

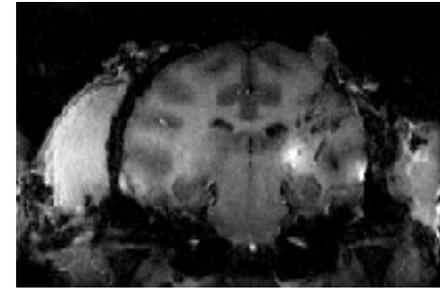
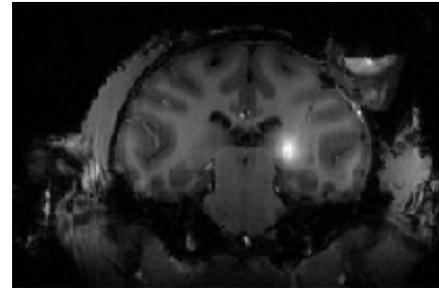
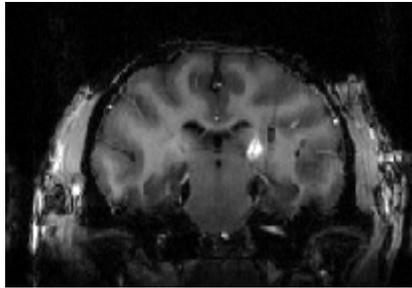
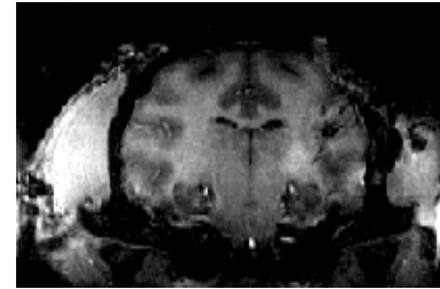
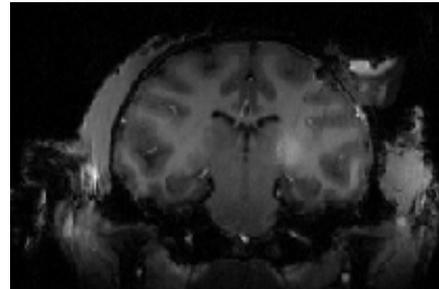
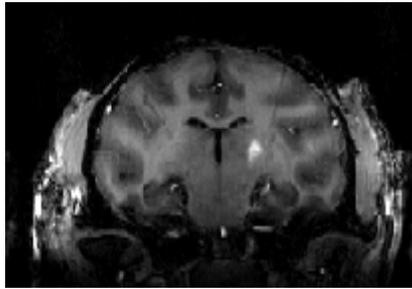
SUPPLEMENTAL FIGURE 1

Monkey A

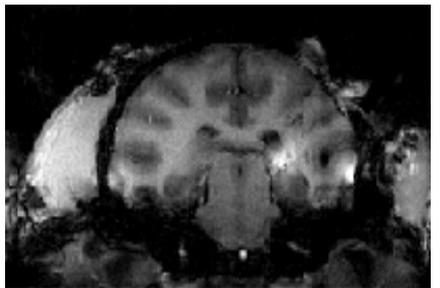
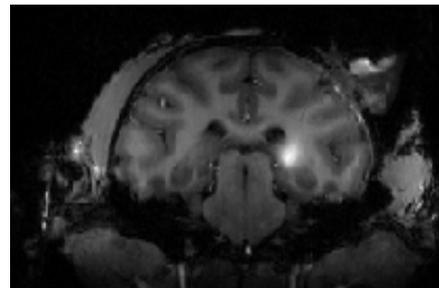
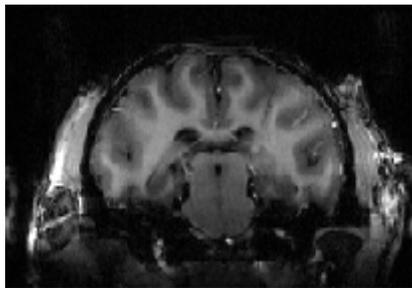
Monkey B

