

Supplemental materials

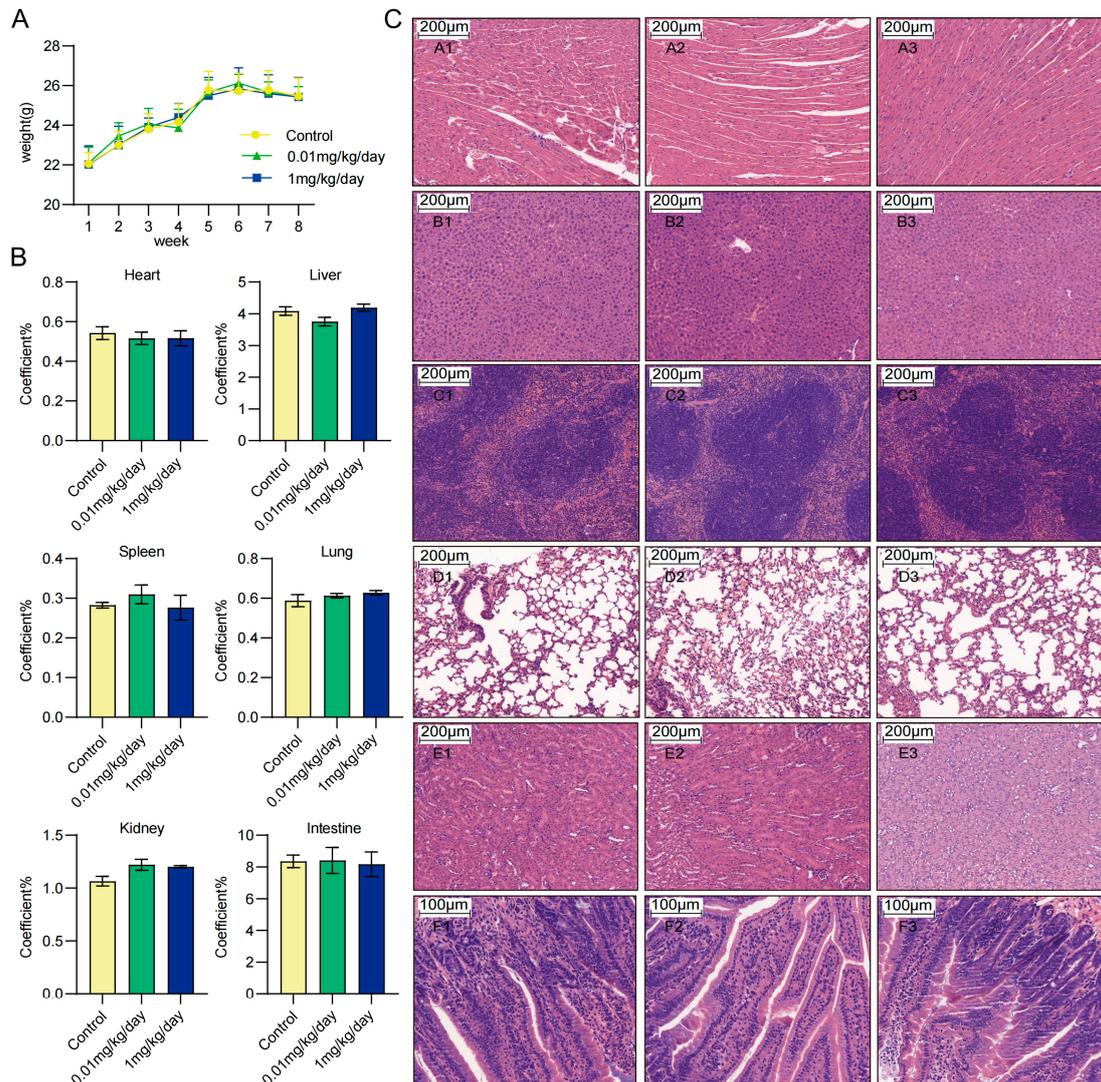


Figure S1. General toxicity of molybdenum exposure *in vivo*. **(A)** Line chart depicting the changes in body weight during molybdenum treatment. **(B)** Histogram illustrating the organ coefficients of the heart, liver, spleen, lung, kidney, and intestine. **(C)** Representative pathological images of the major organs. Figures labeled A to F represent the heart, liver, spleen, lung, kidney, and intestine, respectively. Figures labeled 1 to 3 represent the control group, molybdenum-0.01 mg/kg/day group, and molybdenum-1 mg/kg/day group, respectively. Organ coefficient = weight of the organ (g)/total body weight (g) \times 100.

