Startle reflex modulation in spider phobics: Effects of monaural left and right ear stimulation
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There is evidence that the startle reflex is sensitive to emotional valence. For example, the startle reflex is reliably potentiated during the perception of frightening pictures and diminished during perception of pleasant pictures. In line with this, de Jong et al. (1993) showed that the startle magnitude of spider phobics was larger in the presence of a live spider than in the presence of tasty food items.

In addition, several lines of research suggest that the right cerebral hemisphere is more involved in the processing of phobic material than the left hemisphere. Given the evidence that anxiety is lateralized in the central nervous system, it might well be that affect-induced startle modulation is also lateralized. If startle modulation is, indeed, a lateralized phenomenon, this would imply that startle reflexes elicited by left ear stimulation might index affective valence more sensitively than those elicited by right ear probes or binaurally. Apart from this practical implication, a startle pattern indicating fear potentiation only for left ear probes would add to the evidence that the right hemisphere in particular is involved in the development and maintenance of anxiety.

To explore this issue, we presented monaural probes to 20 women who were spider phobic and who had applied for therapy. This was done in the presence of a live spider, a book, and tasty food items. Both left and right ear probes elicited blink magnitudes which increased linearly from pleasant to unpleasant foreground stimuli. Moreover, the affect-startle relationship was equal for right and left ear probes. Thus, no evidence emerged to support the idea that the affect-startle relationship is predominantly a function of the left ear.

Response-processes in ADHD and normal control children, a psychophysiological study
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In this study a variant of the Eriksen flanker task was used to investigate whether deficits in response-related processes could be found in children with Attention-Deficit-Hyperactivity-Disorder (ADHD). Besides performance, the following physiological measures were recorded to study stimulus evaluation, response preparation (at the central level) and response activation (peripheral processes): Event-related brain potential (ERP); lateralized readiness potential (LRP); electromyographic activity (EMG).

Stimuli consisted of a single target arrow (to which a left or right hand button press was required), or the target flanked by arrows that were incongruent, congruent or neutral with the target. The task was performed by 14 ADHD and 14 control children and P3, LRP and EMG measures were recorded. ADHD subjects experienced a significantly larger interference effect from incongruent stimuli in the sense that they made more errors than normal controls. Significant interference effects from incongruent stimuli were present for all dependent variables, but in both groups. No group differences in reaction time, stimulus evaluation (P3 latency), response preparation (LRP onset latency) or response activation (EMG onset latency) were found.

It was concluded that, compared to control children, the presence of incongruent flankers caused a larger reduction of accuracy in ADHD children. However, when a correct response is given, ADHD subjects do not appear to be slower in stimulus evaluation, response preparation or activation processes. In contrast to what has been found in normal adults, patterns of incorrect response activation as induced by incongruent flankers could not be detected in the LRP's of ADHD and normal control children.

The modulation of color-cued selective attention event-related potentials (ERPs) by test connectivity
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Recent evidence has suggested that ERPs associated with color-cued selective attention may be modulated by language variables. In contrast to the selection negativity previously reported in color-cued selection studies, a long duration mid-latitude positivity associated with attention (selection positivity) was recently reported in a color-cued selective attention paradigm utilizing connected text stimuli (Nobre & McCarthy, 1987). These experiments investigated this polarity reversal of color selective attention effects on ERPs.