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Links](#)**Behavioural hyperactivity in rats following postnatal exposure to sub-toxic doses of polychlorinated biphenyl congeners 153 and 126.**[Holene E](#), [Nafstad I](#), [Skaare JU](#), [Sagvolden T](#).

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Rats were exposed through mother's milk either to the di-ortho-substituted polychlorinated biphenyl (PCB) congener 2,2',4,4',5,5'-CB (IUPAC no. 153) or to the non-ortho-substituted PCB congener 3,3',4,4',5-CB (IUPAC no. 126). The different groups of mothers were dosed via gavage with corn oil vehicle, 5 mg/kg b.w. of PCB 153 or 2 microg/kg b.w. of PCB 126 every second day from day 3 to 13 after delivery. The exposure did not affect the body weight (b.w.) of the dams or the physical development of the pups. A two-component schedule of reinforcement was used to study behavioural effects of the PCB exposures in male offspring. One component was operating when the house light was turned on. Then a reinforcer, a drop of water, was delivered every 2-min. This component is called a 2-min fixed interval (FI) schedule of reinforcement. The other component was in effect when the house light was turned off. Then no reinforcer was ever delivered. This is called an extinction (EXT) component. It was shown that the PCB-exposed offspring were hyperactive as they had an increased frequency of lever presses. In addition, the PCB 153-exposed male pups showed a behavioural pattern similar to that observed in spontaneously hypertensive rats (SHR), an animal model of attention-deficit hyperactivity disorder (ADHD). This behaviour is characterized by 'burst' of lever presses with short interresponse times (IRT) just before the next reinforcer is given. These results show that both PCBs 153 and 126 may produce significant neurotoxic effects following postnatal exposure through mother's milk.

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