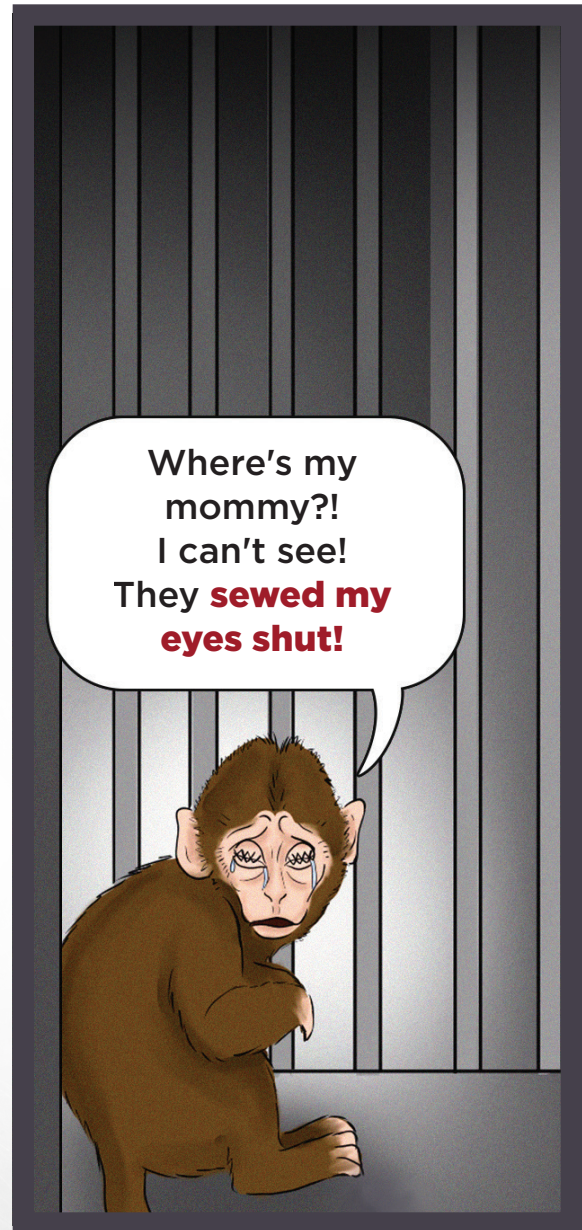
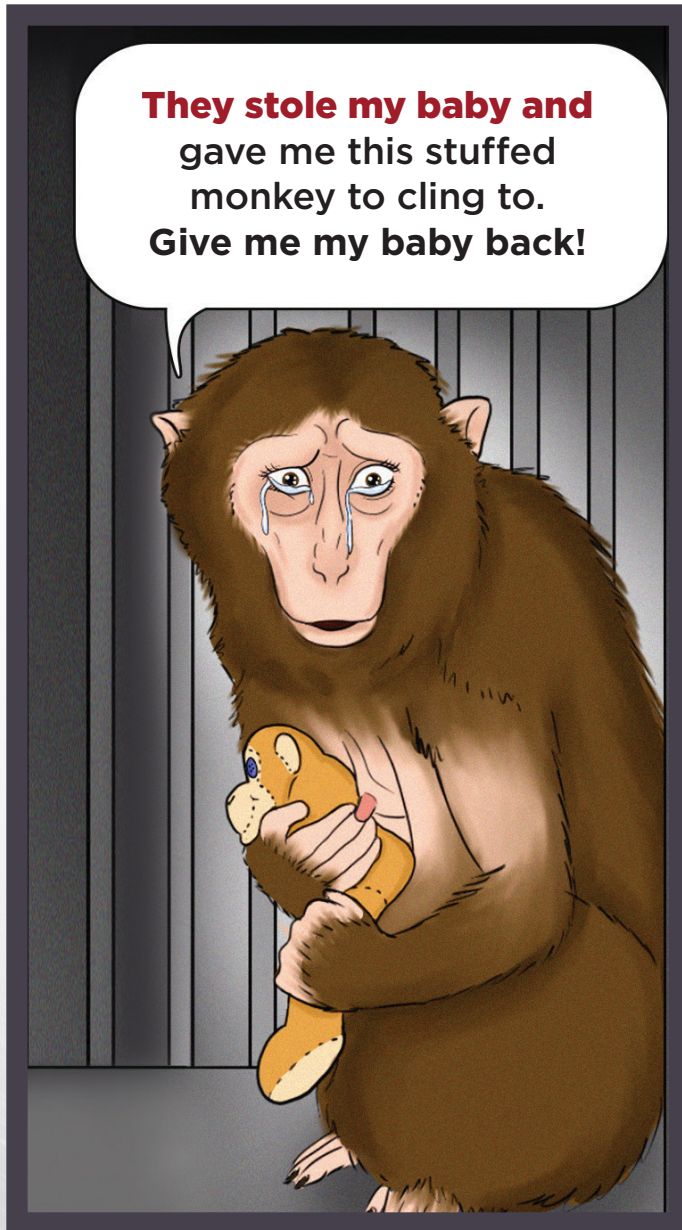


# Deprived Monkeys Depraved Tests

## Harvard's Maternal and Sensory Deprivation Experiments on Infant Macaques



In a series of experiments funded by the National Institutes of Health (NIH), Harvard Medical School's Margaret Livingstone removes infant rhesus macaques from their mothers soon after birth and deprives them of normal visual input so that she can study the deleterious effects of sensory deprivation on their developing brains.