Monkey C

AP 5/6



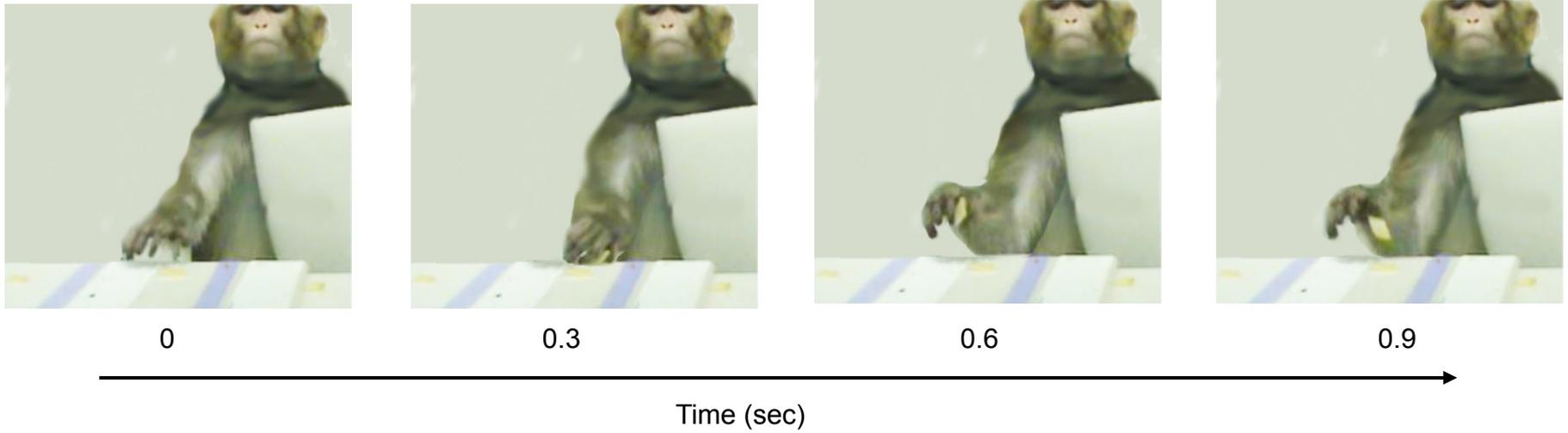
AP 2/3



SUPPLEMENTAL FIGURE 2

A

Grasping with the contralesional arm



B

Self-grasping behavior



Supplemental Figure Legends

Supplemental Figure 1. Inactivation sites in the three monkeys as visualized by co-injecting gadolinium. Coronal anatomical MR images were collected after pulvinar inactivation. In all cases, the monkeys were fully awake and accustomed to being in the scanner. Panels show coronal magnetic resonance (MR) images of the injection sites in monkeys A, B and C (from left to right). Depicted are three slices (1.75mm thickness) around the tip of the cannula after injection. Light areas show the gadolinium contrast agent, which was co-injected with the drug. Figures show the spread of the gadolinium ~30 min (A) and ~1h (B and C) after injection for the maximum volume of drug used in the study (4 μ l). AP refers to anterior-posterior in Horsley-Clark coordinates.

Supplemental Figure 2. Single frame reconstruction of the grasping deficits in monkey

Frames were recorded every 0.03 s and every tenth frame is depicted in the figure. (A) Grasping movements following dorsal pulvinar inactivation. Data were recorded ~50 min following injection of 2 μ l THIP into the left dorsal pulvinar. Shown are grasping movements for a trial in which the contralesional (right) arm was used (ipsilesional hand usage was prevented by a barrier in front of it). Note the inadequate wrist angle and ineffective grip, resulting in the animal's dropping the treat. (B) Example of self-grasping behavior following pulvinar inactivation. Data were recorded ~90 min following injection of 2.5 μ l muscimol into the left dorsal pulvinar. Shown is the sequence of the following event (from left to right): The monkey at first ignores the touch of the contralesional (right) hand by the experimenter, tries to grasp the experimenter with the ipsilesional (left) hand and then grasps his own contralesional (right) hand with the ipsilesional (left) hand.

