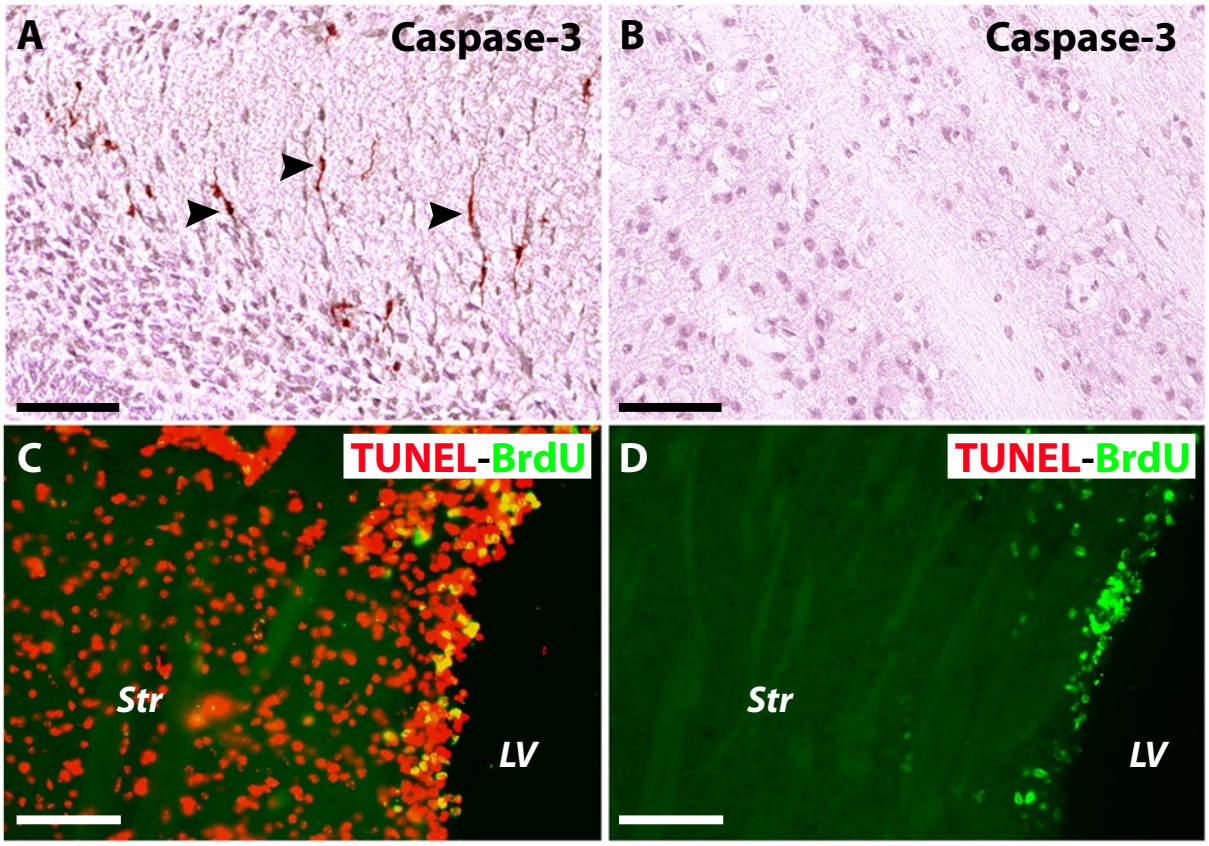
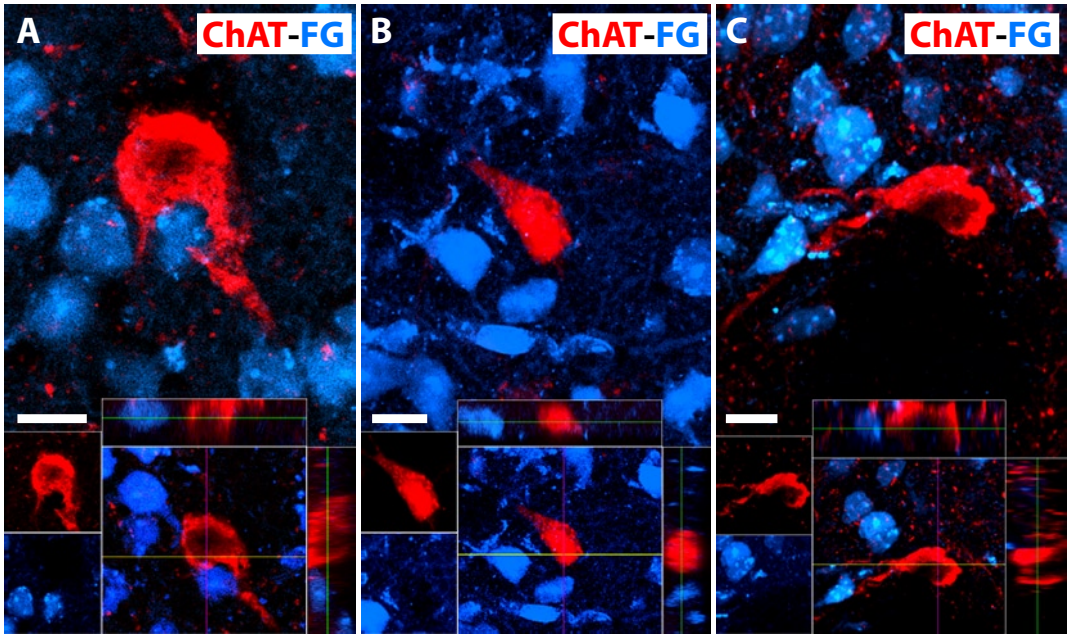