## It is well established that monkeys separated from their mothers exhibit profound physical and psychological damage, including the following:

- Excessive fearfulness and/or aggression<sup>1</sup>
- Excess stress hormones<sup>2</sup>
- Abnormal reproductive and social behavior<sup>3</sup>
- Increased self-injurious behavior<sup>4</sup>
- Motor stereotypies indicative of frustration and stress<sup>5</sup>
- Abnormal sleep patterns<sup>6</sup>
- Increased startle and stress responses<sup>7</sup>
- Increased susceptibility to infection<sup>8</sup>
- Altered serotonin pathway function<sup>9,10</sup>
- Altered cerebral blood flow<sup>11</sup>
- Altered levels of brain-derived neurotrophic factor and nerve growth factor critical for normal brain function<sup>12</sup>
- Abnormal brain morphology<sup>13</sup>

## Prevented From Seeing Any Faces

After some newborns in this laboratory were removed from their mothers, their eyes were sutured closed for their entire first year of life. Others are denied the ability to view the faces of conspecifics or even the laboratory workers feeding them. Laboratory staff are required to wear *welding masks* during their limited interactions with the infants.<sup>14</sup>

Monkeys in this laboratory are subjected to multiple major surgeries so that head posts can be affixed to their skulls<sup>15</sup> or so that eye coils<sup>16</sup> and/or intracranial electrode arrays can be implanted.<sup>17</sup> For many experiments, their heads are immobilized using helmets, chin straps, or bite bars,<sup>18</sup> and in some experiments the monkeys are killed and dissected.<sup>19</sup>

## Disregard for Life and Law

Livingstone's laboratory has repeatedly failed to comply with minimum federal animal welfare guidelines—causing catastrophic harm to animals and jeopardizing the health and safety of laboratory personnel:

1. A case report dated January 31, 2018, documented that after a cage divider was not properly latched, a macaque escaped from a cage and fought with another stressed monkey.

One monkey sustained lacerations requiring amputation of a finger.

2. A case report dated October 1, 2019, documented that an infant macaque who had been removed from her mother and caged alone with a cloth “surrogate mother” died of strangulation after she ripped a hole in the cloth covering the surrogate and her head became stuck in the hole. It is not clear from the report whether this infant had been subjected to visual deprivation procedures; such deprivation could have contributed to her tragic and untimely death.
3. A case report dated June 22, 2020, documented that Livingstone was reported by veterinary staff for failing to wear personal protective equipment (PPE) while experimenting on a restrained monkey—even though federal guidelines require that PPE be worn to reduce the risk of zoonotic spread of deadly pathogens. It is worth noting that this incident occurred at the height of the pandemic.

**These cruel experiments on baby monkeys have not led to any new treatments or cures for humans.** PETA scientists and other experts have shared their concerns about the experiments with Harvard administrators, Harvard Medical School's institutional animal care and use committee, NIH, and the journal that published Livingstone's recent paper “Triggers for Mother Love”—but Harvard has so far refused to end them.

## What You Can Do

Please contact Harvard University's Office of the President at 617-495-1502 and politely urge the administration to put an immediate end to these experiments, redirect resources into cutting-edge and human-relevant non-animal research, and retire the primates to reputable sanctuaries.

**PETA.org/Harvard**

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<sup>4</sup>Drago L, Thierry B. Effects of six-day maternal separation on tonkean macaque infants. *Primates.* 2000;41(2):137–145.

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<sup>12</sup>Cirulli F, Francia N, Branchi I, et al. Changes in plasma levels of BDNF and NGF reveal a gender-selective vulnerability to early adversity in rhesus macaques. *Psychoneuroendocrinology.* 2009 Feb;34(2):172–180.

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<sup>14</sup>Arcaro MJ, Mautz T, Berezovskii VK, Livingstone MS. Anatomical correlates of face patches in macaque inferotemporal cortex. *Proc Natl Acad Sci U S A.* 2020 Dec 22;117(51):32667–32678.

<sup>15</sup>Ponce CR, Hartmann TS, Livingstone MS. End-stopping predicts curvature tuning along the ventral stream. *J Neurosci.* 2017 Jan 18;37(3):648–659.

<sup>16</sup>Howe PD, Livingstone MS. V1 partially solves the stereo aperture problem. *Cereb Cortex.* 2006 Sep;16(9):1332–1337.

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