If you are prone to daily headaches, the possibility that they signal something rather more sinister than tension or migraine may have crossed your mind. And for those who worry a lot about their health, repeated reassurance from the family doctor may not, by itself, stamp out those niggling doubts.

Now research from the Institute of Psychiatry in London suggests that it is worth offering a brain scan to highly anxious patients with recurrent headache, because it ultimately saves a substantial amount of money.

The findings are based on 150 patients at a headache clinic, half of whom were offered a brain scan. In the short term (three months), scanned patients worried less that their headaches had a serious cause than patients who had not been scanned, although this difference had disappeared by 12 months.

But scanned patients who were very anxious, as judged by a validated scale (HADS), cost £465 less than patients who had not been scanned. They used fewer specialist services, and, furthermore, a third of the highly anxious patients who were not offered a scan got themselves scanned elsewhere over the next year.

The researchers conclude that while a scan does not provoke anxiety in patients, as has sometimes been suggested, it perhaps may do more to reassure the family doctor.

A normal scan result might enable them to manage very anxious patients more effectively by avoiding further unnecessary referrals and potentially inappropriate treatment, they say.