

Table S1. Diffusion metrics (fractional anisotropy and mean diffusivity)

| Region of interest | Fractional anisotropy | | | | | Mean diffusivity ($\times 10^{-3}$ mm ² /s) | | | | |
|-----------------------------------|-----------------------|-------|-----------------|-------|--------------|---|-------|-----------------|-------|----------|
| | NSLBP (n= 18) | | Control (n= 18) | | <i>p</i> | NSLBP (n= 18) | | Control (n= 18) | | <i>p</i> |
| | M | SD | M | SD | | M | SD | M | SD | |
| Anterior limb internal capsule L | 0.489 | 0.028 | 0.482 | 0.034 | 0.545 | 0.664 | 0.024 | 0.661 | 0.012 | 0.680 |
| Anterior limb internal capsule R | 0.506 | 0.032 | 0.503 | 0.029 | 0.788 | 0.656 | 0.022 | 0.651 | 0.025 | 0.482 |
| Cerebral peduncle L | 0.635 | 0.027 | 0.618 | 0.033 | 0.099 | 0.759 | 0.024 | 0.767 | 0.019 | 0.240 |
| Cerebral peduncle R | 0.627 | 0.029 | 0.622 | 0.032 | 0.625 | 0.753 | 0.024 | 0.752 | 0.024 | 0.878 |
| Corticospinal tract L | 0.514 | 0.024 | 0.525 | 0.028 | 0.213 | 0.694 | 0.023 | 0.699 | 0.025 | 0.515 |
| Corticospinal tract R | 0.515 | 0.031 | 0.510 | 0.027 | 0.645 | 0.678 | 0.022 | 0.685 | 0.019 | 0.341 |
| Inferior cerebellar peduncle L | 0.496 | 0.023 | 0.482 | 0.032 | 0.150 | 0.714 | 0.035 | 0.718 | 0.027 | 0.708 |
| Inferior cerebellar peduncle R | 0.498 | 0.025 | 0.483 | 0.024 | 0.090 | 0.703 | 0.027 | 0.716 | 0.020 | 0.103 |
| Medial lemniscus L | 0.537 | 0.034 | 0.527 | 0.037 | 0.402 | 0.718 | 0.032 | 0.724 | 0.029 | 0.541 |
| Medial lemniscus R | 0.547 | 0.031 | 0.531 | 0.028 | 0.101 | 0.727 | 0.036 | 0.730 | 0.031 | 0.768 |
| Middle cerebellar peduncle | 0.481 | 0.019 | 0.478 | 0.011 | 0.540 | 0.732 | 0.032 | 0.749 | 0.039 | 0.157 |
| Posterior limb internal capsule L | 0.632 | 0.019 | 0.630 | 0.020 | 0.763 | 0.640 | 0.014 | 0.638 | 0.010 | 0.795 |
| Posterior limb internal capsule R | 0.641 | 0.019 | 0.634 | 0.018 | 0.228 | 0.629 | 0.023 | 0.633 | 0.018 | 0.497 |
| Posterior thalamic radiation L | 0.552 | 0.026 | 0.551 | 0.022 | 0.903 | 0.735 | 0.045 | 0.740 | 0.029 | 0.680 |
| Posterior thalamic radiation R | 0.555 | 0.021 | 0.554 | 0.022 | 0.923 | 0.726 | 0.029 | 0.723 | 0.026 | 0.753 |
| Superior cerebellar peduncle L | 0.517 | 0.039 | 0.543 | 0.035 | 0.039 | 1.078 | 0.132 | 1.021 | 0.103 | 0.155 |
| Superior cerebellar peduncle R | 0.521 | 0.414 | 0.532 | 0.032 | 0.366 | 1.089 | 0.133 | 1.053 | 0.107 | 0.374 |