

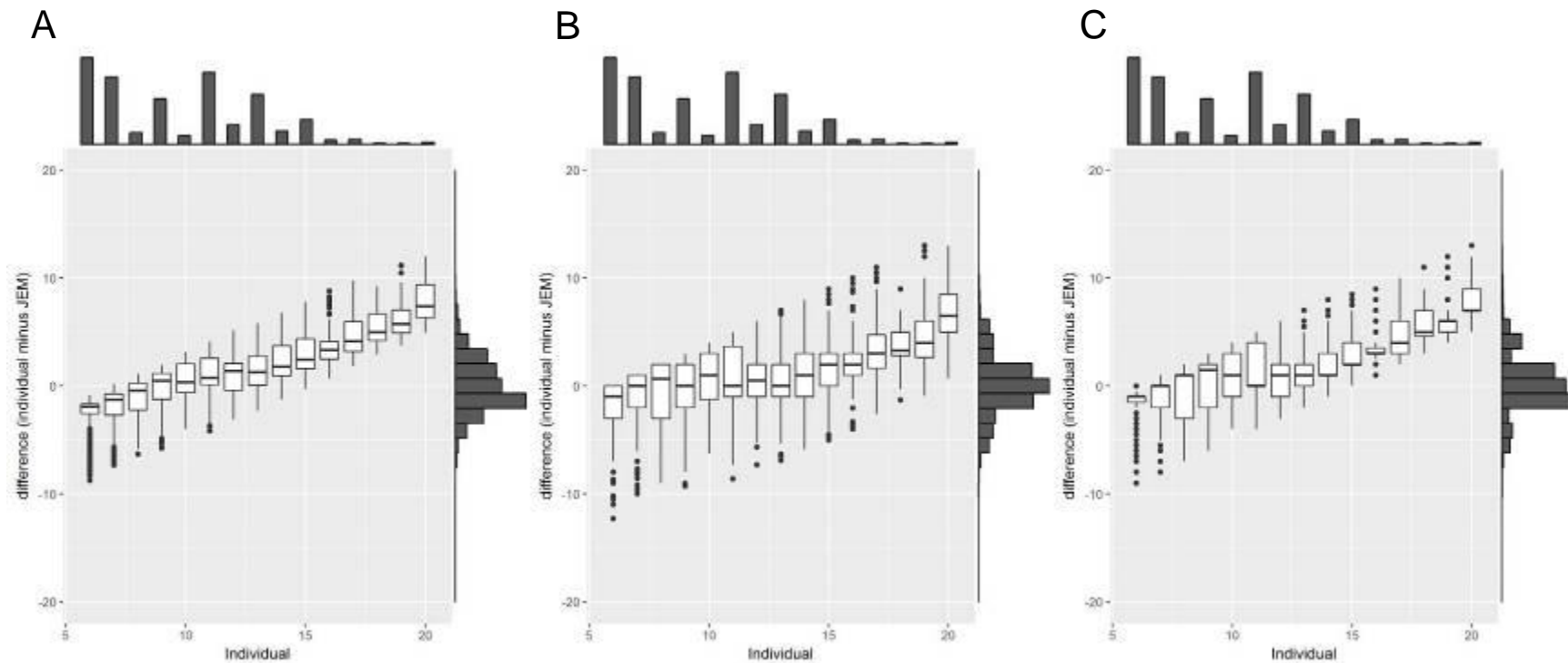
Supplement Table 1. Within- and Between- Group Variance for Three Exposure Metrics (Mean, Bias-Corrected Mean, Median)

Exposure Variable	<u>JEM Mean</u>			<u>JEM-Bias-Corrected Mean</u>			<u>JEM-Median</u>		
	Within	Between	R ²	Within	Between	R ²	Within	Between	R ²
Physical intensity	6.13	492.03	0.41	7.62	1193.55	0.57	6.73	764.15	0.49
Stand	0.55	93.03	0.57	0.70	161.44	0.64	0.67	132.78	0.60
Repetition	0.97	26.61	0.19	1.43	137.88	0.46	1.27	80.82	0.36
Change tasks	1.11	16.18	0.11	1.71	144.20	0.42	1.31	58.41	0.28
Rest eyes	1.00	39.83	0.22	1.40	177.84	0.48	1.29	130.31	0.42
Kneel or squat	0.51	43.37	0.40	0.67	107.32	0.56	0.60	62.55	0.45
Bend trunk	0.62	44.41	0.35	0.83	126.28	0.53	0.75	83.02	0.45
Drive machinery	0.15	8.27	0.30	0.22	25.60	0.48	0.19	5.93	0.20
Drive car or truck	0.49	36.96	0.37	0.67	96.65	0.53	0.59	53.57	0.41
Handle objects 1-4 kg	1.34	109.85	0.38	1.72	283.32	0.55	1.70	213.50	0.48
Handle objects >4 kg	0.91	79.93	0.42	1.15	191.49	0.57	1.11	129.05	0.49
Carry loads <10 kg	0.83	61.99	0.38	1.08	163.83	0.55	1.02	93.17	0.43
Carry loads 10-25 kg	0.54	44.04	0.40	0.72	112.27	0.56	0.66	61.09	0.43
Carry loads > 25 kg	0.41	34.45	0.41	0.54	83.24	0.56	0.50	44.38	0.42
Use vibrating tools	0.16	8.60	0.31	0.22	27.73	0.51	0.18	8.48	0.27
Use computer screen	0.55	98.82	0.57	0.68	171.96	0.65	0.67	161.98	0.64
Use keyboard or scanner	0.61	89.89	0.54	0.77	164.81	0.63	0.73	145.56	0.62
Bend neck	1.14	15.06	0.09	1.80	168.31	0.40	1.27	50.23	0.22
Arms above shoulder	0.41	18.97	0.24	0.58	71.53	0.46	0.54	32.38	0.30
Reach behind	0.30	2.35	0.06	0.51	39.59	0.38	0.38	9.94	0.17
Arms abducted	0.49	20.01	0.22	0.72	91.07	0.47	0.61	28.77	0.25
Bend elbow	0.55	24.77	0.23	0.79	104.18	0.47	0.67	37.21	0.27
Rotate forearm	0.26	18.51	0.33	0.35	52.80	0.52	0.31	20.95	0.32
Bend wrist	0.50	19.16	0.21	0.72	89.55	0.47	0.60	29.63	0.26
Press base of hand	0.19	7.90	0.23	0.26	34.34	0.48	0.21	7.22	0.19
Finger pinch	0.69	14.50	0.13	1.08	112.92	0.42	0.87	36.91	0.23
Work outdoors	0.39	35.68	0.38	0.53	94.92	0.54	0.49	54.61	0.42

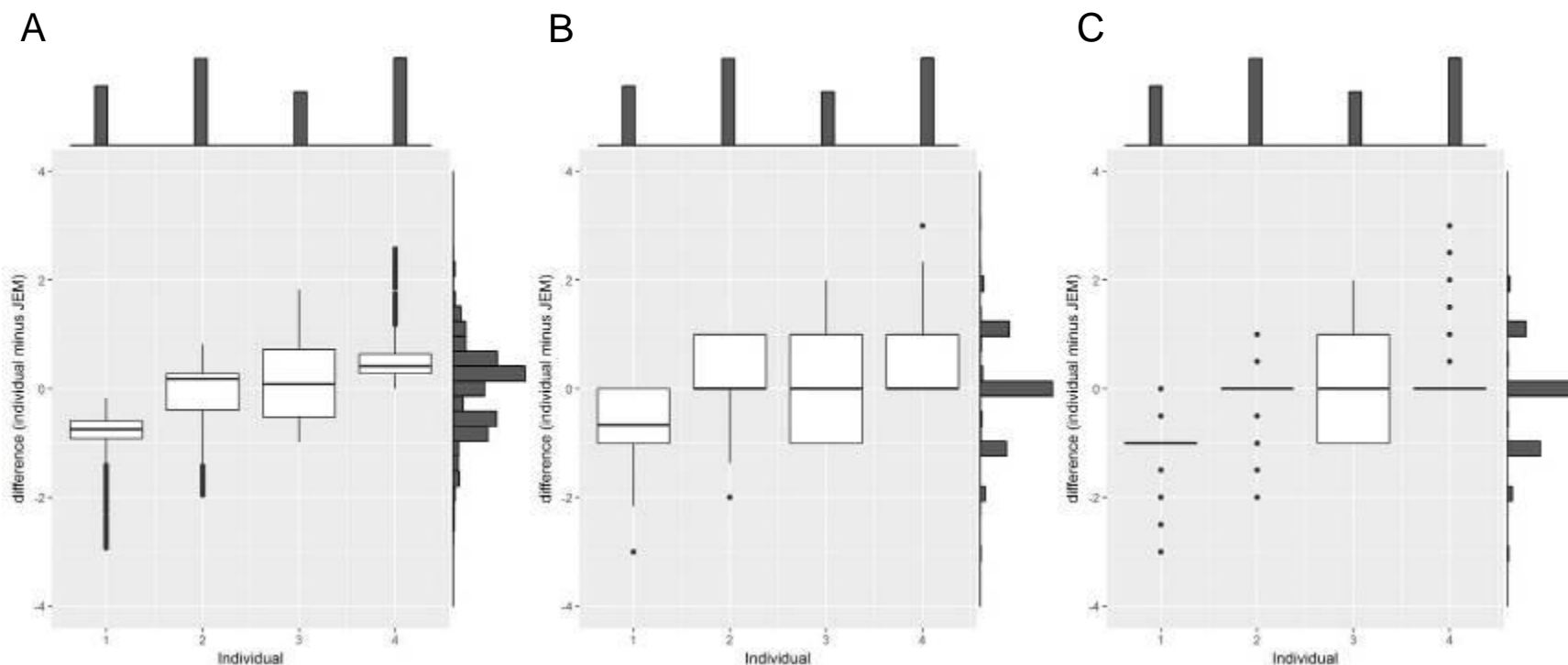
Supplement Table 2. Comparison Between Individual-Level Reports and JEM-Assigned Exposure Values Using Three Exposure Metrics.

Exposure Variable	N	JEM Mean			JEM-Bias-Corrected Mean			JEM-Median		
		MeanDiff ¹	Absolute ²	Variance ³	MeanDiff ¹	Absolute ²	Variance ³	MeanDiff ¹	Absolute ²	Variance ³
Physical intensity	26821	0.002	1.979	6.060	-0.004	2.022	0.097	0.234	1.868	3.802
Stand	29597	-0.001	0.591	0.547	-0.008	0.547	0.020	-0.160	0.519	0.266
Repetition	26424	-0.002	0.791	0.961	0.007	0.722	0.001	0.398	0.643	0.652
Change tasks	26581	0.001	0.886	1.098	0.004	0.922	0.000	-0.199	0.847	0.776
Rest eyes	31848	0.000	0.823	0.990	0.003	0.756	0.002	-0.273	0.722	0.417
Kneel or squat	29574	0.000	0.492	0.503	-0.001	0.447	0.009	0.180	0.405	0.387
Bend trunk	30853	-0.001	0.574	0.610	-0.001	0.511	0.005	0.178	0.470	0.357
Drive machinery	29385	0.000	0.134	0.151	0.005	0.112	0.017	0.081	0.091	0.176
Drive car or truck	29357	0.003	0.435	0.483	0.007	0.372	0.019	0.210	0.321	0.398
Handle objects 1-4 kg	31116	0.001	0.878	1.324	-0.050	0.770	0.055	0.355	0.701	0.690
Handle objects >4 kg	28306	0.001	0.678	0.893	-0.004	0.604	-0.006	0.267	0.554	0.569
Carry loads <10 kg	28240	0.000	0.643	0.816	-0.010	0.587	-0.006	0.313	0.520	0.663
Carry loads 10-25 kg	28297	0.001	0.510	0.536	-0.012	0.469	-0.013	0.242	0.412	0.457
Carry loads > 25 kg	28271	0.000	0.442	0.404	-0.007	0.395	0.011	0.215	0.349	0.370
Use vibrating tools	28437	0.001	0.143	0.154	0.000	0.123	0.001	0.070	0.098	0.160
Use computer screen	31017	0.000	0.503	0.538	-0.008	0.422	0.001	-0.038	0.416	0.075
Use keyboard or scanner	28437	0.000	0.536	0.597	0.002	0.463	-0.003	-0.095	0.439	0.160
Bend neck	32048	0.000	0.924	1.129	0.003	1.002	0.039	-0.089	0.882	0.887
Arms above shoulder	32712	0.000	0.440	0.407	0.005	0.411	0.041	0.240	0.353	0.371
Reach behind	29482	0.000	0.395	0.301	-0.003	0.374	0.013	0.251	0.264	0.305
Arms abducted	32634	0.000	0.464	0.487	-0.006	0.422	-0.010	0.248	0.357	0.487
Bend elbow	33722	0.000	0.491	0.547	0.004	0.439	0.010	0.247	0.375	0.524
Rotate forearm	32647	0.001	0.259	0.258	0.005	0.222	0.018	0.137	0.182	0.259
Bend wrist	32599	0.000	0.444	0.492	0.002	0.395	-0.001	0.229	0.326	0.471
Press base of hand	33127	0.000	0.187	0.184	0.006	0.156	0.003	0.099	0.123	0.199
Finger pinch	33128	0.000	0.588	0.681	-0.007	0.549	0.004	0.354	0.422	0.652
Work outdoors	35187	0.001	0.393	0.384	-0.003	0.345	0.000	0.162	0.297	0.287

