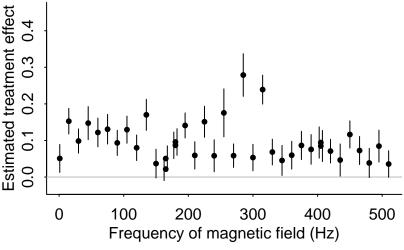Estimates from bias−correlated hierarchical model