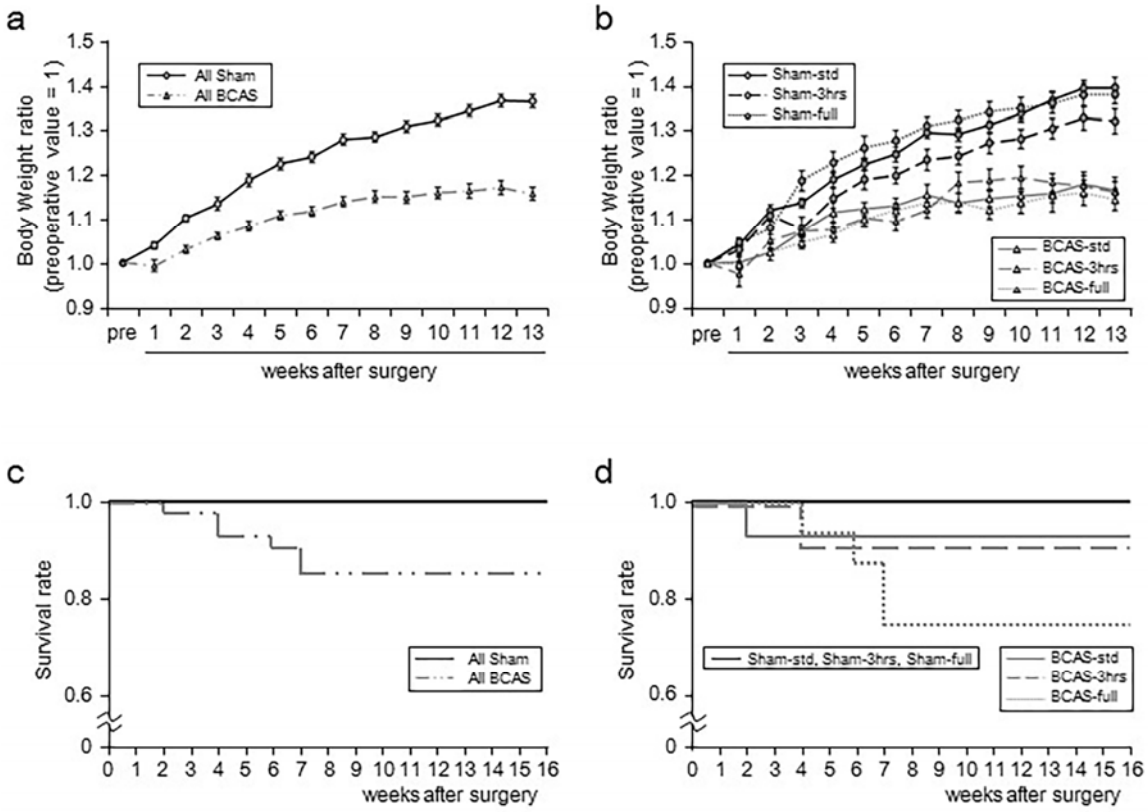
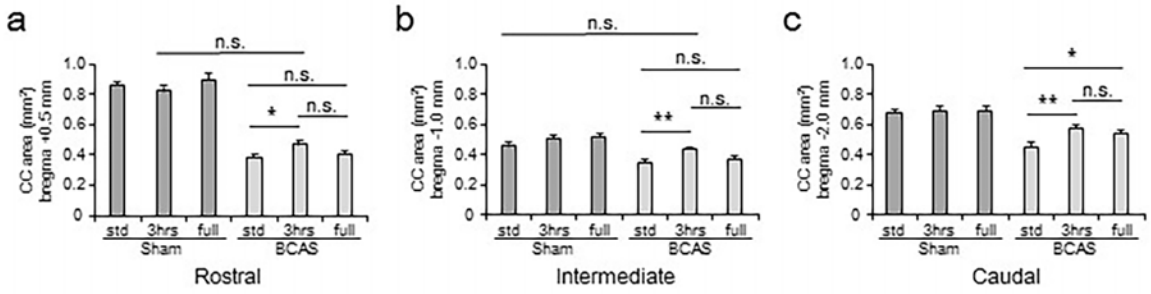


Supplementary Figure 1. Body weight change (a–b) and survival rate (c–d) during experimental period **a,** Body weight (BW) change of all sham and BCAS operated mice and **b,** BW change of sham subgroups and BCAS subgroups at indicated time points. BW was expressed as a ratio to the initial BW. BCAS operated mice showed delayed and less recovery of their BW after surgery compared with sham operated mice ($P<0.01$). **c,** Survival curves show survival rate of all sham (top) and all BCAS (bottom) operated mice. All sham-operated mice survived until 16 weeks after surgery. BCAS-operated mice survived less, whereas all sham-operated mice survived over 16 weeks period after surgery (Kaplan-Meier survival analysis, log-rank $P<0.01$). **d,** Survival curves show survival rate of all BCAS subgroups after surgery. BCAS-full group showed the highest mortality rate between BCAS subgroups.



Supplementary Figure 2. Area of the corpus callosum (CC) A-C, Histograms showing CC area of different coronal levels from rostral side **(a),** intermediate **(b)** to caudal level **(c)**. All BCAS subgroups showed significantly smaller CC area compared to all sham subgroups ($P<0.01$) **(a-c)**. BCAS-3hrs showed larger CC area compared with BCAS-std (*$P<0.05$, **(a)**; *$P<0.01$, **(b and c)**). No difference was seen between BCAS-3hrs and BCAS-full **(a, b and c)**. Only in the most causal side, BCAS-std showed smaller CC area compared to BCAS-full **(c)**. In rostral side, no difference was seen between BCAS-3hrs and sham-3hrs **(a)** as well as between BCAS-3hrs and sham-std **(b)**. No difference was seen between sham subgroups **(a, b and c)**.