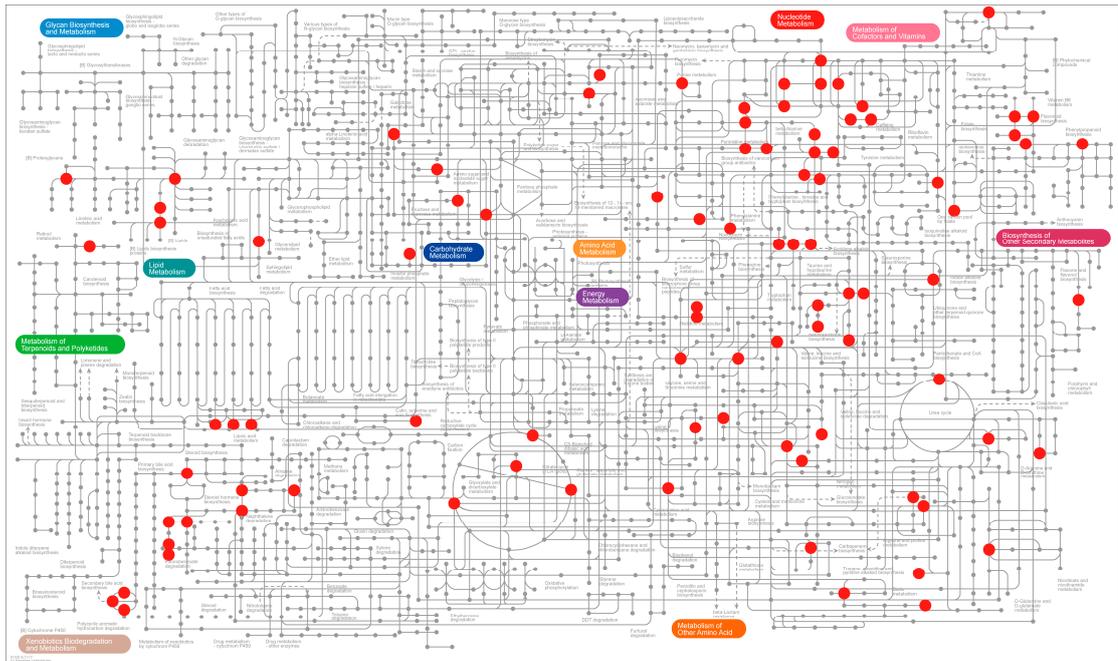


Figure S2. Detected metabolites in the general metabolic pathway based on iPath 3.0 [https://pathways.embl.de (accessed on 21 December 2023)]. The red dot indicates the detected metabolites in serum. The pathway and metabolite information can be found in detail in Metabolism module of Available maps [https://pathways.embl.de/ipath3.cgi?map=metabolic (accessed on 21 December 2023)].

Table S1. Participant characteristics.

	Total Subjects N (%) or Mean (SD)
N	838
Age (Years)	52.14 (17.81)
Race	
Mexican American	116 (13.8)
Other Hispanic	70 (8.4)
Non-Hispanic White	288 (34.4)
Non-Hispanic Black	200 (23.9)
Non-Hispanic Asian	113 (13.5)
Other Race - Including Multi-Racial	51 (6.0)
Education	
High school and below	185 (22.1)
High school graduate/GED or equivalent	219 (26.1)
Some college or AA degree	235 (28.0)
College graduate or above	198 (23.6)
Missing	1 (0.1)
Smoking status	
Never smoker	396 (47.3)
Former smoker	270 (32.2)
Current smoker	172 (20.5)
BMI (kg/m ²)	
Underweight	12 (1.4)
Normal weight	194 (23.2)
Overweight	297 (35.4)
Obesity	320 (38.2)
Missing	15 (1.8)
Cadmium (µg/L)	0.34 (0.46)
Molybdenum (µg/L)	53.40 (51.70)

BMI, body mass index.

AA degree, an associate's degree.