

Figure S1. CSF concentration of Ca^{2+} . (a) Concentration of Ca^{2+} in CSF from patients with SAH (0.80 ± 0.09 mM, n = 32) and healthy control subjects (0.74 ± 1.00 mM, n = 14, P = 0.08). (b) CSF concentration of Ca^{2+} in SAH patients with successful EVD weaning (0.80 ± 0.08 mM, n = 20) and shunt insertion due to chronic PHH development (0.79 ± 0.11 mM, n = 12, P = 0.68). (c) CSF concentration of Ca^{2+} across the whole SAH patient group divided into start samples (0.79 ± 0.09 mM, n = 31) and end samples (0.77 ± 0.10 mM, n = 31, P = 0.79, left panel). The average Ca^{2+} change amounted to 0.02 ± 0.14 mM (n = 31, P = 0.89, right panel). Data are presented as mean \pm standard deviation. For unpaired CSF samples, statistical significance was tested with an unpaired two-tailed t-test or a Mann-Whitney test, depending on normality. A Wilcoxon matched-pairs signed rank test was employed for paired CSF samples. A one-sample Wilcoxon signed rank test was employed to determine the average Ca^{2+} change. Ctrl; control, SAH; subarachnoid hemorrhage. NS = not significant.

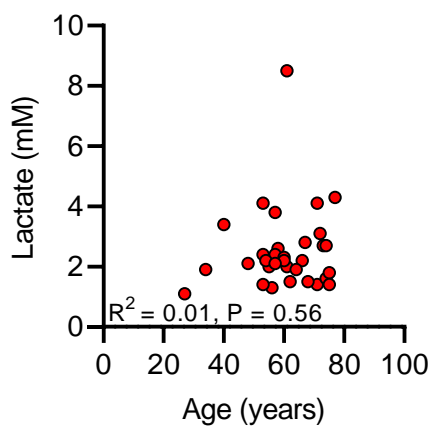
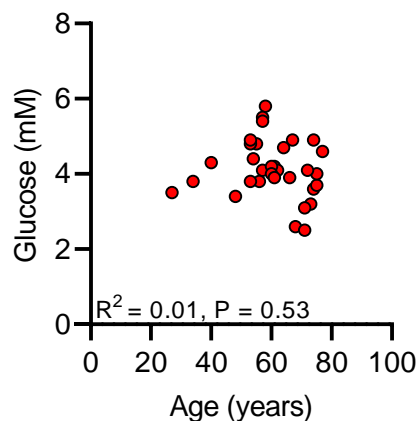
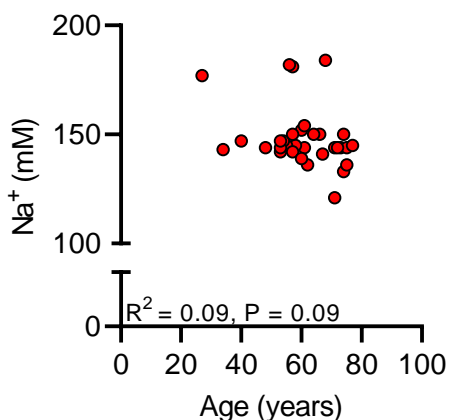
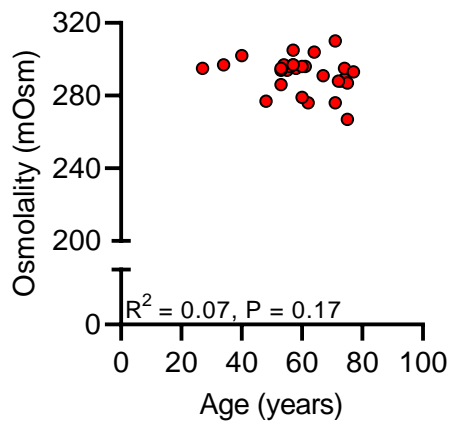
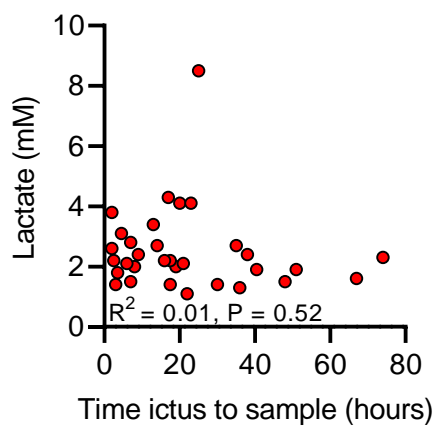
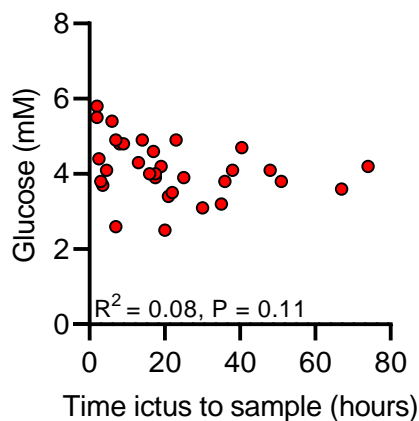
