiac health in population that are subject to mental stress. Several studies suggest that yoga may significantly improve risk factors for CVD like body weight, lipid profile, blood pressure, smoking, psychological stress and type 2 Diabetes Mellitus.

In addition to this, in a recent published scientific statement on alternative methods to lower blood pressure and reduce CVD risk, the American Heart Association (AHA) reported that Transcenderital Medication techniques may be considered in clinical practices to lower BP. The AHA also reported research that TM may also reduce heart attacks, strokes and deaths in CVD patients.

VI. Effect Of Yoga On Heart Failure[7-12]

"Increased neurohormonal activation via the sympathetic nervous system and the Renin Angiotensin system is the key factors in the progression of heart failure. Drugs that block these systems have shown the mortality benefits in patients with chronic Heart Failure.

Through its modulatory effects on the Autonomic Nervous System yoga is known to reduce Heart Rate and Blood Pressure in patients with Heart Failure. Not only this, but Yoga also improves physical function measures such as balance, strength and endurance."

Arrythmias [7-12]

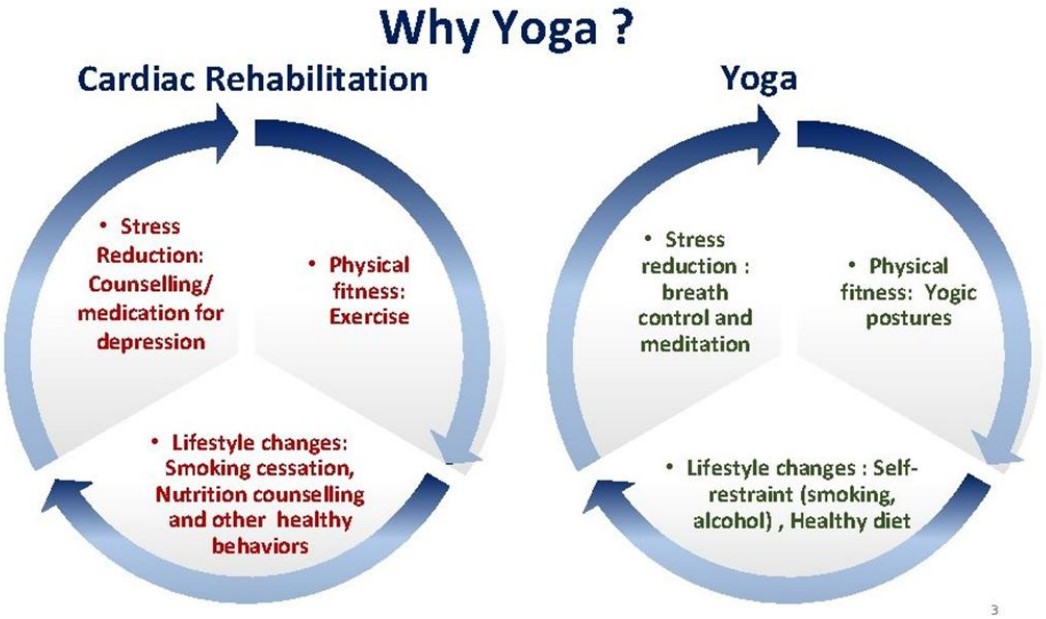
"Increased automaticity, re entry and triggered activity are key factors in initiation and maintenance of cardiac arrythmias. Yoga can potentially lower arrythmias by decreasing sympathetic nervous system and promoting parasympathetic output thus decreasing automaticity."

"It was reported improved mental health scores in patients with paroxysmal atrial fibrillation after a 12-week program involving light movement and deep breathing."

The effects of yoga on other forms of fibrillation have not been studied to date.

Further research is necessary to establish the significance of yoga as a potential therapeutic option in management of arrythmias."

VII. Yoga For Cardiac Rehabilitation



VIII. Challenges

Despite of the numerous benefits of yoga, incorporating it for cardiac rehabilitation has its own problems.

There is lack of guidance for standard practices. The choice of the style, intensity and a proper instructor, modifications depending upon each patient's condition and requirement are crucial for its success.

While yoga maybe accepted in the urban population, but lack of trained instructor and adequate resources can be a limitation for its incorporation in rural settings.

The role of instructors is critical for appropriate outcomes but it may be difficult to assure competence, particularly with respect to CR patients.

IX. Limitations For Yoga Studies

Although yoga has been demonstrated to be useful in CVD and several other Cardiovascular conditions, there are several limitations.

Most of the studies have small sample size, many have absence of adequate controls and have non uniform methodologies.

Large multicentric randomized trials are needed to confirm these findings.

Nevertheless, Yoga is a cheap, simple technique without any side effects and therefore could be used as a method of prevention of cardiovascular complications and several other conditions.

References

[1]. Twinkle. Effects Of Yogic Practices On Different Systems Of Human Body. J Adv Sch Res Allied Educ. 2015:10(20). ISSN 2230-7540.
[2]. Kiecolt-Glaser JK, Christian L, Preston H, Et Al. Stress, Inflammation, And Yoga Practice. Psychosom Med. 2010;72(2):113–121.
[3]. Cramer H, Lauche R, Haller H, Steckhan N, Michalsen A, Dobos G. Effects Of Yoga On Cardiovascular Disease Risk Factors: A Systematic Review And Meta-Analysis. Int J Cardiol. 2014;173(2):170–183.
[4]. Bock BC, Fava JL, Gaskins R, Et Al. Yoga As A Complementary Treatment For Smoking Cessation In Women. J Womens Health (Larchmt). 2012;21(2):240–248.
[5]. Carim-Todd L, Mitchell SH, Oken BS. Mind-Body Practices: An Alternative, Drug-Free Treatment For Smoking Cessation? A Systematic Review Of The Literature. Drug Alcohol Depend. 2013;132(3):399–410.
[6]. Chu P, Pandya A, Salomon JA, Goldie SJ, Hunink MG. Comparative Effectiveness Of Personalized Lifestyle Management Strategies For Cardiovascular Disease Risk Reduction. J Am Heart Assoc. 2016;5:E002737.
[7]. Lakkireddy D, Atkins D, Pillarisetti J, Et Al. Effect Of Yoga On Arrhythmia Burden, Anxiety, Depression, And Quality Of Life In Paroxysmal Atrial Fibrillation: The YOGA My Heart Study. J Am Coll Cardiol. 2013;61(11):1177–1182.
[8]. Pal A, Srivastava N, Tiwari S, Et Al. Effect Of Yogic Practices On Lipid Profile And Body Fat Composition In Patients Of Coronary Artery Disease. Complement Ther Med. 2011;19(3):122–127.
[9]. Cramer H, Lauche R, Haller H, Dobos G, Michalsen A. A Systematic Review Of Yoga For Heart Disease. Eur J Prev Cardiol. 2015;22(3):284–295.
[10]. Krishna BH, Pal P, G K P, Et Al. Effect Of Yoga Therapy On Heart Rate, Blood Pressure And Cardiac Autonomic Function In Heart Failure. J Clin Diagn Res. 2014;8(1):14–16.
[11]. Yusuf S, Hawken S, Ounpuu S, Et Al. Effect Of Potentially Modifiable Risk Factors Associated With Myocardial Infarction In 52 Countries (The INTERHEART Study): Case-Control Study. Lancet. 2004;364(9438):937–952.
[12]. Cramer H, Lauche R, Haller H, Dobos G, Michalsen A. A Systematic Review Of Yoga For Heart Disease. Eur J Prev Cardiol. 2015;22(3):284–295.