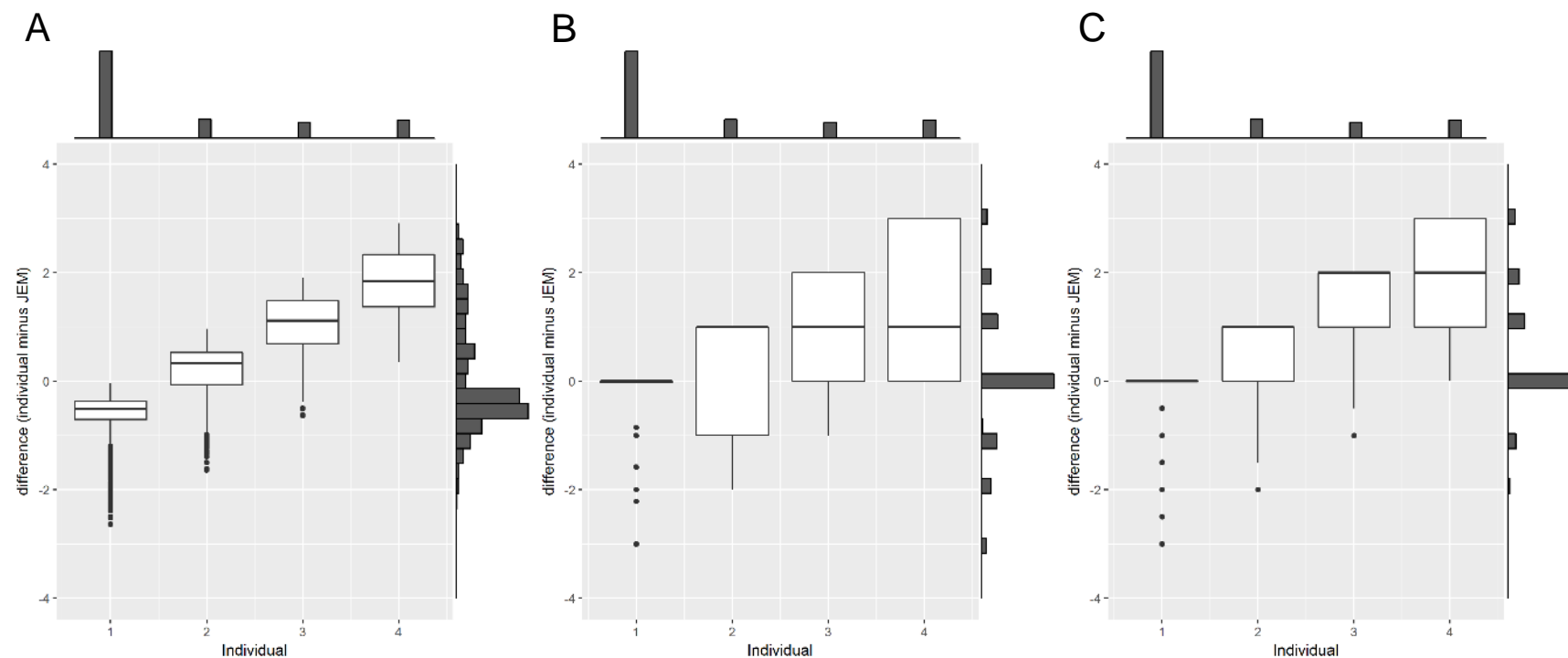
¹Mean differences between mean individual and JEM exposure estimates. ²Differences of average absolute values between individual and JEM estimates. ³Differences in variance between individual and JEM exposure estimates



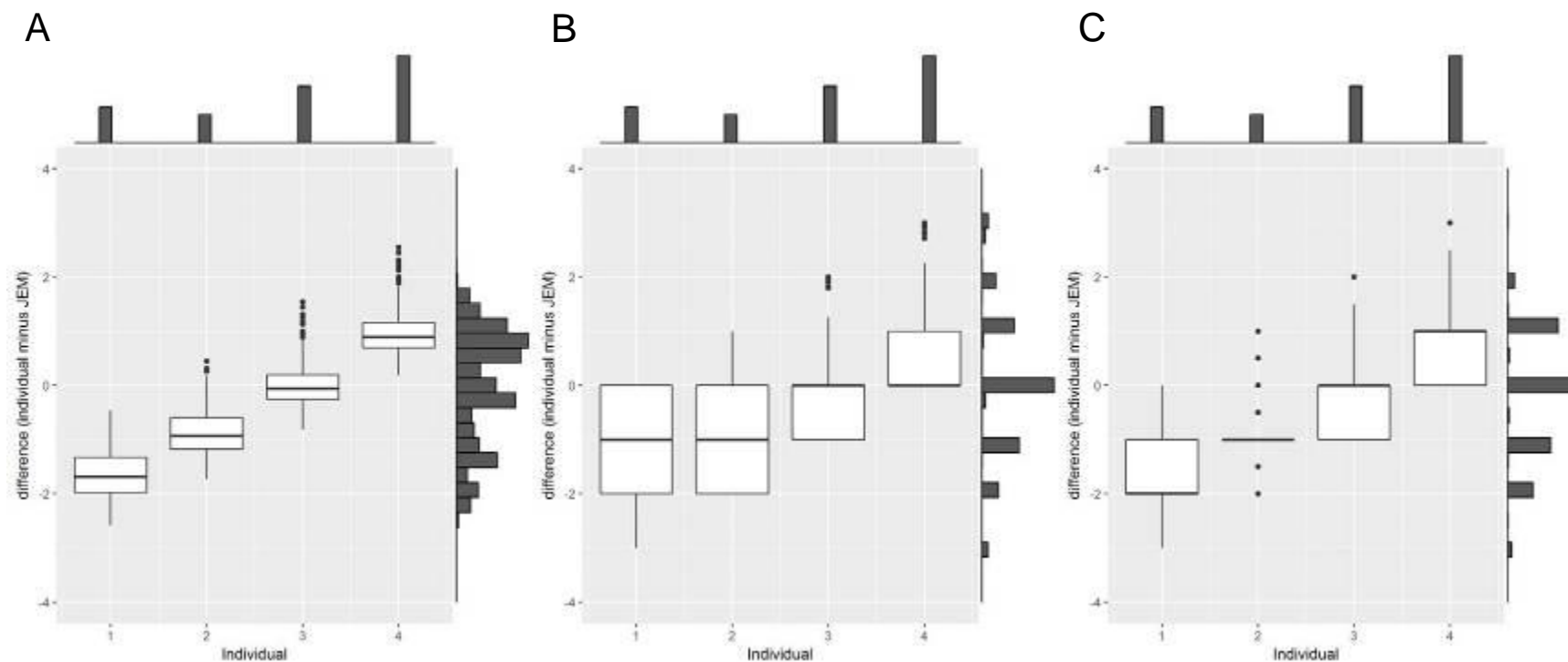
Supplement, Figure 1. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Physical Intensity**



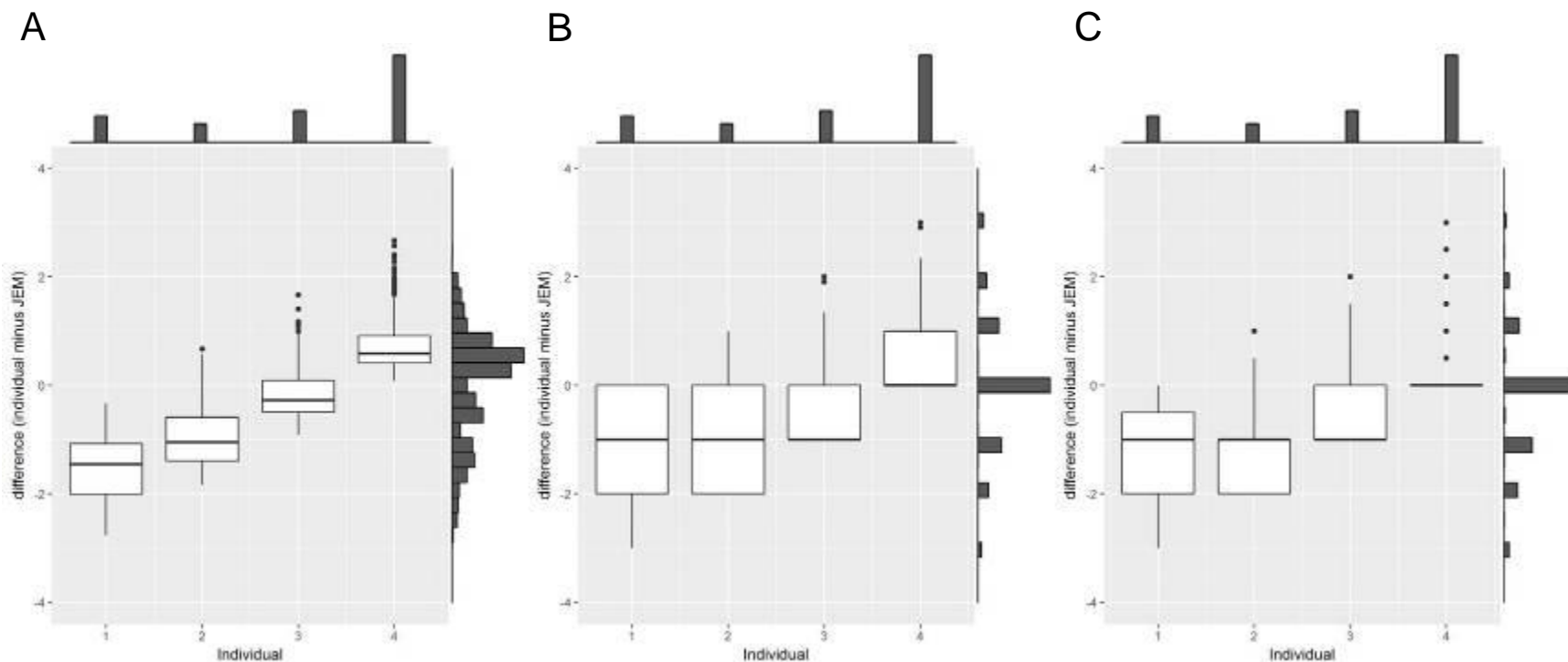
Supplement, Figure 2. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Stand**