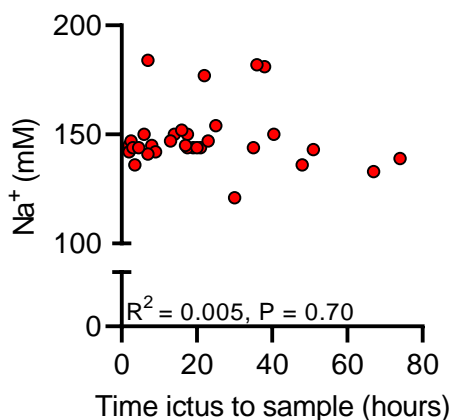
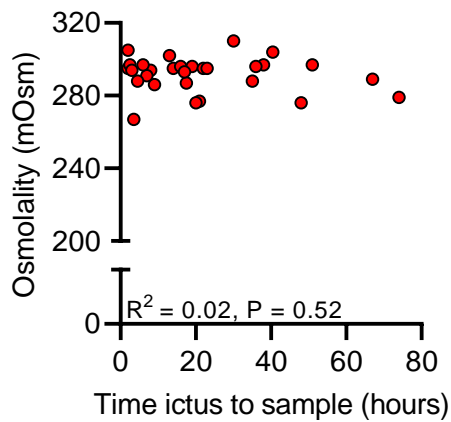
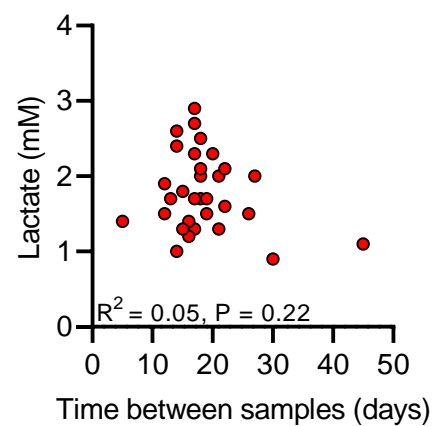
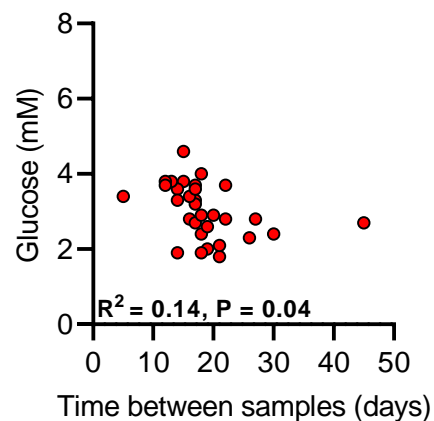
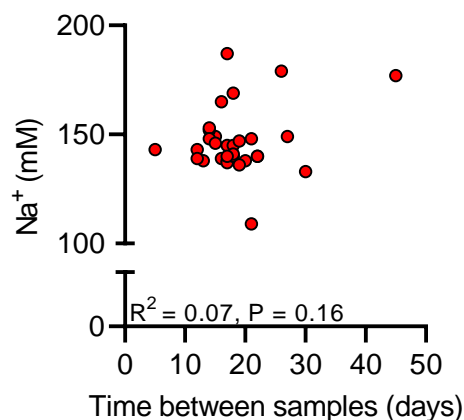
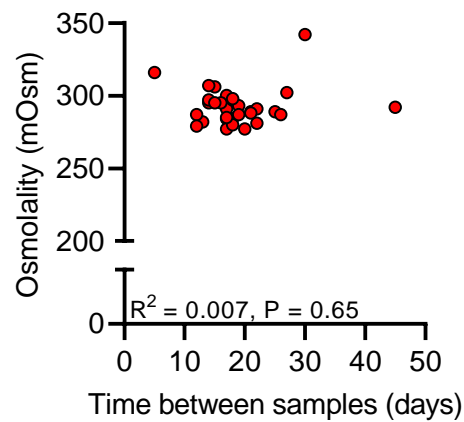
a**b****c**

Figure S2. Correlation analysis. Correlation between CSF osmolality, Na⁺, glucose, and lactate levels with patient age (**a**), time from ictus to first CSF sample (**b**), and time between the first and second CSF sample (**c**). Start samples were employed for correlation analysis with patient age (**a**) and time from ictus to first CSF sample (**b**), while end samples were employed for correlation