

# Exercise Was Effective In Preventing Deterioration of Underlying Disease

Chris Pratt\*

Department of Vascular Surgery, University of Catharina, Eindhoven, The Netherlands

\*Corresponding author: Chris Pratt, Department of Vascular Surgery, University of Catharina, Eindhoven, The Netherlands, E-mail: Pratt\_Ch@yahoo.com

**Received date:** April 25, 2025, Manuscript No. IPJVES-22-13816; **Editor assigned date:** April 28, 2022, PreQC No. IPJVES-22-13816 (PQ); **Reviewed date:** May 11, 2022, QC No. IPJVES-22-13816; **Revised date:** May 21, 2022, Manuscript No. IPJVES-22-13816 (R); **Published date:** May 28, 2022, DOI: 10.36648/ J Vasc Endovasc Therapy.7.5.79

**Citation:** Pratt C (2022) Exercise Was Effective In Preventing Deterioration of Underlying Disease. J Vasc Endovasc Therapy: Vol.7 No.5: 79

## Description

We included any exercise programmer or regimen used for treatment of IC, such as walking, skipping, and running. Inclusion of trials was not affected by duration, frequency, or intensity of the exercise programmer. Outcome measures collected included treadmill walking distance (time to onset of pain or pain-free walking distance and maximum walking time or maximum walking distance), Ankle Brachial Index (ABI), quality of life, morbidity, or amputation; if none of these was reported, we did not include the trial in this review. Our goal was to determine whether an exercise programmer was effective in alleviating symptoms and increasing walking treadmill distances and walking times in people with intermittent claudication. Secondary objectives were to determine whether exercise was effective in preventing deterioration of underlying disease, reducing cardiovascular events, and improving quality of life.

## Intermittent Claudication

We included two new studies in this update and identified additional publications for previously included studies, bringing the total number of studies meeting the inclusion criteria to 32, and involving a total of 1835 participants with stable leg pain. The follow-up period ranged from two weeks to two years. Types of exercise varied from strength training to pole striding and upper or lower limb exercises; supervised sessions were generally held at least twice a week. Most trials used a treadmill walking test for one of the primary outcome measures. The methodological quality of included trials was moderate, mainly owing to absence of relevant information. Most trials were small and included 20 to 49 participants. Twenty-seven trials compared exercise versus usual care or placebo, and the five remaining trials compared exercise versus medication (pentoxifylline, iloprost, antiplatelet agents, and vitamin E) or pneumatic calf compression; we generally excluded people with various medical conditions or other pre-existing limitations to their exercise capacity.

High-quality evidence shows that exercise programmes provided important benefit compared with placebo or usual care in improving both pain-free and maximum walking distance in people with leg pain from IC who were considered to be fit for exercise intervention. Exercise did not improve ABI, and we found no evidence of an effect of exercise on amputation or

mortality. Exercise may improve quality of life when compared with placebo or usual care. As time has progressed, the trials undertaken have begun to include exercise versus exercise or other modalities; therefore we can include fewer of the new trials in this update. Claudication, a manifestation of systemic atherosclerosis and accompanying peripheral vascular disease, is characterized by pain induced by walking in one or both legs; it primarily affects the calves. Claudication usually does not abate with continued walking and is relieved only by rest. Since the effects of approved medication are usually limited, exercise programs have been developed to treat this painful condition. This review discusses the rationale for an exercise program for the patient with claudication, with a focus on pathophysiology and the effect of training. A general population sample of adult men and women was followed biennially over 14 years during which time 79 men and 46 women developed initial symptoms of intermittent claudication.

## Multiplicative Increase

Risk factors for intermittent claudication (IC) were studied in 54 patients--that is, all patients with IC on the lists of two general practices--and 108 controls. Smoking was the factor most strongly associated with the development of IC, but systolic and diastolic blood pressures and concentrations of triglyceride, urate, and fibrinogen were all significantly higher among the patients with IC than the controls. The presence of more than one factor appeared to be associated with a multiplicative increase in risk. Cholesterol, an important risk factor for ischemic heart disease, was not associated with an increased risk of IC. IC was present in about 2% of the men and 1% of the women, who were aged 45-69 years. These findings suggest that IC, a common and disabling manifestation of atherosclerosis, may be largely preventable. Lifestyle changes and cardiovascular prevention measures are a primary treatment for intermittent claudication (IC). Symptomatic treatment with vasoactive agents (Anatomic Therapeutic Chemical Classification (ATC) for medicines from the World Health Organization class CO4A) is controversial. The fate of 257 consecutive patients (100 women) aged 36-85 years (mean 65) first seen with intermittent claudication in 1977 was analysed after a mean of 6.5 (SD 0.5) years. When first seen none of the patients complained of rest pain or had ulcers or gangrenous lesions on the feet. At follow up 113 of the patients (44%) had

died. Causes of death were no different from those in the general population. Mortality was twice that of the general population matched for age and sex. Mortality among the men was twice that among the women. In men under 60 mortality was four times that expected. The rate of clinical progression of the arteriosclerotic disease (that is, rest pain or gangrene) of the worst affected leg was 7.5% in the first year after referral. Thereafter the rate was 2.2% a year. An ankle systolic blood pressure below 70 mm Hg, a toe systolic blood pressure below 40 mm Hg, or an ankle/arm pressure index below 50% were individually significantly associated with progression of the arteriosclerotic disease. These findings show the importance of peripheral blood pressure measurements in the management of patients with intermittent claudication due to arteriosclerotic disease. Hospital studies were used to identify those characteristics of angina pectoris, cardiac infarction and

intermittent claudication which most effectively distinguish these conditions from other causes of chest or leg pain. These are used to formulate precise definitions for epidemiological use and to form the basis of a standardized questionnaire. Agreement on the use of such a questionnaire would permit international comparisons of the prevalence of these conditions, as defined. This would not hinder the collection of additional information, as required in particular studies.

As compared with physicians' diagnoses, the questionnaire had high specificity and reasonably good sensitivity. Interpretation of subjects' answers presents no serious difficulties. There is evidence that the diagnosis of angina pectoris presents special problems in populations with a high prevalence of chronic bronchitis.