Harley Street medical practice:

The London Sleep Centre using polysomnography

The full polysomnography ecorded every standard physiological sleep measurement on a selection of passengers, including brainwaves, eye, abdominal, chest and hip leg movement. The study design followed established principles of clinical study – this was a cross-over study to assess the impact on sleep variables by two different seat sizes – 17 and 18 inches in a small sample of 6 healthy adults who had been previously screened for the presence of medical and sleep disorders. The cabin environment was structured to simulate as close as possible the true flight environment from the start including lighting to replicate sunset and sunrise, aircraft take-off and background sounds, in-flight entertainment and catering. (October 2013)

All participants in the study were of average BMI with no record of health or sleep issues and were kept blind to the purpose of the study. Each completed a series of nights sleep in flight simulations re-creating long haul economy passenger experience, all variables were kept constant apart from the width of the seat which changed between 17 and 18 inches.

Objective (Scientific Data) - Improvement in Sleep Quality variables by up to 53%

- The time it took to fall asleep (also called Sleep Onset Latency) showed an improvement of 14.7% (6 minutes) on the 18 inch seat;
- The number of awakenings after falling asleep (Wake After Sleep Onset – WASO)
  showed an average reduction of 28 minutes on the 18 inch seat
- Arousal Index – the most sensitive measure of SQ – measures number and frequency of disturbances to the brain waves during the course of the night – showed an average 53% improvement on the 18” seat
- Limb Twitches were reduced by 11% on the 18” seat

Subjective (participant data)

- 67% of study participants reported better Sleep Quality and 86% of participants reported improved Sleep Quantity on the 18 inch seat.