Some recent neurobiological models argue for a perception-memory continua along the visual ventral stream. This kind of model may help to explain the puzzling nature of synaesthesia (having elements of perception, memory and imagery), and its potential causes. People with the developmental form of synaesthesia report hyper-sensitivity in various perceptual domains but, curiously, acquired synaesthesia is linked to the opposite profile of hypo-sensitivity of perception. These basic differences in perception may promote the formation of synaesthetic associations but they also have consequences for memory. Synaesthetes have better performance on some tests of memory, but by no means all, and nor can their performance be attributed to their synaesthesia per se. An alternative hypothesis is that their memory performance is a result of changes in perceptual processing, rather than a direct outcome of having synaesthesia.