Sustained ventricular tachyarrhythmias and sudden death are particularly prevalent in patients with idiopathic dilated cardiomyopathy (IDC). In contrast to patients with ischemic heart disease, the value of electrophysiological stimulation (EPS) in patients with IDC has not yet been established. To clarify the role of EPS in these patients, we studied 19 patients (58 +/- 11 years) with IDC who had symptomatic ventricular tachycardia (VT) or ventricular fibrillation (VF). The mean left ventricular ejection fraction was 26 +/- 9%. Ten patients had survived out-of-hospital cardiac arrest, eight had documented sustained monomorphic VT and one patient had non-sustained VT associated with syncope. Thirteen of the 19 patients (68%) had their clinical ventricular tachyarrhythmias induced at EPS (12 VT, 1 VF). In nine of 13 patients (69%), the arrhythmias were subsequently suppressed during serial electrophysiological drug testing. During 17 +/- 11 months of follow-up, 10/19 (53%) patients experienced recurrence of their arrhythmias and nine out of 19 (47%) patients died; six died suddenly and three secondary to heart failure. There was no difference in arrhythmia recurrence between patients with and without inducible ventricular tachyarrhythmias at initial study. Furthermore, suppression of arrhythmia during serial testing did not predict outcome; recurrences were observed in five out of nine patients whose arrhythmias were suppressed.