analysis of time between the first and second CSF sample (**c**). All SAH patients were included in the analysis (n = 29-32), statistical evaluation with Pearson correlation coefficient. Significant P values are highlighted in bold.

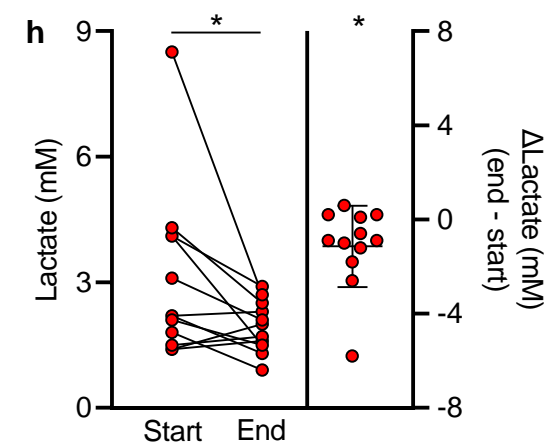
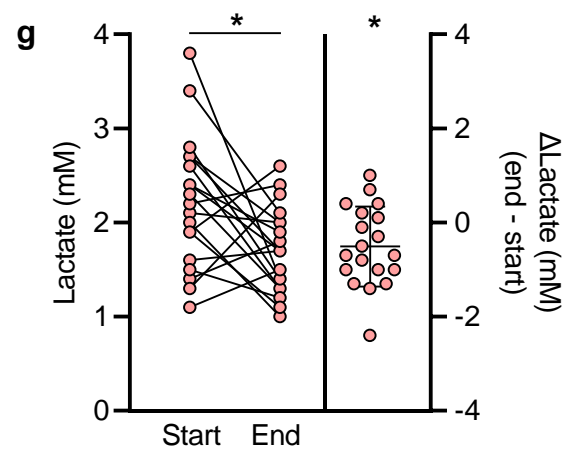
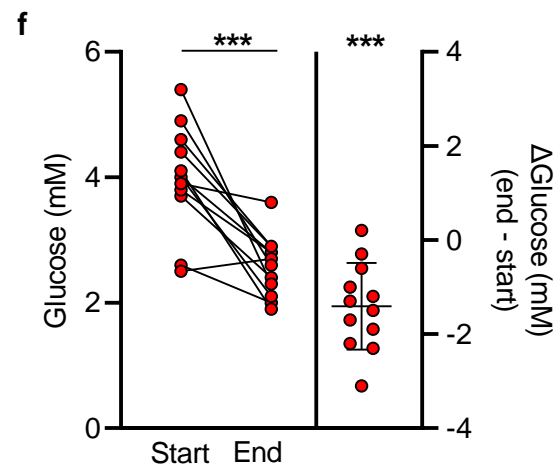
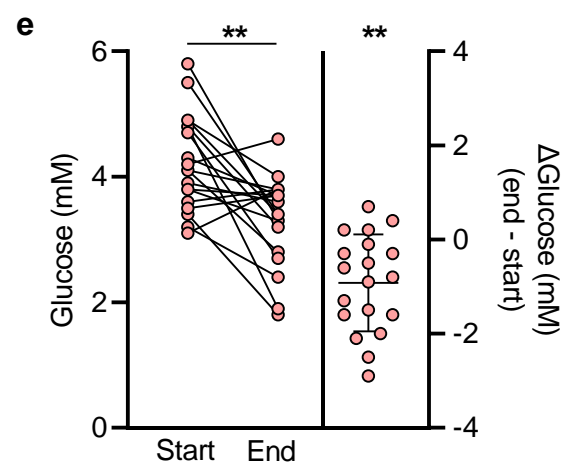
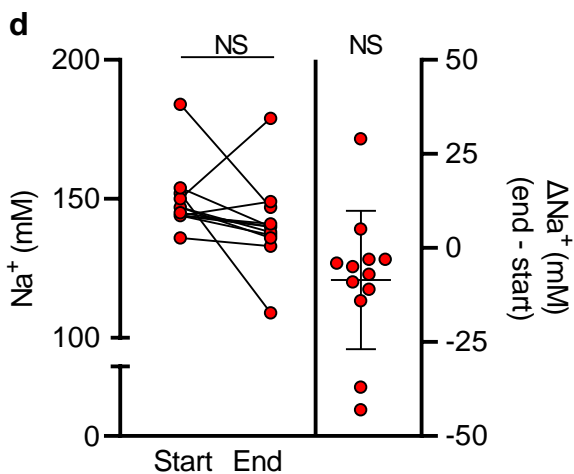
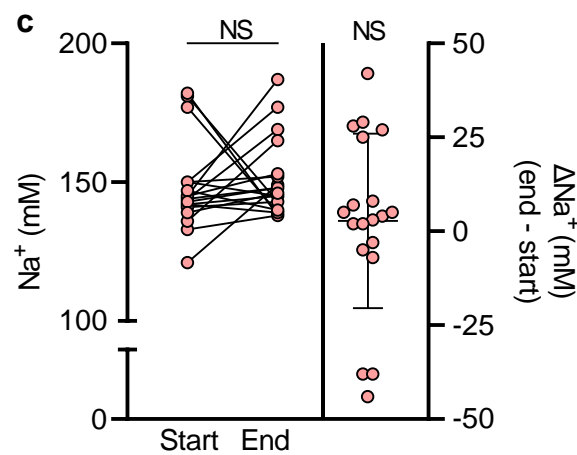
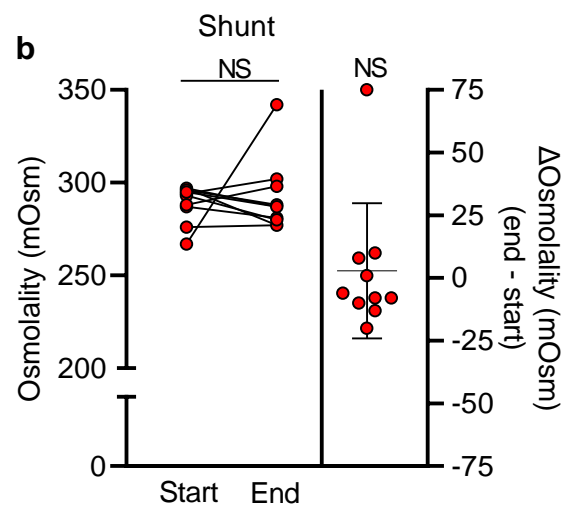
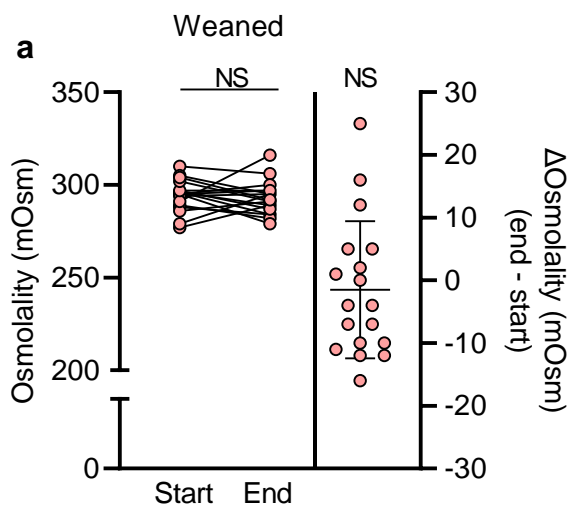


Figure S3. CSF osmolality, Na⁺, glucose, and lactate content in weaned and shunted SAH patients.

