Objective: To evaluate newborn fluoxetine exposure at different period on development and behavior of adult rats.

Methods: Male rat pups were randomized to be treated once daily with fluoxetine(s.c.) or saline(s.c.) during postnatal day 1–7 and postnatal day 8–21. Recorded the body weight. Starting at 90 days of age, all rats were tested with several experimental facilities, including open field test, elevated-plus maze, novelty-suppressed feeding test and forced swim test.

Results:

1. Weight gain of rats with fluoxetine exposure during postnatal day 1–7 were lower than controls (P<0.05).

2. Exploratory behavior decreased and depression anxiety behavior increased in adult rats with neonatal fluoxetine exposure (P<0.05), and more severe with postnatal day 1–7 exposure (P<0.05).

Conclusions: Newborn fluoxetine exposure may result badness weight gain and depression anxiety behavior in adult rats, and the earlier exposure may accompany the larger risk.