**Supplementary Material:**

**Supp. 1:** Transmission electron microscopic pictures of mitochondria from *C. elegans* isolated with a 12µm (A) or 6µm ball clearance (B). Degrees of damage are indicated by exemplary pointers (a = “intact”; b = “mildly fractured”; c = “heavily fractured” and d = “fractured”).

**Supp. 2:** Mitochondria isolated from nematodes with 12 µm or 6 µm clearance were assessed by transmission electron microscopy and categorized into four categories (intact, mildly fractured, heavily fractured and fragmented) as described in the Methods section. Mean ± SEM; students t-test; p* < 0.05, p** < 0.01.
Supp. 3: Cytochrome c addition, as a marker for intactness of the outer mitochondrial membrane, increases respiration after isolation with a 6 µm compared to a 12 µm clearance, indicating a fractured outer membrane.

n = 5; Mean ± SEM; students t-test; p*** < 0.001.