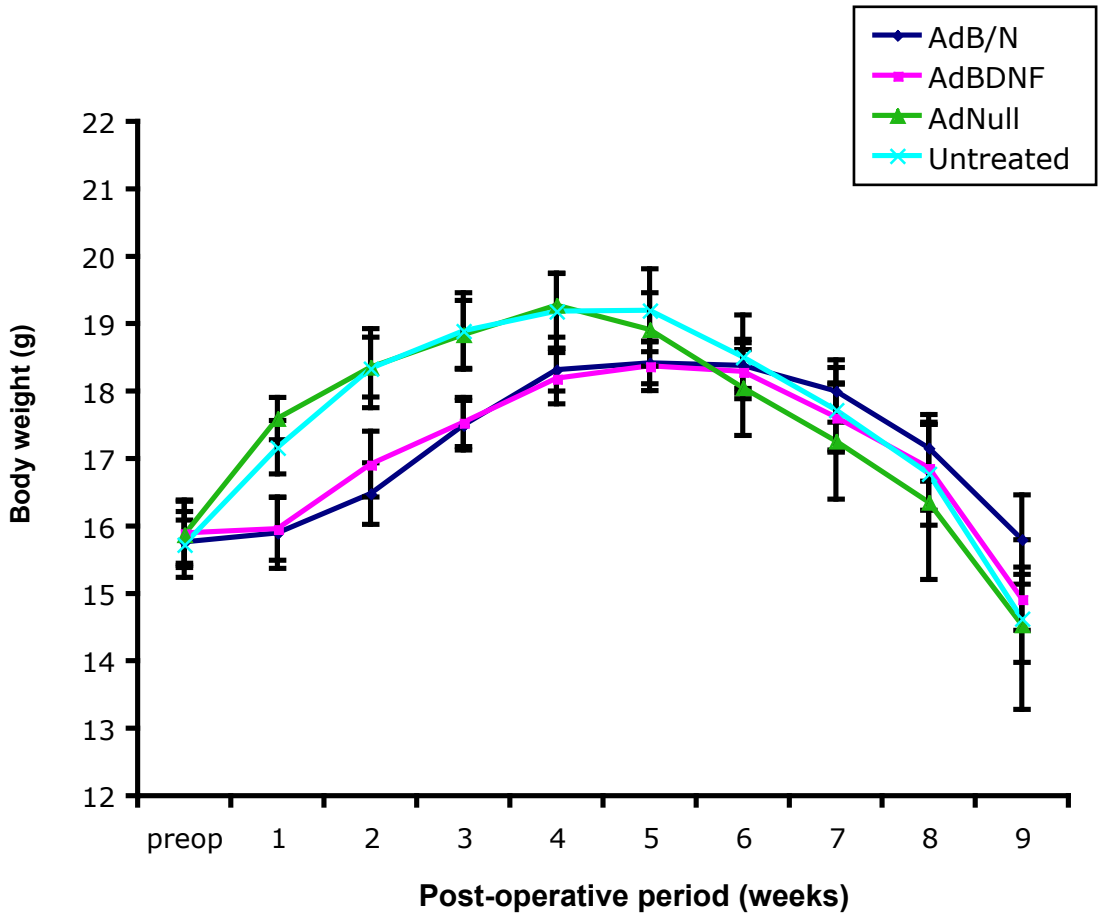