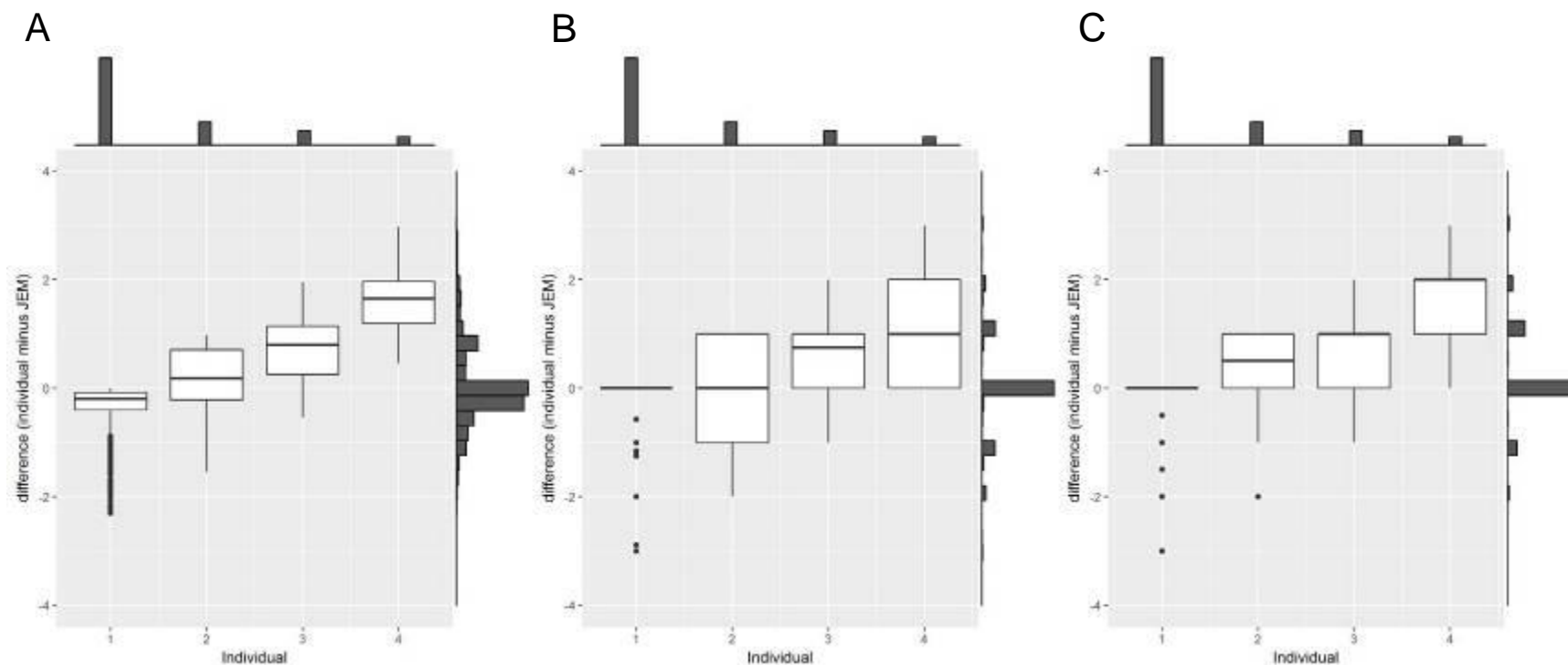
Supplement, Figure 3. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Repetition**



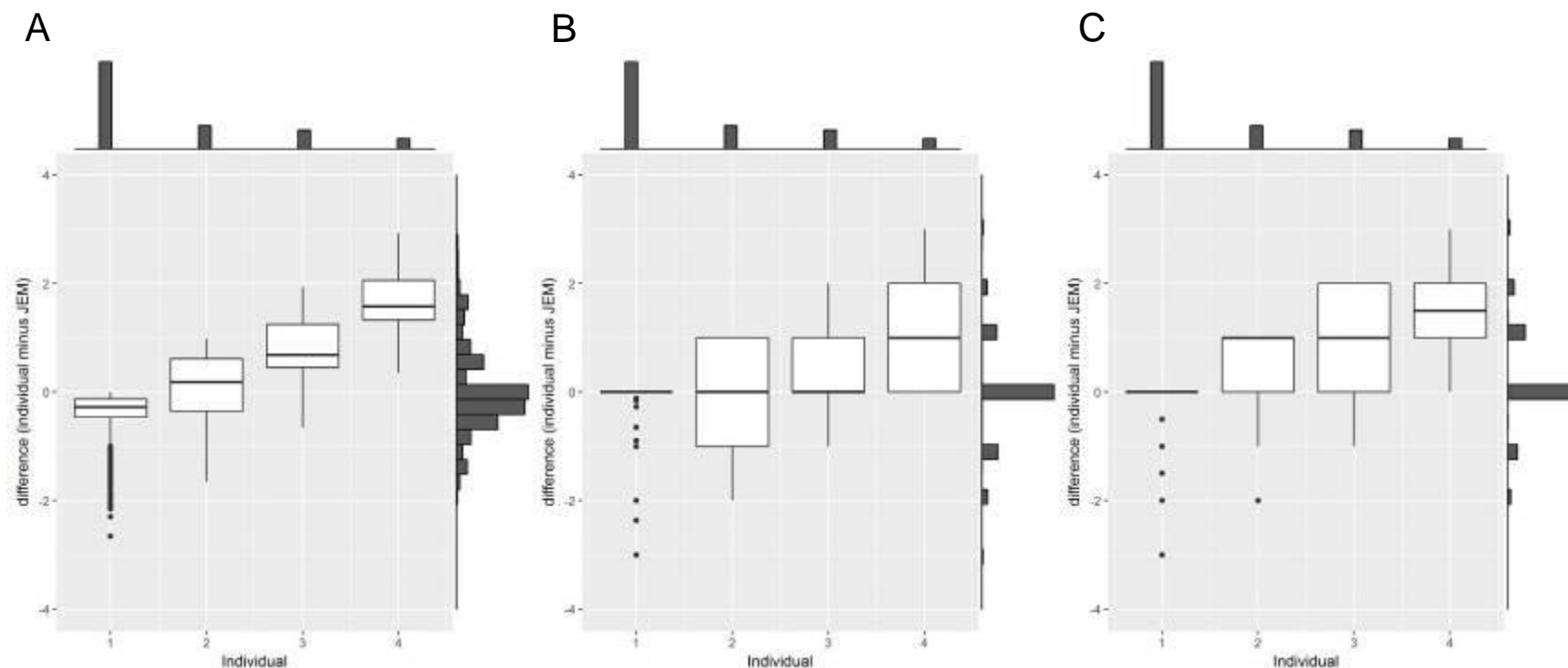
Supplement, Figure 4. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Change Tasks**



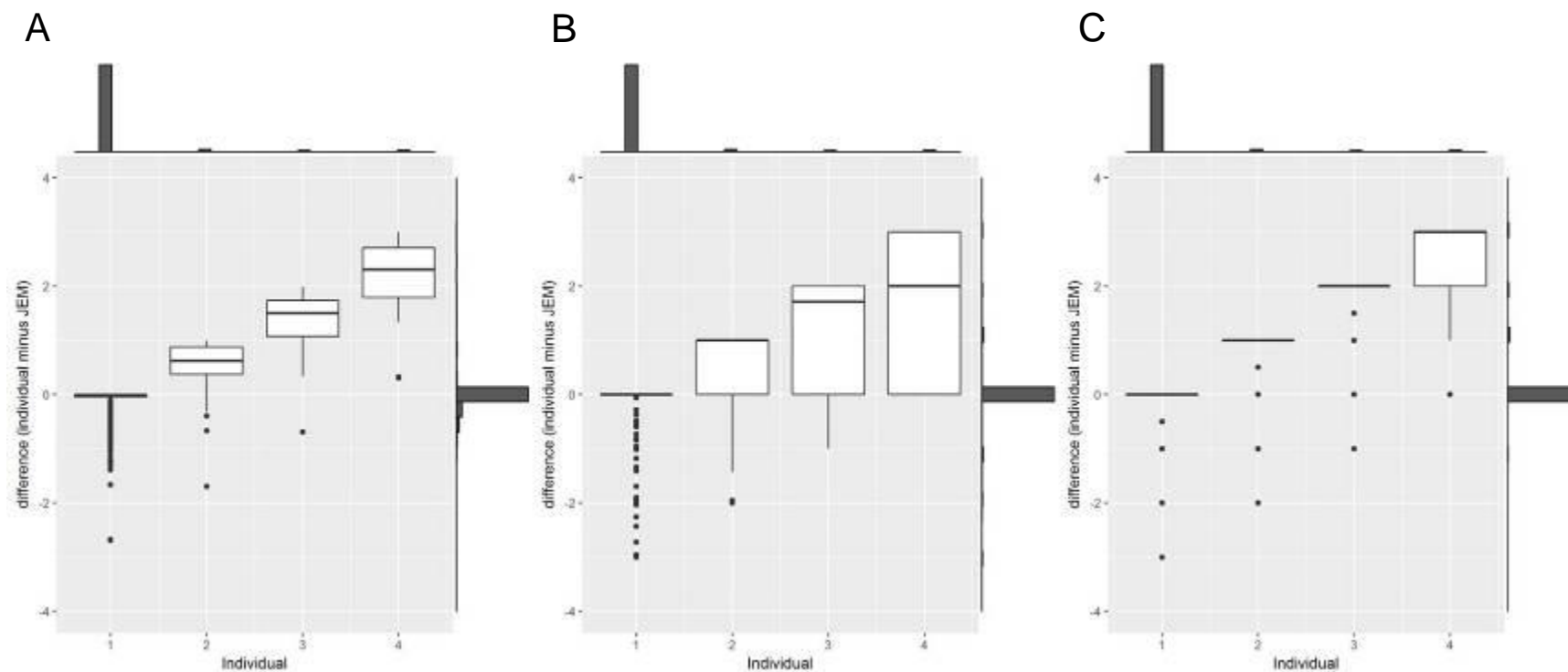
Supplement, Figure 5. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Rest Eyes**



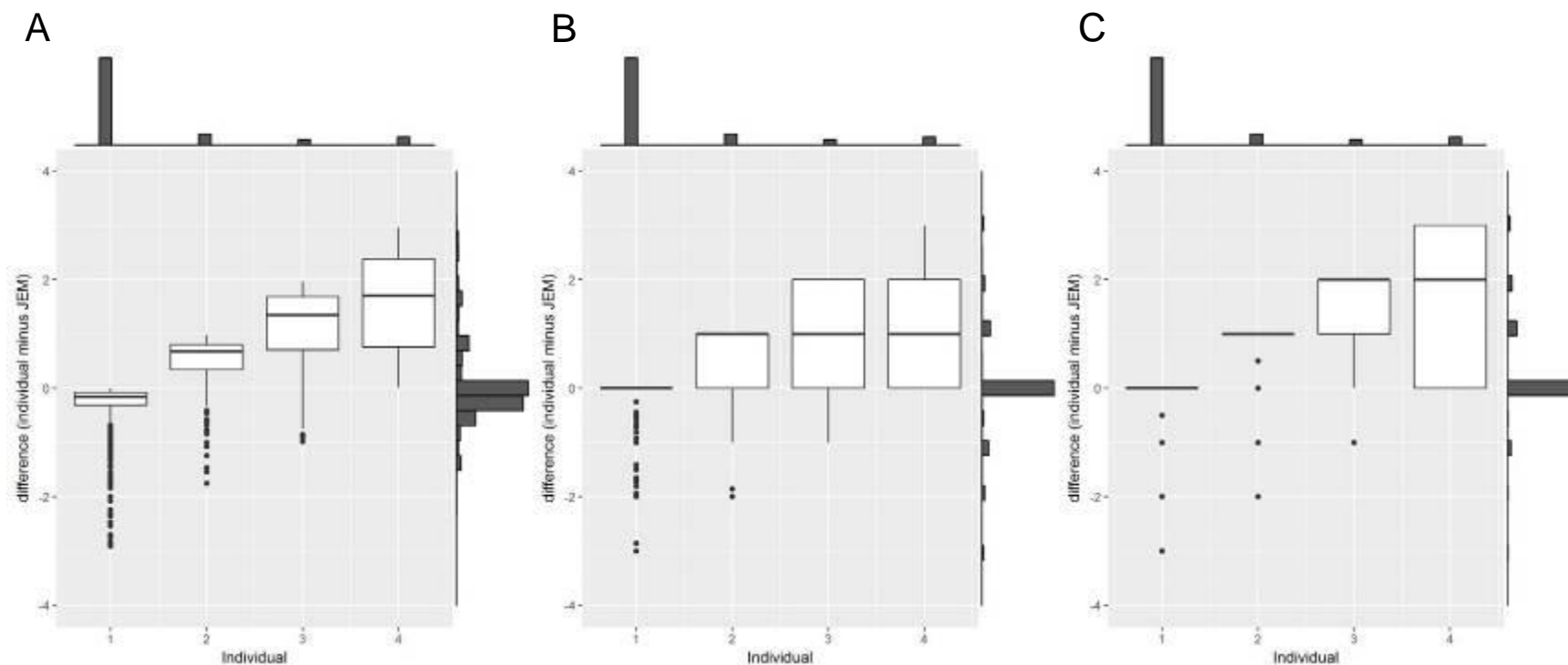
Supplement, Figure 6. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Kneel or Squat**



