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## Reduced Swim Performance and Aerobic Capacity in Adult Zebrafish Exposed To Waterborne Selenite

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### Abstract

Although dietary exposure of adult fish to organoselenium in contaminated aquatic ecosystems has been reported to bioaccumulate and cause larval deformities in offspring, subtle physiological effects produced through low level waterborne selenium exposure in fish such as swim performance and aerobic capacity have not been investigated. To evaluate potential effects of selenite on these responses, adult zebrafish (*Danio rerio*) were exposed to nominal aqueous concentrations of 0, 10 or 100 µg/L sodium selenite for 14 days. Upon completion of the exposure period, fish underwent two successive swim trials in a swim tunnel respirometer to determine critical swim speed ( $U_{crit}$ ), oxygen consumption ( $MO_2$ ), standard and active metabolic rates, aerobic scope (AS) and cost of transport (COT) followed by analysis of whole body triglyceride and glycogen concentrations. Selenite exposure had a significant negative effect on  $U_{crit}$  and aerobic capacity. Active metabolic

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