A
Caspase-3
B
Caspase-3
C
TUNEL-BrdU
Str
LV
D
TUNEL-BrdU
Str
LV


A
ChAT-FG
B
ChAT-FG
C
ChAT-FG


AdB/N
AdBDNF
AdNull
Untreated
Body weight (g)
22
21
20
19
18
17
16
15
14
13
12
preop
1
2
3
4
5
6
7
8
9
Post-operative period (weeks)

SUPPORTING INFORMATION

Supplemental Figure 1

Spontaneous apoptotic cell death was rare in the 10 week-old R6/2 neostriatum

No evidence of apoptotic cell death was observed in AdBDNF/Noggin-treated R6/2 mice, when assessed at 10 weeks of age, either by caspase staining or TUNEL. **a**, neonatal mouse forebrain was sampled at postnatal day 1 as a positive control for caspase-3. Immunoperoxidase staining (*brown*, with *blue* Hematoxylin counterstain) revealed frequent caspase-3 immunoreactive cells (*arrowheads*). In contrast, no caspase-3 immunoreactivity was seen in the neostriatum of an AdBDNF/Noggin-treated R6/2 mouse (**b**).

Samples from R6/2 mice, were also tested for DNA fragmentation, another feature of apoptotic cells, by combining TUNEL (*red*) with BrdU staining (*green*). AdBDNF/Noggin-treated R6/2 mice were tagged for 3 weeks antemortem with BrdU, prior to BrdU staining and TUNEL. **C** shows a positive control obtained by treating a section with DNase in order to artificially generate DNA nicks. No similar staining was found in untreated sections of AdBDNF/Noggin-treated R6/2 striata (D).

Str: Striatum; LV: lateral ventricle. Scale: A-B, 50 μm; C-D, 100 μm.

Supplemental Figure 2

FluoroGold incorporation was limited to those neurons projecting fibers to the globus pallidus

ChAT$^+$ neurons, sampled in the dorsomedial neostriata of each of 3 mice given intrapallidal injections of FG (1 μl), did not incorporate FG, despite abundant FG incorporation by neighboring, non-cholinergic medium spiny striatal neurons. These observations suggest that intrapallidal-injected FG did not meaningfully diffuse into the neostriatum, so that FG incorporation by striatal neurons, both new and extant, was limited to those cells projecting fibers to the globus pallidus.

Scale: 10 μm.

Supplemental Figure 3

AdBDNF and AdBDNF/Noggin-treated R6/2 mice exhibited a delay in maturational weight gain

Daily weights revealed that AdBDNF and AdBDNF/Noggin-treated R6/2 mice exhibited significant but transient delays in weight gain as young adults, catching up with the untreated or AdNull-treated cohorts within a month after virus injection. No mice were observed to die during this transient period of AdBDNF-associated relative anorexia; to the contrary, the net survival of AdBDNF/Noggin-treated mice was lengthened as a function of treatment.