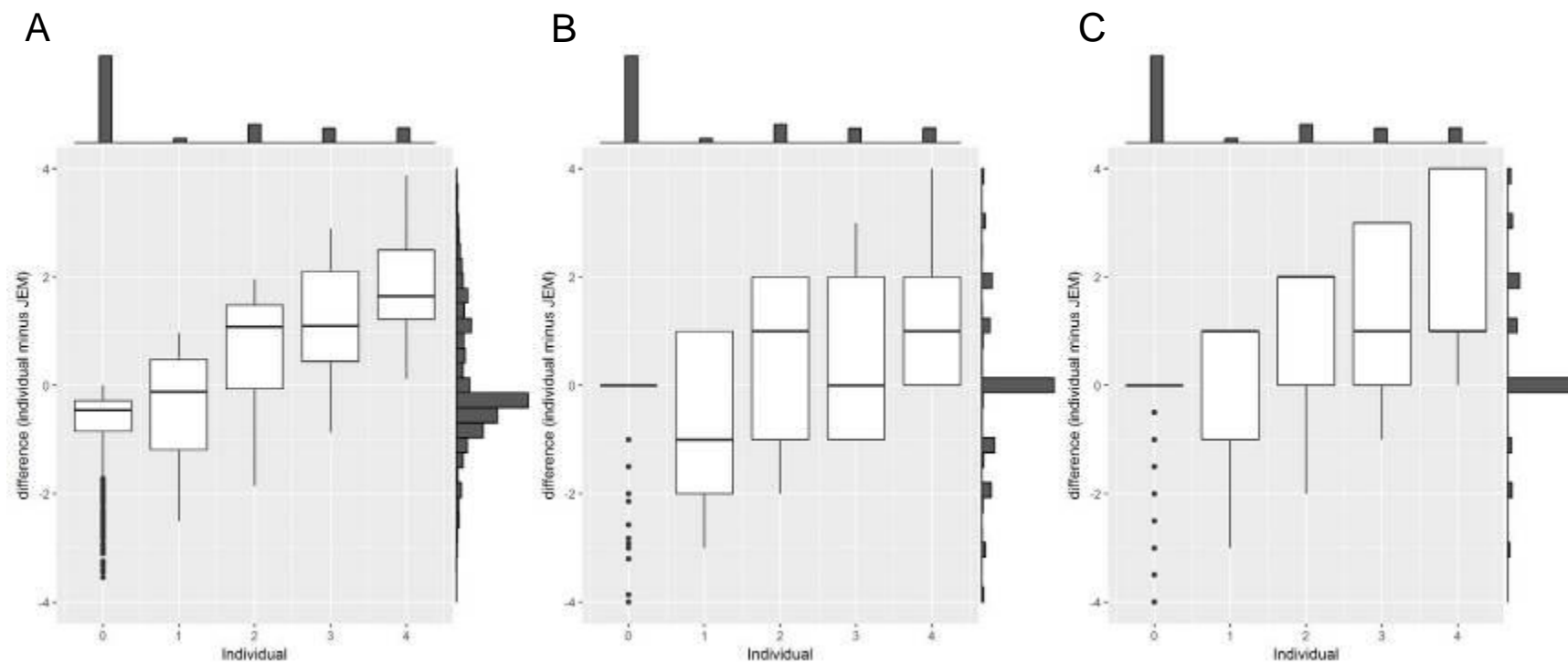
Supplement, Figure 7. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Bend Trunk**



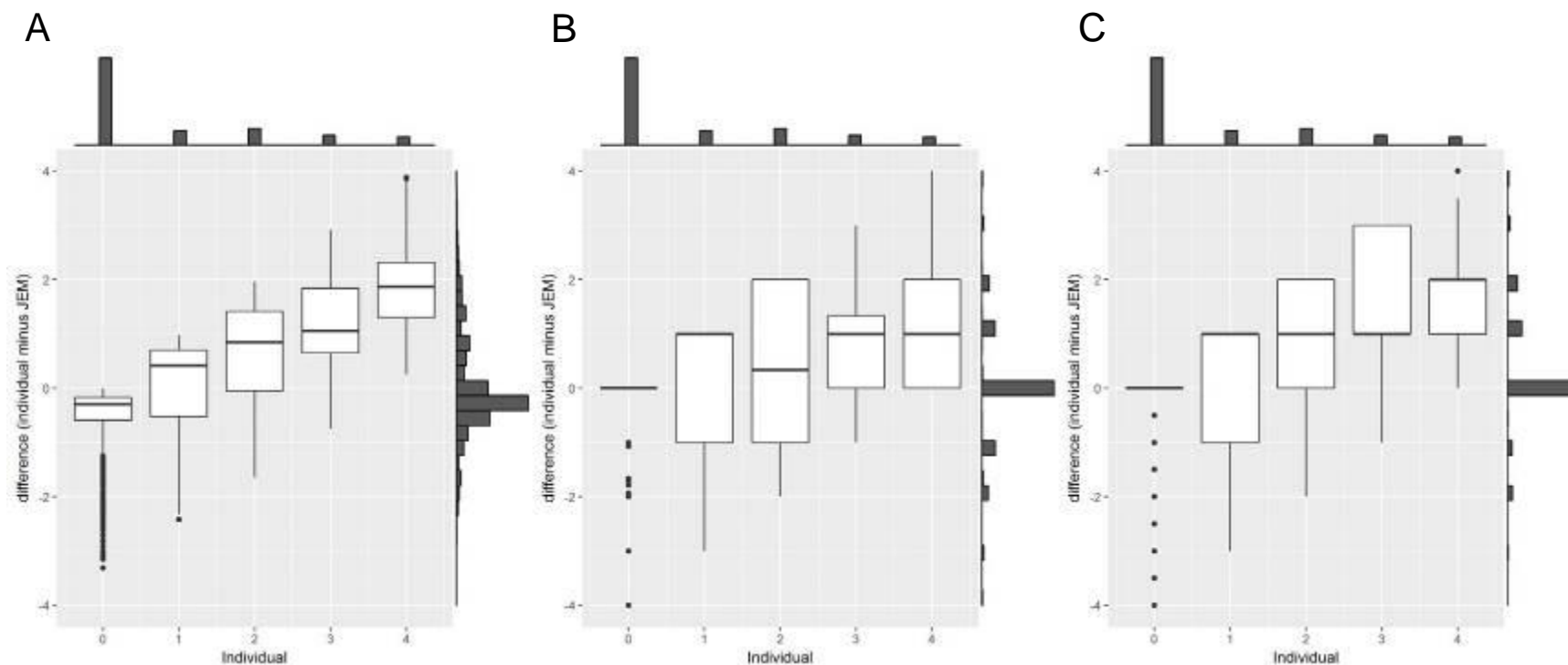
Supplement, Figure 8. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Drive Machinery**



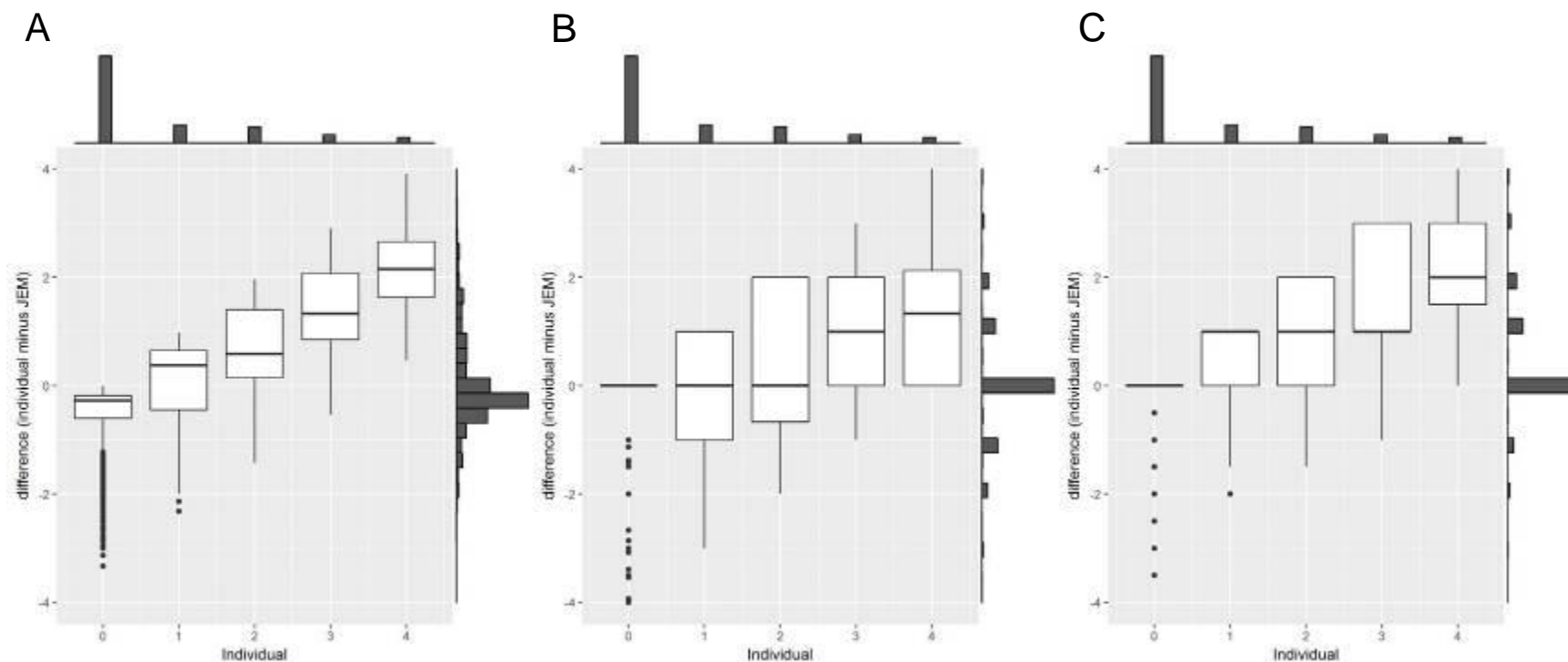
Supplement, Figure 9. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Drive Car or Truck**



