

Daith ear piercing and changes in migraine symptoms

Chris Blatchley MB BChir¹ & Arnold Wilkins DPhil²

1. London Migraine Clinic

2. University of Essex

OBJECTIVES: We report the first medical study of the change in migraine symptoms after Daith ear piercing.

DESIGN: Electronic questionnaires assessing qualitative and quantitative changes in migraine frequency and severity were administered before, during, and after the piercing.

SETTING: A long-established national chain of piercing studios in seven locations throughout the UK collaborated.

PARTICIPANTS: Between 1/8/22 and 14/11/22 a consecutive series of 133 participants sought a piercing for their migraines, of whom 119 consented to be contacted later by email. A follow-up questionnaire was sent on 15/01/23, 2-4 months after the piercing. Ninety of the 119(76%) completed the questionnaire: 84 female and 6 male, 19-69 years old (mean 43). They had suffered migraine for a median range of 11-20 years; 82/91(91%) had previously received a medical diagnosis of migraine; 58% had migraine with aura.

INTERVENTION: Experienced piercers inserted 100% titanium jewellery through the *crus helix* cartilage immediately above the auditory meatus, an area innervated by the auricular branch of the vagus nerve.

MAIN OUTCOME AT 2-4 MONTH FOLLOW-UP: The average incidence of migraine days for the whole group was reduced by 50% from 6.3 to 3.2 per month with no serious side effects, $p < .0001$.

DETAILED OUTCOMES: Qualitatively, 65/90(72%) reported that their migraines had “stopped”(13%) or the frequency was “much better”(59%). The frequency was “a little better” in 14/90(16%), and 11/90(12%) reported “no change”(9%) or “worse”(3%).

Quantitatively, for the group of 65 whose migraines had “stopped” or were “much better”: (1) the average incidence of migraine days was reduced by 69% from 5.5 to 1.7 per month, $p < .0001$; (2) the average monthly number of days off work or in bed was reduced by 73% from 3.1 to 0.8, $p < .0002$; (3) the average number of completely symptom-free days per month was increased by 71% from 9.8 to 16.7, $p < .0001$. Corresponding analyses for the remaining 25 who reported little or no improvement showed no significant change in these measures.

There was a negligible correlation (0.03) between expectation and reported outcome.

67/90 (74%) reported the effect “not wearing off” or “improving”; 5/90 (6%) reported “never had an effect”; 18/90 (20%) reported a reducing effect

COMPLICATIONS: 3/90 patients (3.4%) reported infection that required medical attention but not the removal of the piercing. Separately, prior to follow-up, 2 had had the piercing removed because of infection which then resolved.

CONCLUSION: Daith piercing is readily available and costs little. It merits further exploration as a migraine treatment.

(400 words including section headings)

