Table. The effects of ethologically relevant stressors on the different stages of adult neurogenesis in several mammalian species

| | Cell Proliferation | | Cell Survival | | Cell Differentiation | | |
|---|---|---|---|---|---|---|---|
| **Stressor** | **Brain region** | **Species** | **Brain region** | **Species** | **Brain region** | **Species** | **Reference** |
| **Conspecific** | | | | | | | |
| Separation from peers | | | | | | | |
| Acute | -- | | -- | | -- | | |
| Subchronic | ↑ DG | ♂ California mouse | 0 DG | Wistar rat | 0 DG | California mouse | [70, 71, 72] |
| | 0 DG | ♀ California mouse | | | 0 DG, SVZ | ♀ prairie vole | |
| | 0 AMY, Cing, CdPu, DG, HYP | ♀ prairie vole | | | | | |
| | ↑ SVZ | ♀ prairie vole | | | | | |
| Chronic | 0 AMY, VMH | ♀ prairie vole | 0 DG | ♂ California mouse | ↓ AMY | ♀ prairie vole | [70, 71, 72, 73, 74] |
| | ↓ DG, MPOA | ♀ prairie vole | ↓ DG | ♀ California mouse | ↔ DG | ♀ prairie vole | |
| | | | ↔ AMY, DG | ♀ prairie vole | 0 MOB | ♀ prairie vole | |
| | | | 0 Cing, CdPu, HYP, MOB | ♀ prairie vole | 0 DG | ♂ Sprague-Dawley rat | |
| | | | ↔ DG | ♂ Sprague-Dawley rat | | | |
| | | | 0 DG | ♂ Wistar rat | | | |
| | | | ↓ DG | ♀ Wistar rat | | | |
| Separation from offspring | | | | | | | |
| Acute | -- | | -- | | -- | | |
| Intermittent | ↓ DG | ♀ rat | -- | | -- | | [82] |
| Confrontation via dominance | | | | | | | |
| Acute | -- | | -- | | -- | | |
| Subchronic | 0 DG | ♂ Sprague-Dawley rat | ↑ DG | ♂ baboon | -- | | [61, 91] |
| Chronic | ↓ DG | ♀ Mole-rat | ↑ DG | ♂ Sprague-Dawley rat | 0 DG | ♂ Sprague-Dawley rat | [61, 90, 92] |
| | ↑ DG | ♂ Sprague-Dawley rat | | | | | |
| Confrontation via social defeat | | | | | | | |
| Acute | 0 DG | ♂ mouse, rat | ↓ DG | ♂ rat | 0 DG | ♂ marmoset, tree shrew | [51, 100, 101, 102] |
| | ↓ DG | ♂ marmoset, tree shrew | | | ↓ DG | ♂ rat | |
| Subchronic | 0 AMY | ♂ mouse | ↓ DG | ♂ mouse, rat | ↓ DG | ♂ mouse | [103, 104, 105, 106] |
| | ↓ DG | ♂ mouse, rat | | | 0 DG | ♂ rat | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chronic | ↓ DG<br>↓ PFC<br>0 SVZ, Mot | ♂ rat, tree shrew<br>♂ rat<br>♂ rat | ↓ DG<br>↓ PFC<br>0 SVZ, Mot | ♂ rat<br>♂ rat<br>♂ rat | 0 DG, PFC | ♂ rat | [107, 108, 109, 110, 111] |
| Nonconspecific | | | | | | | |
| Acute (short) | 0 DG | ♂ rat | ↔ DG | ♂ rat | 0 DG | ♂ rat | [115, 116, 117, 118] |
| Acute (long) | ↓ DG<br>0 DG | ♂ rat<br>♀ rat | | | | | |

acute = one exposure not exceeding 24 hours, subchronic = exposure ranging from 2-10 days, chronic = exposure lasting longer than 10 days

AMY: amygdala; Cing.: cingulate cortex; CdPu: caudate putamen; DG: dentate gyrus of the hippocampus; HYP: hypothalamus; MOB: main olfactory bulb; MPOA: medial preoptic area

Mot: primary motor cortex; SVZ: subventricular zone; VMH: ventromedial hypothalamus

↑: increase; ↓: decrease; 0: no change; ↔: mixed findings; --: no data