Supplementary Information (SI)

Diet preparation

Frozen brine shrimp (*Artemia franciscana*) containing 5.8% crude protein, 0.6% crude fat, 0.25% crude fiber, and 90 % moisture (all on a wet wt. basis) was used to prepare the experimental diets. Shrimps were thawed, rinsed three times and then ground in a commercial blender. The amount of selenomethionine or arsenite (as $NaAsO_2$) that would result in the desired concentration of selenium or arsenic in the dry feed was dissolved in 2 mL of de-ionized water and blended with ground brine shrimp for about 10 min to ensure homogenous mixing. Carboxymethylcellulose (2 % w/w dry wt. basis) as a feed binder was also added during the blending process. The blended mix was frozen at −20 °C and subsequently freeze-dried (Labconco Freezone, USA). The feed was cut into small pellets (~0.3 cm^2) and stored in air-tight jars at -20 ^oC until its use in the experiment. The control diet was prepared similarly without the addition of selenomethionine or arsenite. The concentrations of selenium and arsenic in each of the experimental diets was verified in an atomic absorption spectrometer prior to their use in the experimental exposure.

Table S1. Physiochemical parameters of water used for husbandry and experiments.

Parameter	Observations
Alkalinity	105 ± 1.36 mg/L
hardness	159 ± 2.36 mg/L
dissolved organic carbon (DOC)	2.1 ± 0.06 mg/L
pH	7.5–7.8
Selenium (Se)	5.2 ± 1.72 µg/L
Cadmium (Cd)	< 0.1 µg/L
Water flow rate (husbandry tanks)	1 L/min
Water flow rate (experimental tanks)	8 L/min
Photoperiod (light:dark)	14:10 h
Temperature	12 ± 2 ^{o}C