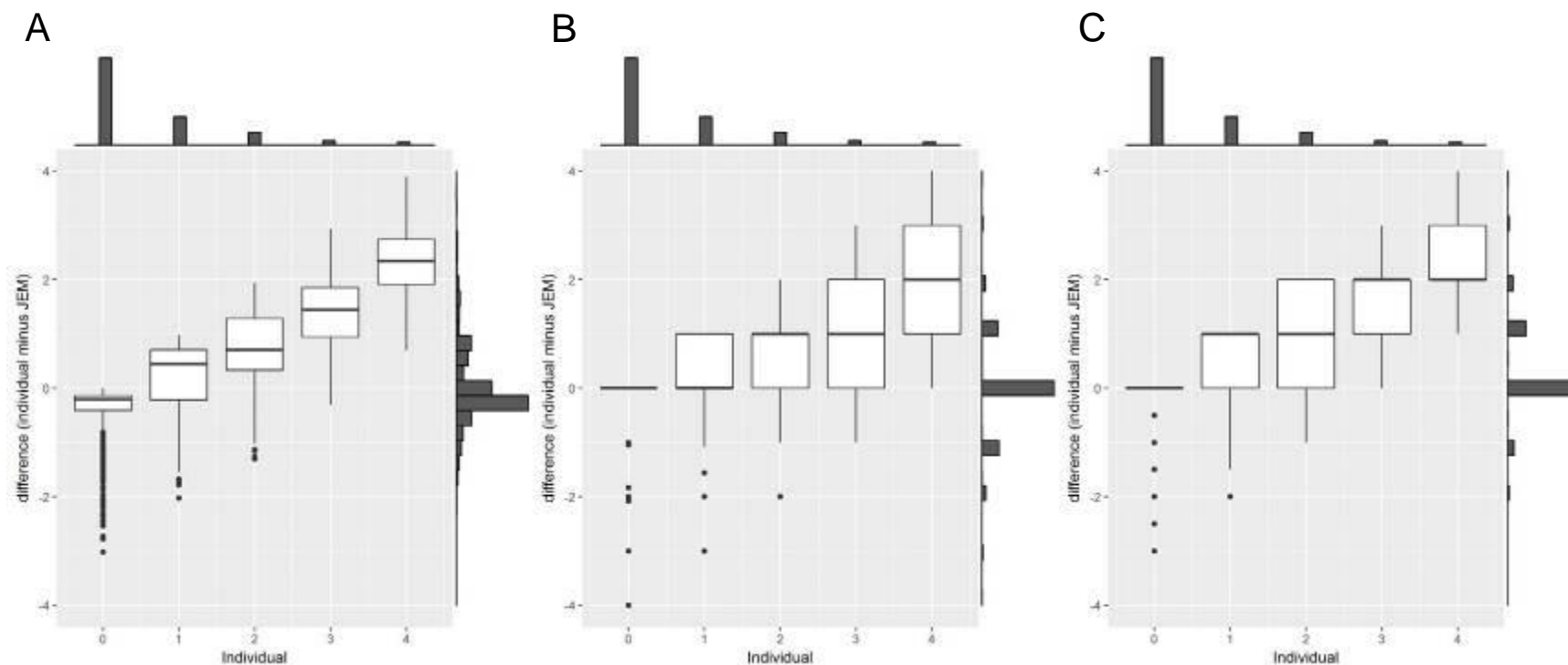
Supplement, Figure 10. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Handle Objects 1-4 kg**



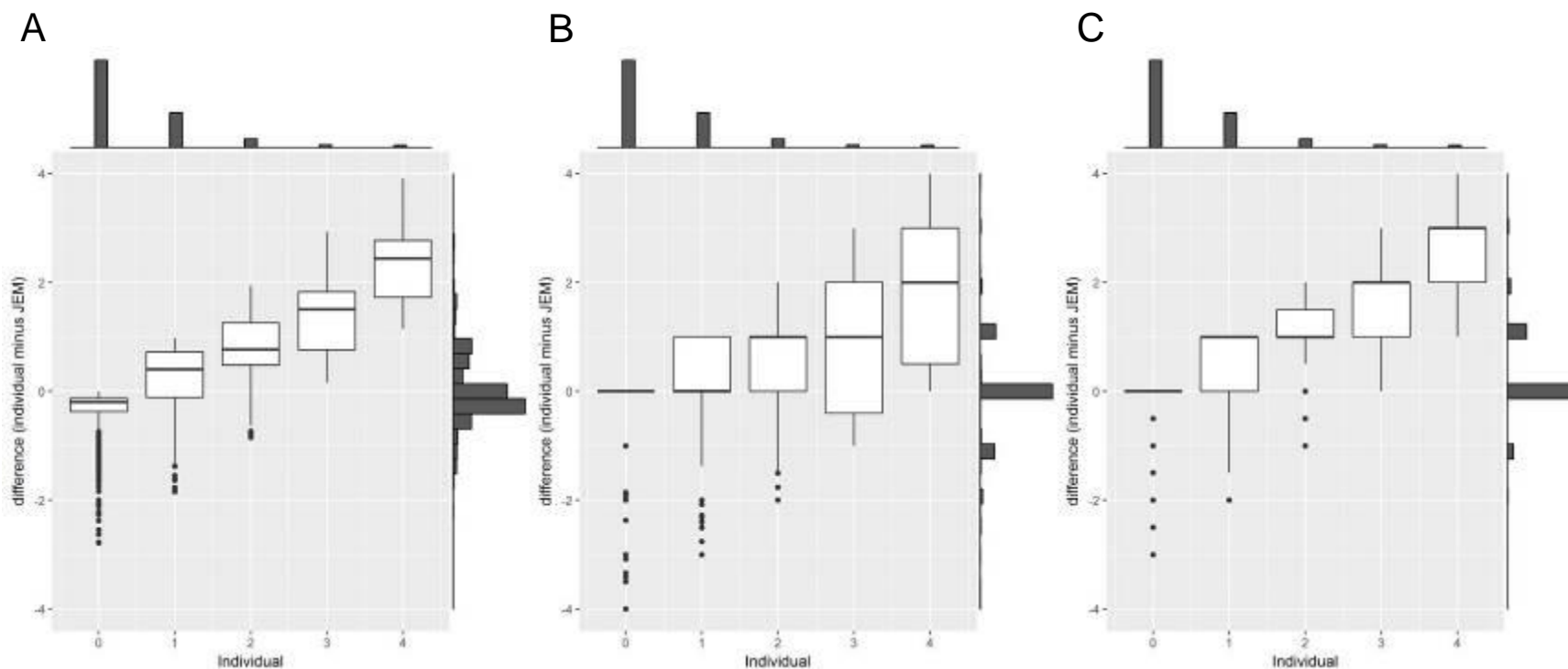
Supplement, Figure 11. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Handle Objects > 4 kg**



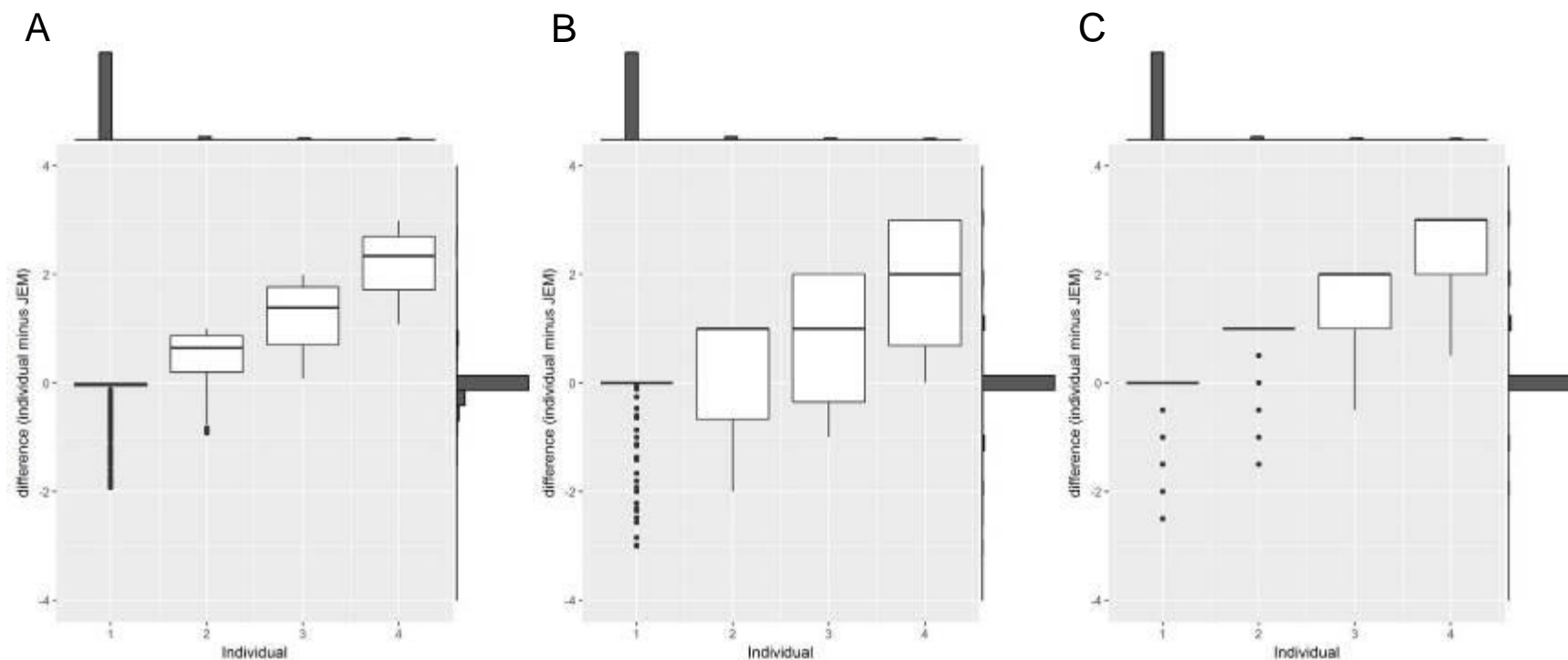
Supplement, Figure 12. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Carry Loads < 10 kg**



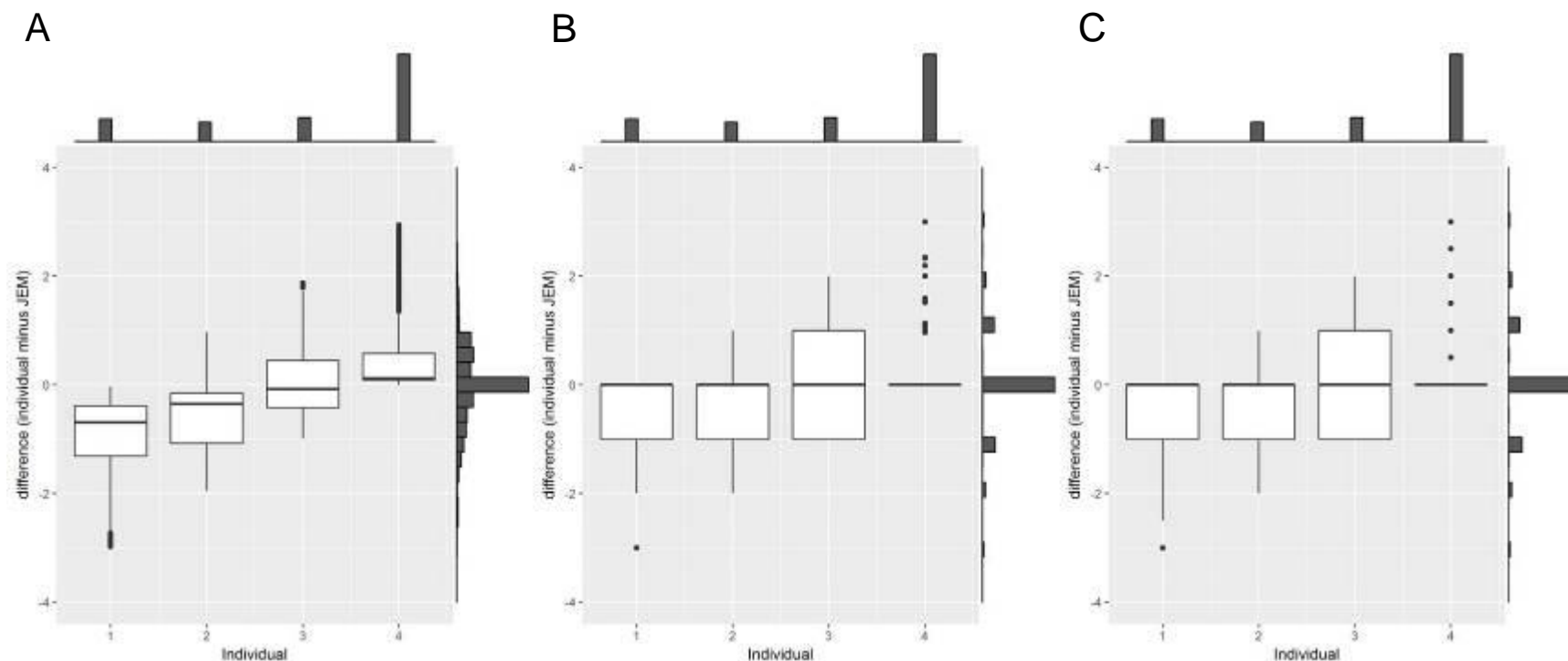
Supplement, Figure 13. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Carry Loads 10 – 25 kg**



