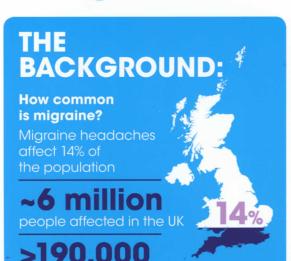
## Migraine study



migraine attacks each day. More common in females



#### What is the impact of migraines?

Migraine is the leading cause of disability among all neurological



More than 50% of migraine patients are unhappy with their current treatment





#### CONSULTATIONS

**NEUROLOGY CONSULTATIONS** 

In the UK, 3% of GP consultations and 30% of neurology consultations are for headache, with migraine the most

The financial burden of migraine on estimated at almost



### THE RESULTS: **Bio-Kult Probiotic**

Chronic Migraine: No. of attacks per month -Intervention Group

444444 4444

\*\*\*\*\* \*\*\*

555555

Episodic Migraine: No. of attacks per month -**Intervention Group** 

BEFORE

555555

5555

No change in placebo group!

#### Mean frequency of headaches

Time	Baseline	8 weeks
CM - probiotic	22	12 (Decreased by ~10 per month)
CM - placebo	19	19 (No change)
EM - probiotic	7	4 (Decreased by ~3 per month)
EM - placebo	7	7 (No change)

Martami, F., Togha, M., Seifishahpar, M et al The effects of a multispecies probiotic supplement on inflammatory markers and episodic and chronic migraine characteristics:



# A multi-strain probiotic (Bio-Kult® Advanced) in the management of chronic and episodic migraine headaches: a randomised double-blind, placebo-controlled trial

#### **Question:**

Is the multi-strain probiotic Bio-Kult® Advanced more effective than placebo at reducing frequency and severity of both chronic and episodic migraines?

#### **Methods:**

Chronic migraine (CM) = characterised by 15 or more headache days per month.

Episodic migraine (EM) = characterised by those with migraine who have 0 to 14 headache days per month.

100 patients suffering from CM (n=50) or EM (n=50), or as defined by International Headache Classification ICHD III criteria, were recruited to receive either the probiotic Bio-Kult® Advanced (14 bacteria strains; 4 billion CFU per day) or placebo capsules for 8 weeks (see flow chart).

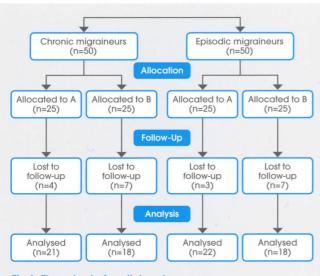


Fig 1. Flow chart of participants.

A = Probiotic group; B = Placebo group.

#### **Results:**

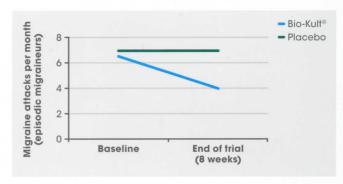
#### Chronic migraine:

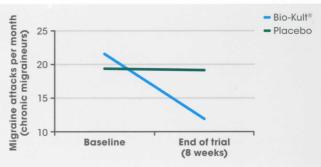
- In the probiotic group, 21/25 individuals completed the trial, whilst in the placebo group, 18/25 completed the trial
- By end of trial, mean frequency of attacks in probiotic group had fallen by 45% (~22 attacks per month  $\rightarrow$  ~12 attacks per month), significantly better than the fall of 1% in the placebo group (P<0.001)

Visual Analogue Scale (VAS)-assessed migraine intensity significantly improved over the course of trial in the probiotic group but not in the placebo group (31% reduction vs 2% reduction; P<0.001).

#### Episodic migraine:

- In the probiotic group, 22/25 individuals completed the trial, whilst in the placebo group, 18/25 completed the trial
- By end of trial, the mean frequency of attacks significantly reduced in the probiotic group compare with placebo group (40% reduction from baseline vs <1% change; P<0.001)
- Migraine intensity measured by visual analogue scale (VAS) was also significantly improved with probiotics compared with placebo (29% reduction vs 2% increase; P<0.001)</li>
- Migraine disability assessment score (MIDAS) by end of trial was significantly lower in probiotic group compared with placebo (~30% reduction vs ~7% increase; P<0.001)</li>





#### Conclusion:

The multi-strain probiotic Bio-Kult® Advanced achieved a significant reduction in the frequency of headaches, and migraine symptom severity in both groups.

