

Can girls with Rett syndrome (re)learn gross motor skills after regression?

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Objective: To study changes in gross motor skills (GMskills) in children with Rett syndrome (RTT) in order to improve counselling including targeted habilitation.

Methods: We reviewed records and clinical evaluations regarding sitting, standing and walking in a cohort of 25 girls, age three to 12 years with RTT and a *MECP2* mutation. The quality of movement was not reviewed. Data were related to parent-reported time of regression.

Results: Before regression some of the girls could: sit independently 88%/22 girls, stand with support 36%/9 and independently 32%/8, walk with support 24%/6 and independently 32%/8. Five girls (20%) lost GMskills during regression: sit (1), stand with support (2) or independently (2), walk with support (1) or independently (2). During regression four girls learned skills: to sit (1), stand independently (3), walk independently (2). After regression four girls relearned skills: to sit (1), stand with support (1) and independently (1), walk with support (1) and independently (1); five girls learned new GMskill: standing with support (3) and independently (1), walk with support (1) and independently (1). Overall, the study showed that six girls did not lose but learned new GMskills during or after regression; three girls lost, relearned and learned; one lost and relearned; one lost without relearning or learning and 14 remained unchanged.

Conclusion: The study shows that girls with RTT can develop GMskills through and post regression and emphasises the importance of continued and targeted physiotherapeutic counselling and training not only for maintenance but also for promotion of new GMskills.

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2. Neul JL, Lane JB, Lee HS et al. Developmental delay in Rett syndrome: data from the natural history study. *J.Neurodev.Disord.* 2014;6(1):20.