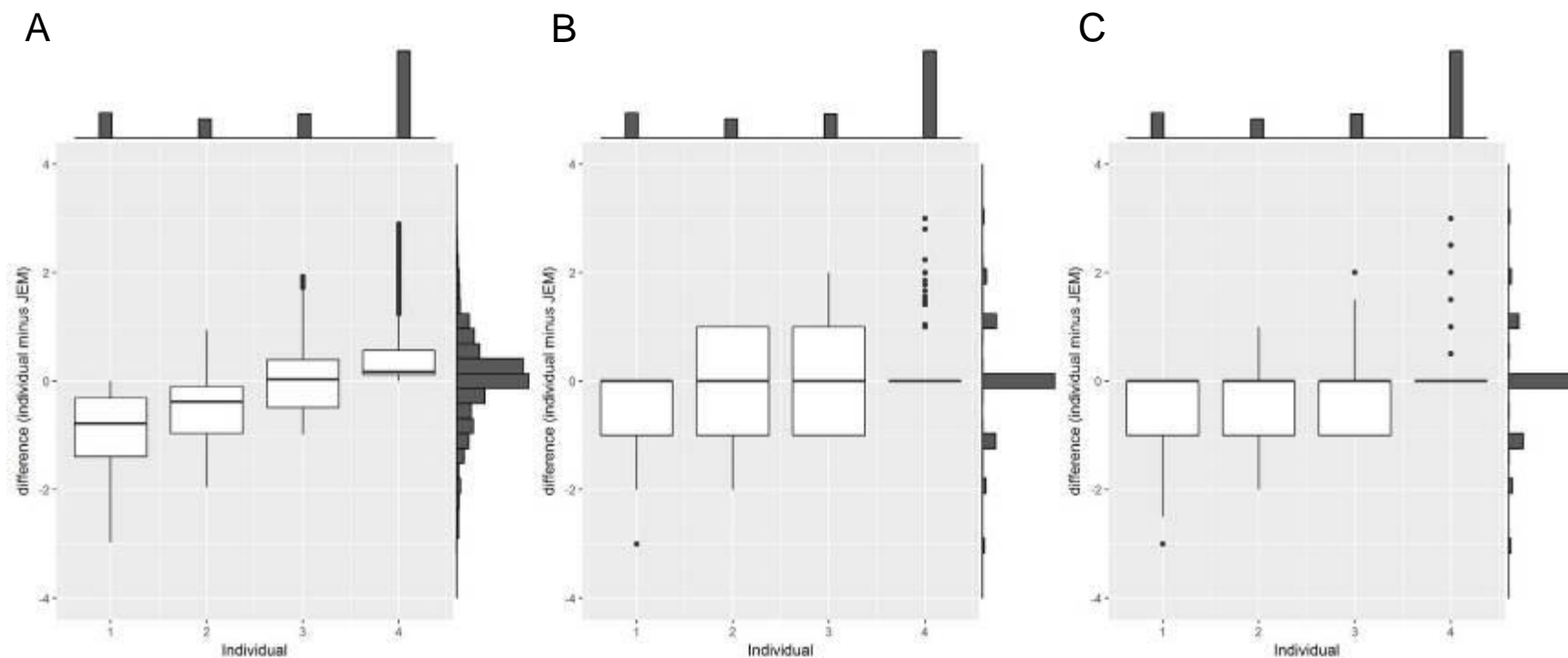
Supplement, Figure 14. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Carry Loads > 25 kg**



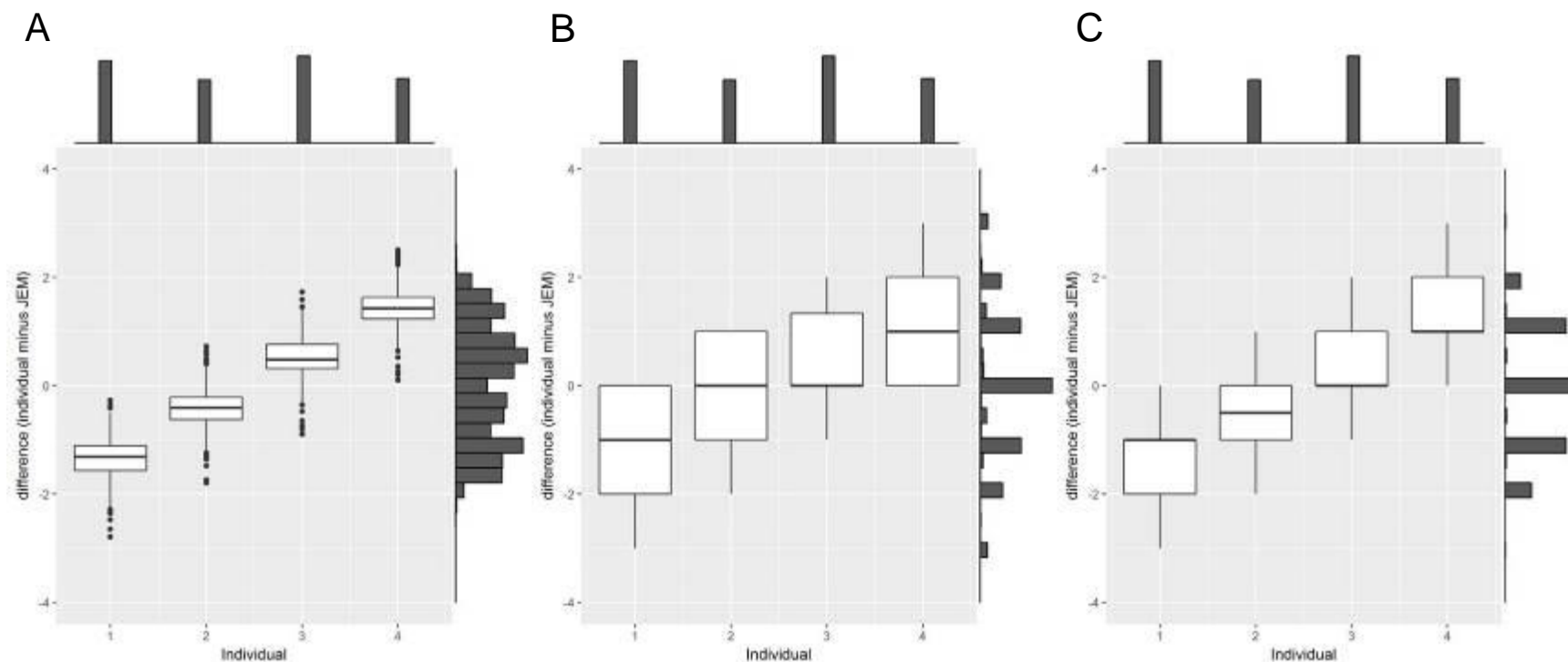
Supplement, Figure 15. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Use Vibrating Tools**



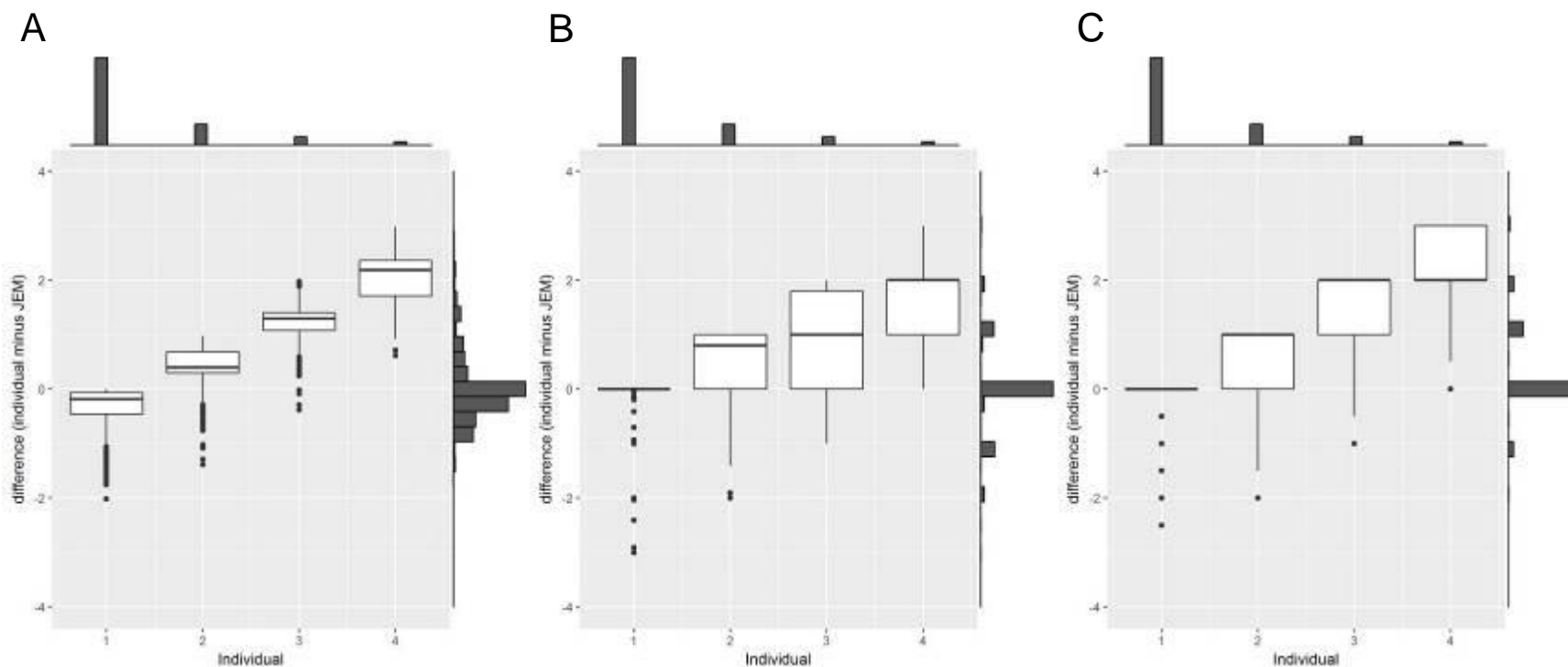
Supplement, Figure 16. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Use Computer Screen**



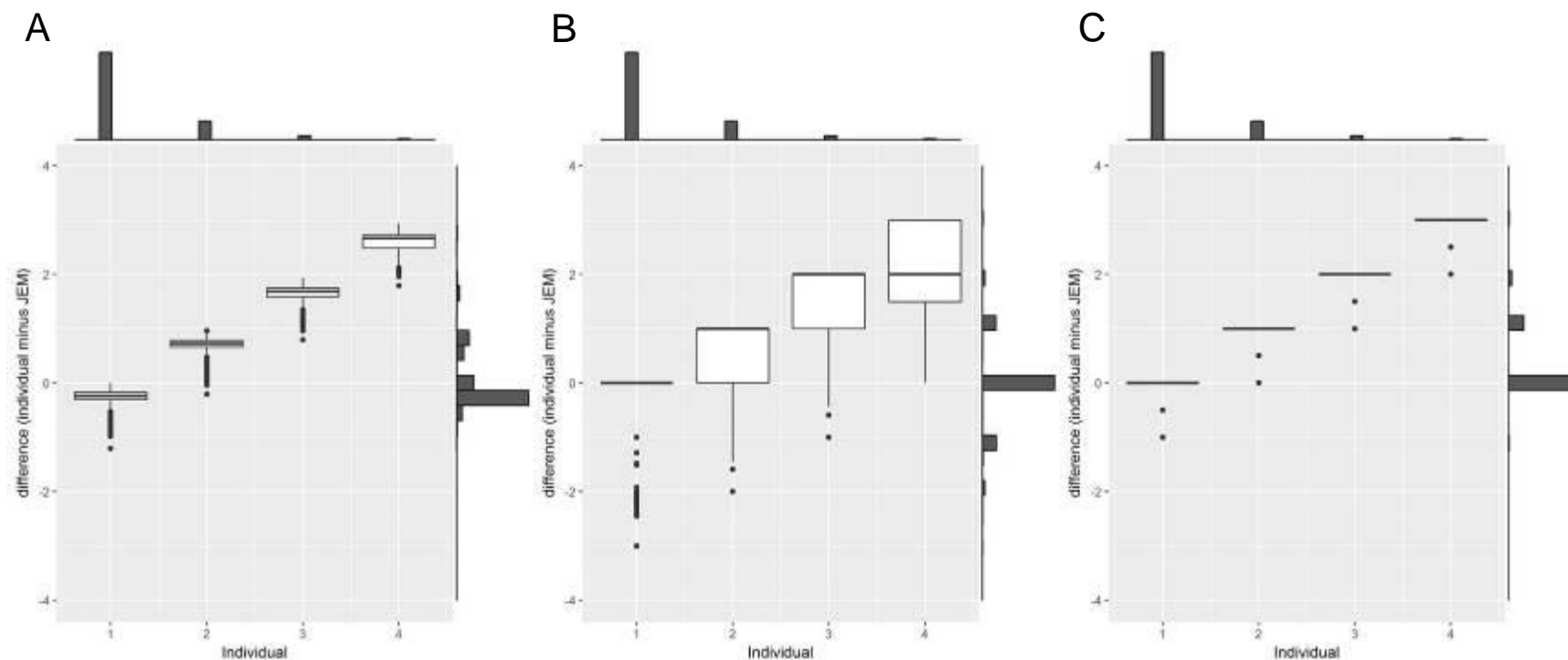
Supplement, Figure 17. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Use Keyboard or Scanner**



