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feeding male and females were similar. The leptin levels in DT restricted animal were higher in dark phase but lower in light phase. Also leptin level similar in DT restricted group compared with *ad libitum* group.

Conclusion: These results show that adult male and female gerbils are more sensitive to NT and DT food restriction and multiple potential environmental cues can be utilized to affect metabolic and hormonal status in adult Mongolian gerbil.

PO.173

Cortical voice processing in cochlear-implanted children

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Introduction: In those with prelingual deafness, the use of cochlear implants can restore both auditory input to the auditory cortex and the ability to acquire spoken language. Language development is strongly intertwined with voice perception. The aim of this electrophysiological study was to investigate human voice processing with cortical auditory evoked potentials (AEPs) in cochlear-implanted (CI) children.

Patients and method: Eight CI children, aged 4–12 years, with good auditory and language performance, were investigated with cortical AEPs and compared with 8 normal-hearing age-matched controls. The auditory stimuli were non-speech vocal sounds (laughing, sighing, coughing) and non-vocal sounds from the human environment (such as telephones, alarms, cars, bells) and nature (such as streams and wind). Independent component analysis was used to minimize the cochlear implant artifact in cortical AEPs.

Results: Fronto-temporal positivity to voice was found in normal-hearing children with a significant effect in the 140–240 ms latency range. In the CI children group, we found a positive response to voice in the 170–250 ms latency range with a more diffuse and anterior distribution than in the normal-hearing children.

Conclusion: Response to voice was recorded in CI children. The topography and latency of response to voice differed from that recorded in normal-hearing children. This finding argued for cortical voice processing reorganization in congenitally deaf children fitted with a cochlear implant.

PO.174

Precision of a pointing movement performed with either the dominant or non-dominant hand is linked to the timing of anticipatory postural adjustments

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Introduction: It is a common experience to feel motor awkwardness when performing a pointing movement with the non-preferred limb, which is known to be associated to less precise movements. Here we provide evidence that this last behaviour partly stems from changes in the temporal organization of the Anticipatory Postural Adjustments (APAs) in the non-preferred side.

Materials and methods: We investigated the effect of lateralization on APAs in Biceps Brachii, Triceps Brachii and Anterior Deltoid, which stabilize the arm when performing a pen-pointing movement (prime mover Flexor Carpi Radialis). Moreover, we analysed the elbow and wrist kinematics as well as the precision of the pointing movement.

Results: The mean kinematics of wrist movement and its latency, with respect to prime mover recruitment, were similar in the two sides, while APAs in Triceps Brachii, Biceps Brachii and Anterior Deltoid were less anticipated when movements were performed with the non-dominant (20–30 ms) versus dominant hand (60–70 ms). APAs in the non-dominant limb were associated with an altered fixation of the elbow, which showed a higher excursion, and with a more scattered pointing error (non-dominant: 16.3 ± 1.7 mm versus dominant: 10.1 ± 0.8 mm).

Discussion: By securing the dynamics of the more proximal joints, an appropriate timing of the intra-limb APAs seems necessary for refining the voluntary movement precision. The linkage between APAs, elbow fixation and movement accuracy also agrees with the recent suggestion that APAs and prime mover recruitment are driven by a shared motor command, which strives to obtain an accurate pointing.