Objective: We aimed to investigate whether the Prognos® device might be a useful tool in the diagnosis of disorders suspected to be due to dental amalgam fillings. Participants and Methods: A diagnostic case-control study was performed in 27 patients who complained about health problems attributed to amalgam (cases), 27 healthy volunteers with amalgam fillings (controls I), and 27 healthy amalgamfree volunteers (controls II). All participants were tested before and after application of 300 mg DMPS (2,3-dimercapto-1-propanesulfonic acid) with Prognos®, a diagnostic device for the energetic measurement of Traditional Chinese Medicine meridians. In addition, mercury was measured in blood, urine, and saliva, and a lymphocyte transformation test (LTT) was performed. Results: Diagnoses derived from the first and second Prognos® testing did not agree above chance (Cohen’s Kappa = -0.11, 95% confidence interval -0.33 to 0.10; p = 0.30). Agreement for secondary outcome measures was poor, too. Prognos® measurements did not differ between cases and controls. Correlations with measurements in urine, blood and saliva were low. Conclusion: In this study Prognos® could not be shown to be a useful tool in the diagnosis of disorders suspected to be due to dental amalgam fillings.