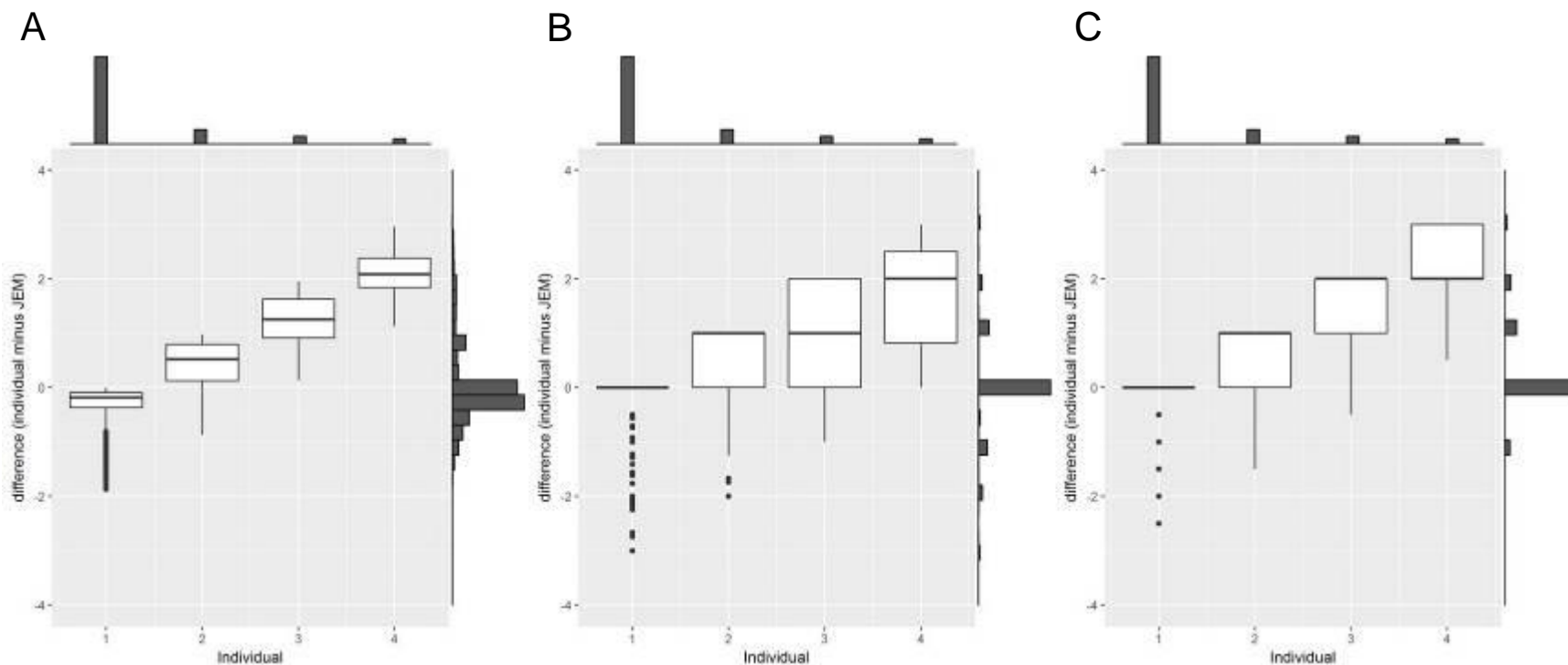
Supplement, Figure 18. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Bend Neck**



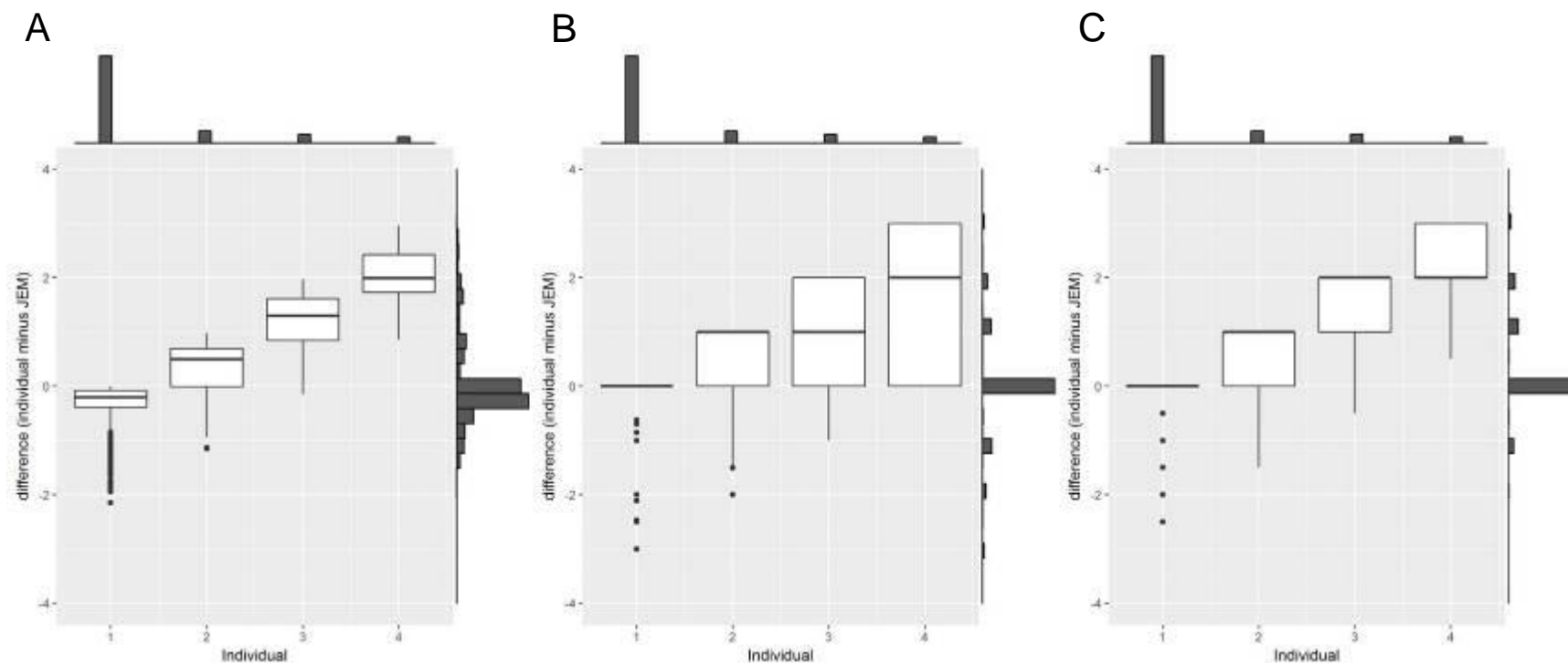
Supplement, Figure 19. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Arms Above Shoulder**



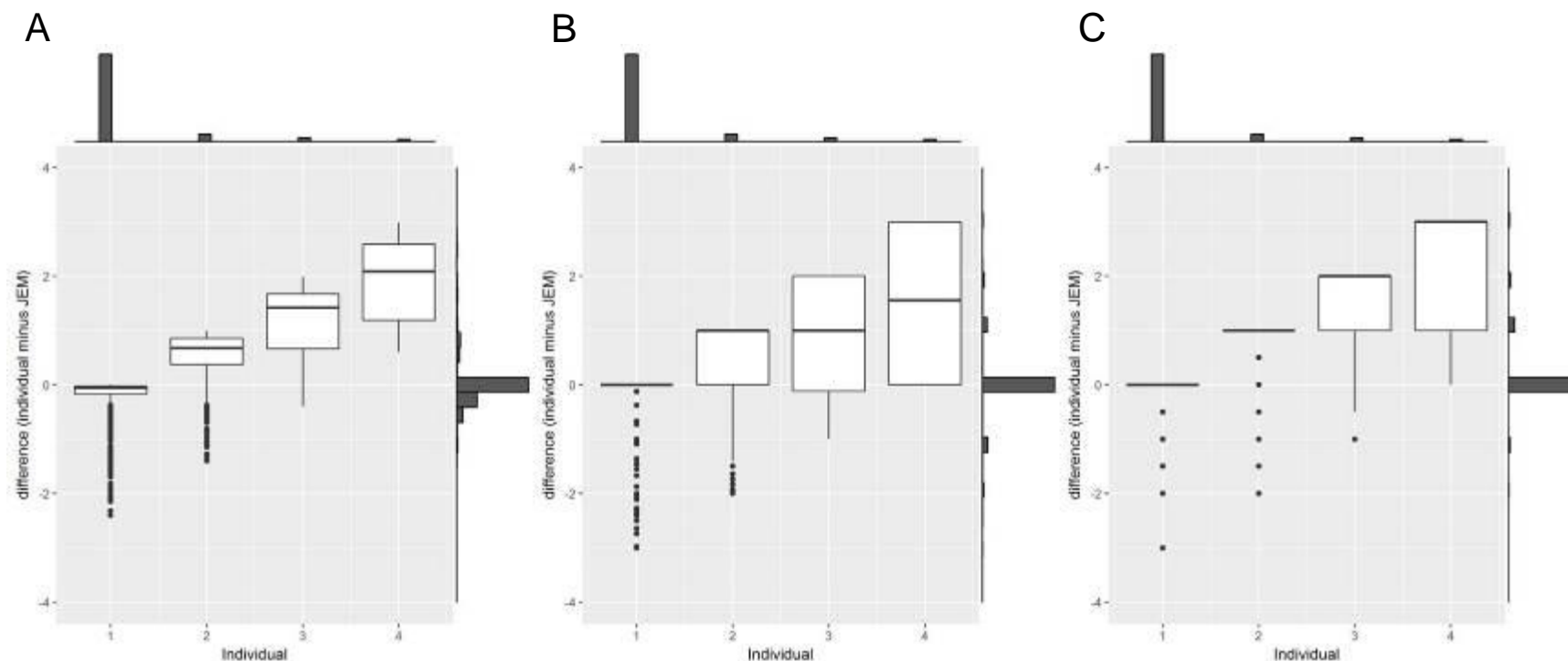
Supplement, Figure 20. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Reach Behind**



