Chronic venous disease in the lower limbs is one of the most common diseases affecting adults in the industrialized world. It has been estimated that 40% of the US population has some form of venous disease, and that 4.6 million work-days are missed due to illnesses related to venous diseases. However, the significance of venous disease (excepting venous thrombosis and pulmonary embolism) is not appreciated by a majority of physicians and health care workers since it is rarely limb- or life-threatening.

Epidemiologic studies can provide information on the spectrum and frequency of venous disease in the population and help physicians better understand the scope and incidence of the disease. Such information not only contributes toward an understanding of the mechanisms that cause the clinical sequelae of venous disease; it also assists in the development of screening and treatment strategies. To better understand the impact of venous disease on productivity in the form of lost work-days, medical costs, and its cost on society in general, we must understand the prevalence and incidence of venous disease in the general population and be able to identify subgroups who have or who are likely to develop venous disease. Prevalence of venous disease (e.g., a cross-sectional measurement of the number of cases in a population from one point in time) has been calculated extensively in Europe and Israel. To date, unfortunately, there have been few studies that have focused on the incidence of venous disease in the US. Consequently, most information about the epidemiology of venous disease comes from Europe, where population demographics such as occupation, environment, and lifestyle differ in many ways from the United States. While the first major study of venous disease took place in the US National Health Survey of 1935–36, no recent study into the prevalence of venous disease in the US has been conducted. The incidence of venous disease, or its occurrence in a population longitudinally through time, has yet to be thoroughly explored in the Western world. Studies on rates of increase in venous disease in specific populations have been measured in New Guinea and other areas of the world that, in recent years, have rapidly become westernized and subject to changes in health status.

There are several reasons for the paucity of data on venous disease, the first due to the nature of the disease itself. Although venous disease has a high frequency in the US, there is debate as to whether or not a diagnosis of a non-morbid venous complaint is simply a normal variation in the population at large, much like a diagnosis of fibrocystic disease in a female patient. In addition, screening strategies for venous disease (i.e., ultrasound) can be costly and impractical for an entire population. Other, lower-cost screening tools, such as the physical examination, are often neglected by the physician who perceives venous disease as an insignificant problem or a “vanity complaint.”

Another difficulty in calculating venous disease rates lies in difficulties in definitions of scope. There is a broad spectrum of venous complaints, ranging from minor cosmetic blemishes to chronic venous ulcers and deep vein thrombosis, all of which are often grouped in the same category of diseases. To provide a precise evaluation of venous disease, it is important to clearly delineate between types
of venous complaints. Definitions of the types of venous disease and veins follow at the end of this section.

Finally, the pathogenesis of many venous complaints has only recently been elucidated. Because this information has not been widely understood, many physicians take a nihilistic approach in diagnosis and are unaware that treatment options exist for most types of venous complaints.

Definitions of Veins

Estimates of the prevalence of varicose veins depend on the definition of varicose veins – since dilated veins ranging from telangiectasias to huge varicosities may fall in the general category of varicose veins. The population under study must be defined as well, since risk factors such as age, sex, and number of pregnancies may change the incidence of varicose veins.

*Varicose vein* refers to any dilated, tortuous, elongated vein, irrespective of size.

*Telangiectasias* or *hyphen-webs* ("spider-veins") refer to intradermal varicose veins which are small and rarely symptomatic. Because of their relatively benign nature, the epidemiology of telangiectasias may or may not be included in papers describing the epidemiology of venous disease. Since telangiectasias are very common, studies that include these veins in their epidemiologic analysis will report a much higher incidence and prevalence of varicose veins than those that do not.

*Trunk veins* are the greater or lesser saphenous veins, or their named tributaries.

*Reticular veins* are subcutaneous veins that enter tributaries of trunk veins.

Prevalence of Venous Disease

Due to the variety of definitions of varicose veins and the numerous methods used in assessing venous disease, it is difficult to determine exact prevalence. One study conducted in a West London community used self-report questionnaires to find the incidence and distribution of venous disease for that community. A random sample of 2103 patients selected from three general practice sites were asked to complete a questionnaire on venous disease, including any previous self-report or physician diagnosis and usage of support hose. Of the 1338 returned questionnaires, 31% reported having some form of venous disease. Twenty-five percent reported having varicose veins, 5% noted a history of phlebitis, 4% had a current or prior leg ulcer, 4% percent reported venous thrombosis and 1% reported a pulmonary embolism.

A study based in Finland sought to assess the reliability of self-reporting of varicose veins. A random sample of 166 patients who previously reported having varicose veins using a self-report questionnaire were examined by a surgeon to determine what variables in the questionnaire predicted misclassification; that is, the self-reported variables which were unreliable in correlating a given condition to a diagnosis of varicose veins. The researchers found that the only statistically significant variable associated with misclassification was a positive reporting of family history of varicose veins, i.e., those patients who reported a family history of varicose veins were more likely to assume they had varicose veins when they did not. Other self-reported variables such as height, weight, occupational status and age did not appear to be subject to mis-classification.

Risk Factors for Varicose Veins

There are definite risk factors for varicose veins. Although there is disagreement about the significance of some of these factors, a strong argument can be made that a combination of several risk factors can be a strong predictor of varicose veins. Svrtinová *et al.* found several variables positively associated with a diagnosis of varicose veins. In a survey of 696 Czechoslovakian women employed at a large department store, 421 were diagnosed with varicose veins. Women who were older, had at least one pregnancy, who stood at work or who were obese had a statistically higher prevalence of trunk varices than their thinner, younger seated-worker counterparts. While mitigating factors such as differences in diet, economic status and genetic history must be taken into account, variables such as age