(a) CSF osmolality (left) in start samples (294 ± 8 mOsm) and end samples (293 ± 9 mOsm) collected from weaned SAH patients ($n = 18$ of each, $P = 0.57$). Average CSF osmolality change is depicted on the right (2 ± 11 mOsm, $n = 18$, $P = 0.57$). (b) CSF osmolality (left) in start samples (289 ± 10 mOsm) and end samples (292 ± 20 mOsm) collected from shunted SAH patients ($n = 10$ of each, $P = 0.58$). Average CSF osmolality change is depicted on the right (3 ± 27 mOsm, $n = 10$, $P = 0.58$). (c) CSF Na⁺ concentration (left) in start samples (148 ± 16 mM) and end samples (151 ± 14 mM) collected from weaned SAH patients ($n = 19$ of each, $P = 0.37$). Average CSF Na⁺ change is depicted on the right (3 ± 23 mM, $n = 19$, $P = 0.61$). (d) CSF Na⁺ concentration (left) in start samples (149 ± 12 mM) and end samples (141 ± 16 mM) collected from shunted SAH patients ($n = 12$ of each, $P = 0.05$). Average CSF Na⁺ change is depicted on the right (9 ± 18 mM, $n = 12$, $P = 0.14$). (e) CSF glucose levels (left) in start samples (4.23 ± 0.76 mM) and end samples (3.31 ± 0.71 mM) collected from weaned SAH patients ($n = 19$ of each, $P < 0.01$). Average CSF glucose decrease is depicted on the right (0.92 ± 1.03 mM, $n = 19$, $P < 0.01$). (f) CSF glucose levels (left) in start samples (3.99 ± 0.83 mM) and end samples (2.58 ± 0.48 mM) collected from shunted SAH patients ($n = 12$ of each, $P < 0.001$). Average CSF glucose decrease is depicted on the right (1.41 ± 0.92 mM, $n = 12$, $P < 0.001$). (g) CSF lactate levels (left) in start samples (2.22 ± 0.70 mM) and end samples (1.71 ± 0.45 mM) collected from weaned SAH patients ($n = 19$ of each, $P < 0.05$). Average CSF lactate decrease is depicted on the right (0.51 ± 0.85 mM, $n = 19$, $P < 0.05$). (h) CSF lactate levels (left) in start samples (3.06 ± 2.03 mM) and end samples (1.92 ± 0.60 mM) collected from shunted SAH patients ($n = 12$ of each, $P < 0.05$). Average CSF lactate decrease is depicted on the right (1.14 ± 1.73 mM, $n = 12$, $P < 0.05$). Data are presented as mean \pm standard deviation. For paired CSF samples, statistical significance was tested with a paired two-tailed t-test or a Wilcoxon matched-pairs signed rank test, depending on normality. For determination of average changes, a one-sample two-tailed t-test or a one-sample Wilcoxon signed rank test was conducted, depending on normality. * $P < 0.05$. ** $P < 0.01$. *** $P < 0.001$. NS = not significant.