

## THE TREATMENT OF EXTRASYSTOLES

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Premature beats usually are of no clinical importance and seldom require treatment. Although they occur in many patients with organic heart disease, they are much more common in individuals with perfectly normal hearts and can never be interpreted as evidence of heart disease. Often they cause no symptoms even though they occur at frequent intervals. Certain individuals, however, and particularly those who are hypersensitive may complain of distinctly disagreeable sensations which result either from the premature beat itself or from the forceful systole which follows a long compensatory pause. Among the most common of these symptoms are an awareness of a pause in the heart's action followed by a sudden, forcible pulsation, a sensation of choking or fulness in the throat, a feeling that "the heart has suddenly risen into the throat," or momentary light-headedness. Other patients state that the heart seems to turn over in the chest, and an occasional person complains of sharp, sticking pain in the precordium. Symptoms such as these often cause great apprehension.

Frequently, no cause can be found for premature beats. There are, however, a number of factors which at times appear to be directly responsible, and it is advisable to investigate these possibilities in all cases, since their detection and correction may result in prompt disappearance of the irregularity. The most common causative factors are excessive nervous strain, excitement, fatigue, infectious diseases such as pneumonia, influenza, meningitis, and acute tonsillitis, chronic constipation, and individual susceptibility to tobacco, coffee, tea, and alcohol. Organic heart disease, either with or without congestive heart failure, appears to be directly responsible at times, and occasionally there is an apparent relationship to focal infection about the teeth or in the tonsils or nasal sinuses. Although physical activity usually causes the irregularity to diminish or disappear, exertion is the most important precipitating cause in certain patients. Occasionally, one encounters very unusual relationships as in the case of a patient who could invariably induce frequent premature beats by eating a small amount of chocolate candy. Digitalis will cause extrasystoles whenever given in sufficient amounts.

A thorough history and physical examination are essential in the study of patients who have premature beats. Careful inquiry should be made concerning the customary mode of living, the average consumption of tea, coffee, alcohol, and tobacco, the hours of work and the stress and strain incident to the occupation, the presence of family or financial worries, the opportunities for recreation, the amount of sleep obtained,

the bowel habits, and the presence of other symptoms referable to the cardiovascular system. In the individual who is using coffee, tea, tobacco, or alcohol to excess, the giving up of these substances or even a reduction to a more nearly normal level may result in prompt disappearance of the arrhythmia. When worry and nervous strain are the apparent causes, the administration of mild sedatives and the institution of a simple program of recreation often prove very helpful. If physical fatigue appears to be a significant factor, the hours of sleep should be regulated and, whenever possible, a rest period after lunch should be arranged. It is important to remember that refractive errors and eye muscle imbalance may play a prominent rôle in the production of mental and physical fatigue. When constipation is present, appropriate dietary measures should be prescribed and an effort should be made to establish a regular habit-time for defecation.

In the physical examination, particular attention should be paid to evidence of focal infection and to the signs of organic heart disease. Caution must be exercised, however, in the matter of focal infection, for altogether too often the eradication of obvious foci fails to have the least influence on the premature beats. Premature beats occur at times in patients with organic heart disease but they are of no significance in prognosis. The onset of congestive heart failure may be responsible for an increase in their number or even for their initial appearance, and in such cases treatment by rest in bed and the administration of digitalis may result in their disappearance or a decrease in their frequency.

The development of premature beats during an acute infectious disease should not be a cause for concern. The cardiac rhythm becomes normal during convalescence and no special therapeutic measures are necessary.

In many individuals a careful history and physical examination fail to reveal a cause for the occurrence of extrasystoles. If the arrhythmia is not causing symptoms, no treatment is necessary. If symptoms are being experienced or if the patient has become apprehensive after chance discovery of the irregularity, reassurance that the condition is not due to organic heart disease and is of no importance may be all that is required. If this does not suffice, symptomatic measures may be employed. Simple sedatives such as the bromides or phenobarbital may be given in suitable doses two or three times a day and are often very effective. In the event that they do not give relief, one may administer quinidine sulphate in doses of three grains (0.2 gm.) two or three times a day. Numerous other preparations have been suggested from time to time, but it has been our experience that, if the sedatives and quinidine sulphate fail, nothing else will prove of value.

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In conclusion, whenever premature beats of which the patient is not aware are discovered during a physical examination, the individual should be told of their presence and should be fully instructed about their lack of importance. This course will serve to prevent the apprehension that might arise in the event of their later detection by the patient or by someone with limited knowledge of their clinical significance.