

# GENOVA Polychlorinated Biphenyls (PCBs)

*The Polychlorinated Biphenyls (PCBs) Profile can help identify which of the most toxic PCBs a patient has been exposed to and the body burden of the patient. We look at the most commonly found PCBs, with reference ranges, that have been documented to cause adverse health problems. Levels are given both in parts per million (PPM) and as lipid-adjusted amounts so the clinician can best estimate the total body burden of these compounds.*

## Why perform polychlorinated biphenyl (PCB) exposure testing?

Once PCBs enter the body, they are absorbed by our fat cells and stored. Since PCBs are not water-soluble, they are not excreted from the body and accumulate over a person's lifetime, increasing that person's body burden of PCBs. Polychlorinated biphenyl testing can help you determine the extent of this PCB burden.

In adults, a heavy burden of PCBs over time can cause impairments in the brain, nervous system, endocrine system, and immune system, and may cause fertility issues.

A PCB burden affects children more than adults. PCBs are most often passed to children through breastfeeding and trans-placental transfer. PCB exposure in children can impede neurobehavioral and immune system development. These impediments may cause delayed neurobehavioral development in motor skills and short term memory, and lower scores on intelligence, psychomotor, and behavioural tests. A lowered immune system can create many problems in children including allergies, sensitivities and chronic infections.

### SYMPTOMS OF EXPOSURE

Severe acne	Rash
Eye irritation	Liver damage
Weakened immune system	Chemical sensitivity
Allergies	Obesity
Fatigue	Developmental disorders

## What are PCBs?

PCBs were used as lubricants and coolants in transformers, capacitors, and electronic equipment because of a high resistance to heat. Due to the stability of PCBs, unfortunately they also do not break down in the environment and bioaccumulate in animals and humans.

PCBs were banned from use in the US in 1979 by the Environmental Protection Agency (EPA), and banned for importation in Australia in 1975. However, due to the persistence of PCBs in the environment, PCBs continue to leach into soil and groundwater from hazardous waste sites and landfills. Since PCBs bioaccumulate, we are exposed through our food chain by eating fish, meat and dairy products, especially from areas of the country considered contaminated.

## Genova POLYCHLORINATED BIPHENYLS (PCBs) (blood) [4103]

❖ PCB 118, PCB 126, PCB 138, PCB 153, PCB 156, PCB 169, PCB 180, PCB 74, PCB 77

## Other environmental toxin tests available

- **Genova Phthalates & Parabens Profile (urine) [4101]:** mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP), mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP), mono-2-ethylhexyl phthalate (MEHP), mono-ethyl phthalate (MEtP); Butylparaben, Ethylparaben, Methylparaben, Propylparaben
- **Genova Chlorinated Pesticides (blood) [4102]:** DDE (p,p1), DDT (p,p1), Dieldrin, Heptachlor Epoxide, Hexachlorobenzene (HCB), Mirex, Oxychlorodane, Endosulfan Sulfate, Trans-Nonachlor
- **Genova Volatile Solvents (blood) [4104]:** Benzene, Ethylbenzene, Styrene, Toluene, Xylene, Hexane, 2-methylpentane, 3-methylpentane
- **Genova Organophosphates (urine) [4105]:** Atrazine, Atrazine Mercapturate, Diethyldithiophosphate (DEDTP), Diethylthiophosphate (DETP), Dimethyldithiophosphate (DMDTP), Dimethylthiophosphate (DMTP)
- **Genova Bisphenol A (BPA) (urine) [4106]:** Bisphenol A (BPA), 4-Nonylphenol, Triclosan

## How to order a test kit:

To order a test kit simply request the test name or test code on a NutriPATH request form and have the patient phone **NutriPATH Customer Service** on **1300 688 522**.

