

Effects of industrial metals on predatory kairomone reception in an aquatic invertebrate predator-prey system.

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Previous studies have demonstrated that neonatal *Daphnia pulex* develop neck teeth in the presence of predatory kairomone (i.e. *Chaoborus* spp. fed *D. pulex*) to reduce their susceptibility to predation. Recent experimental evidence suggests that aqueous metals associated with industrial activities can potentially block chemical communication in aquatic organisms. The objective of this study was to examine whether or not cadmium (Cd), copper (Cu), and nickel (Ni), at environmentally relevant concentrations typical of northern Ontario lakes, affects predatory kairomone reception in *D. pulex*. Evidence of kairomone reception inhibition includes a reduction in the length and number of neck teeth in kairomone-exposed neonatal *D. pulex*. To test this *D. pulex* were placed in increasing waterborne concentrations of Cd, Cu, and Ni in the presence of predatory kairomone. Results from this study will serve to demonstrate a sensitive and ecologically relevant response to metals that has, until now, been relatively unexplored.