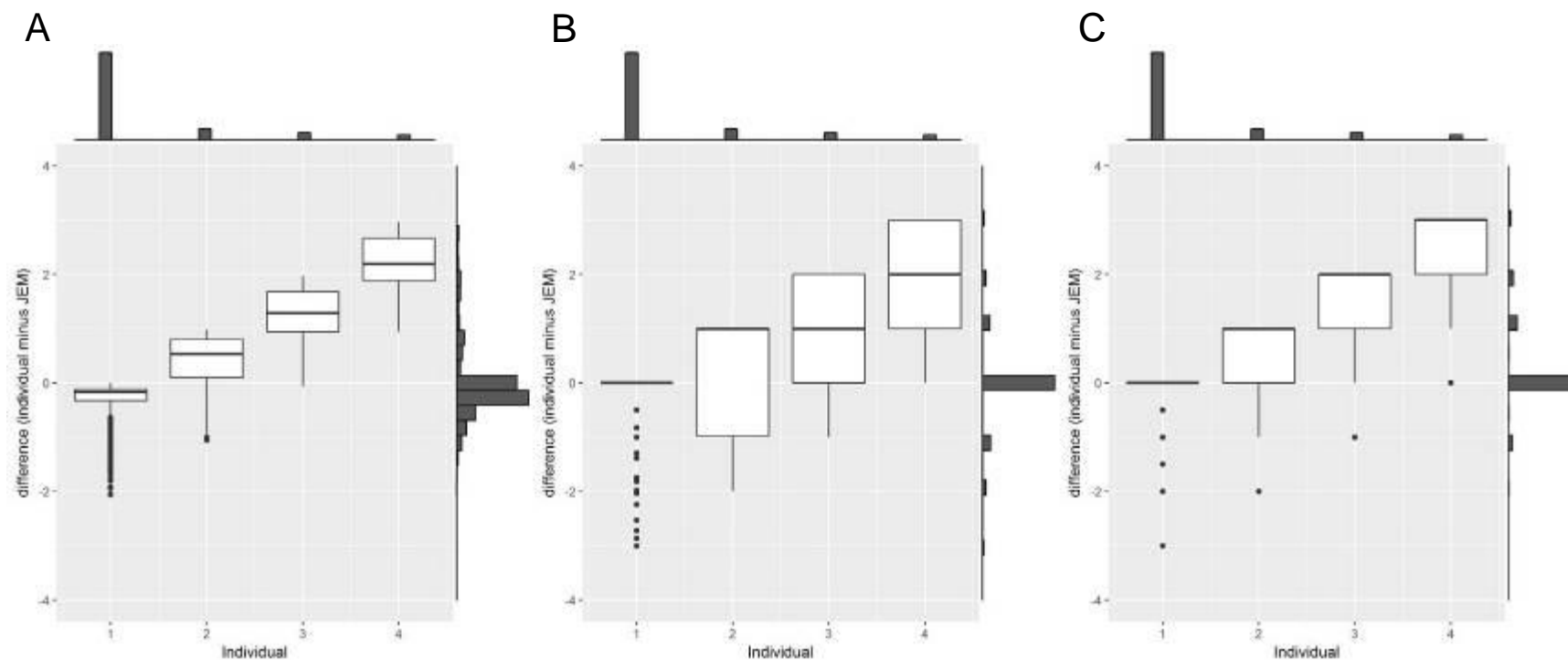
Supplement, Figure 21. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Arms Abducted**



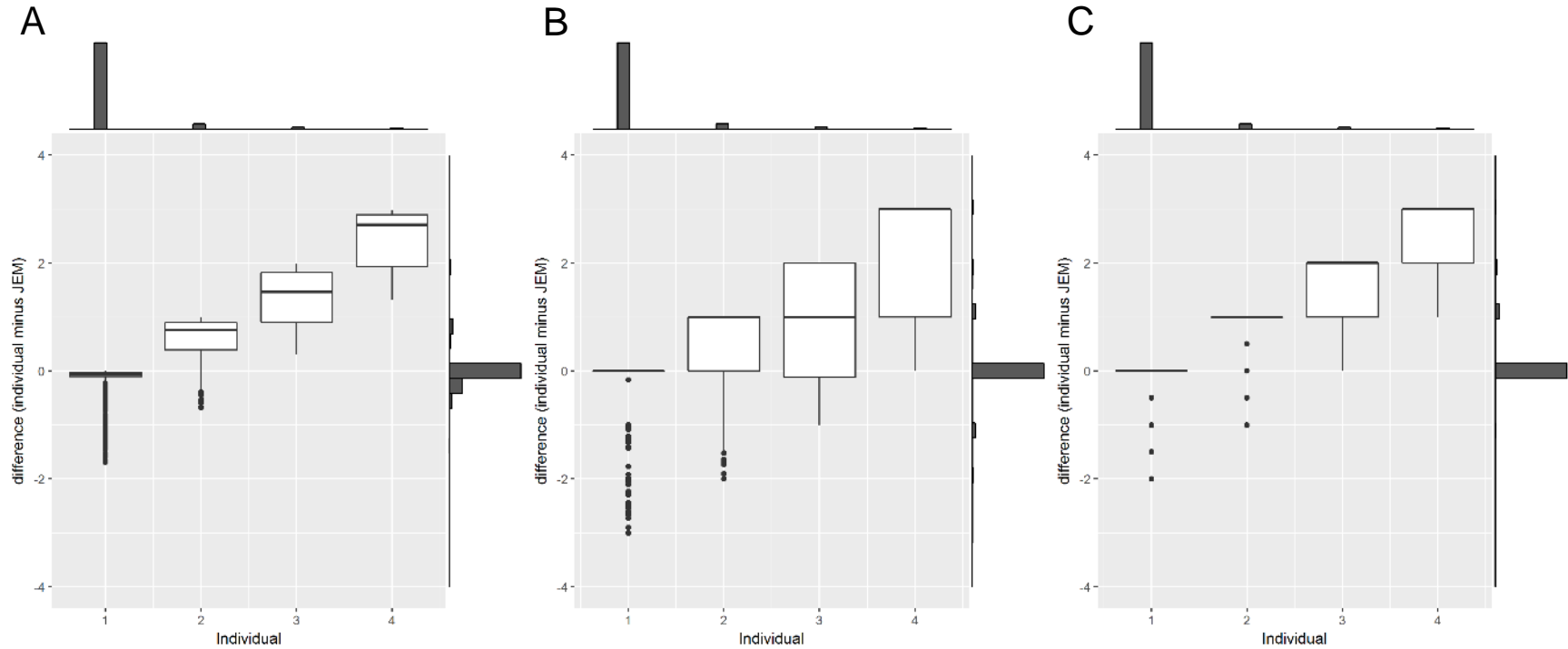
Supplement, Figure 22. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Bend Elbow**



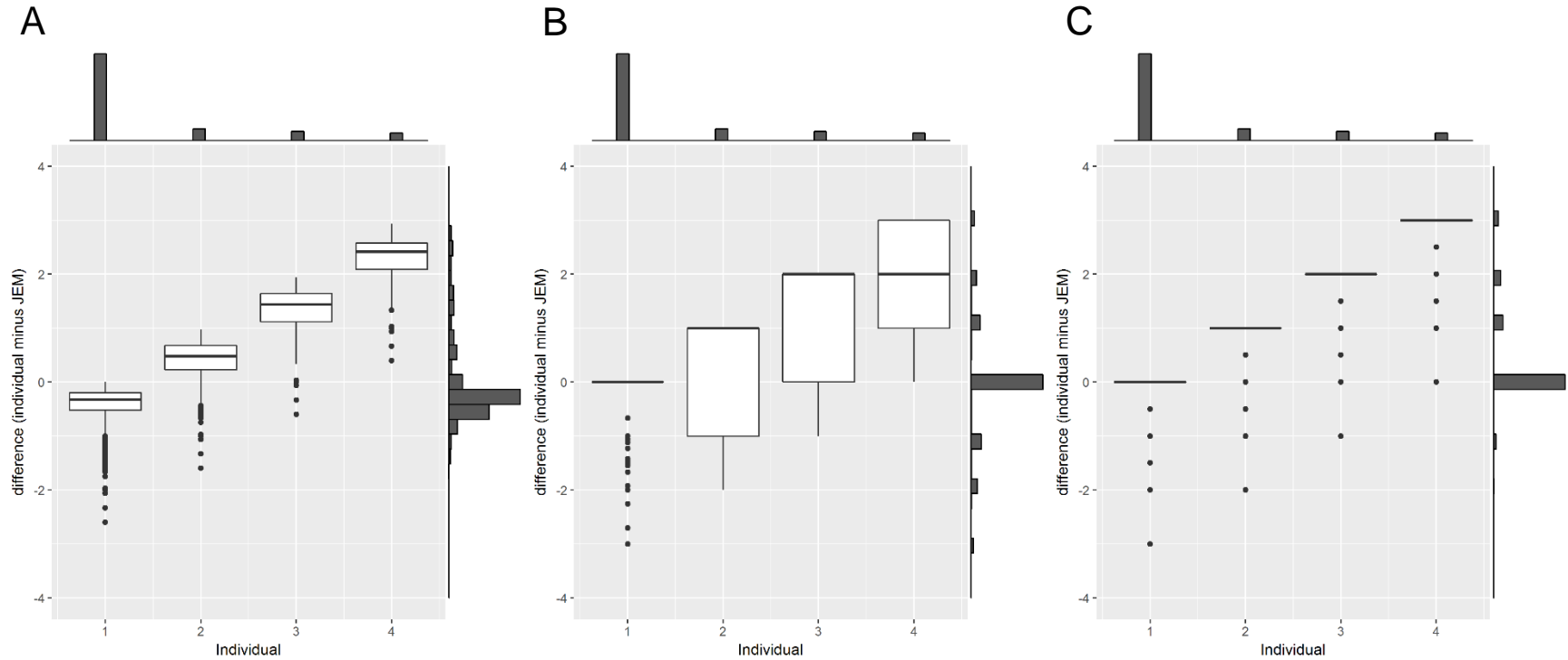
Supplement, Figure 23. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Rotare Forearm**



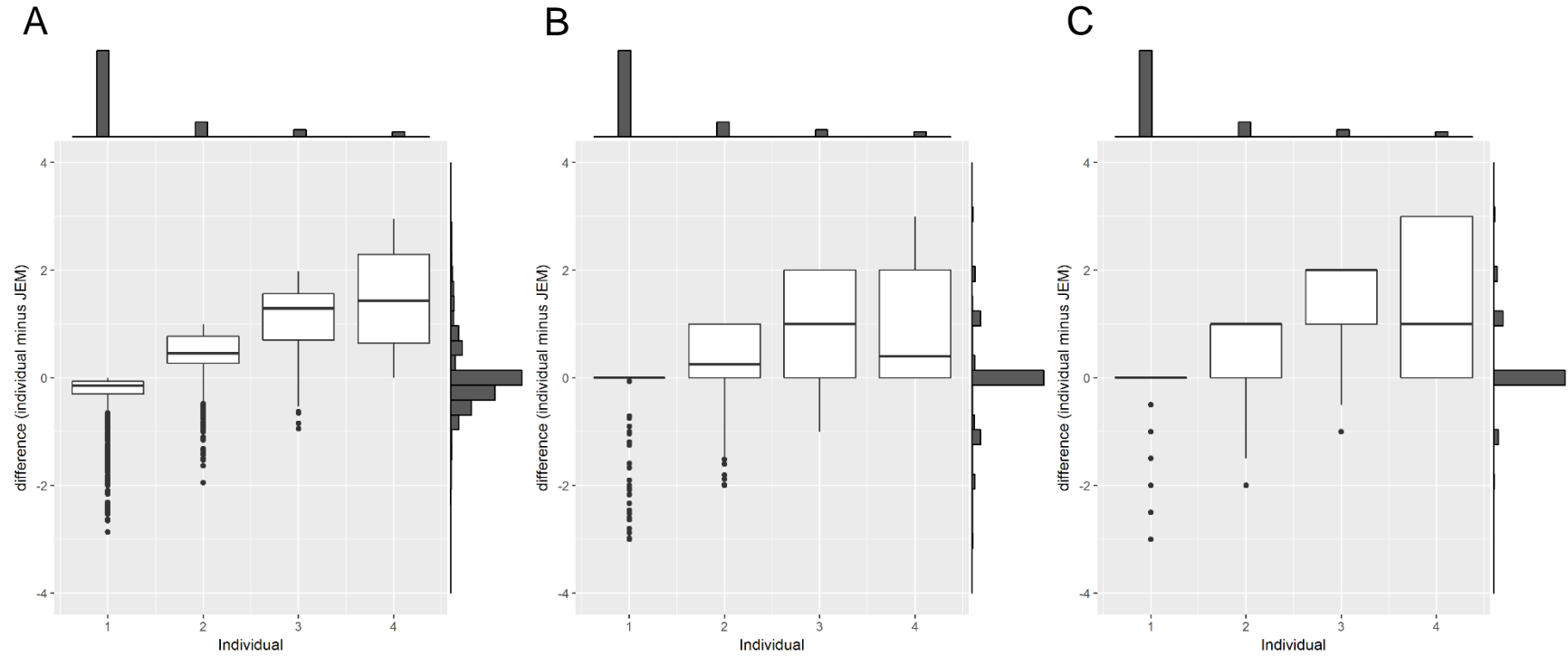
Supplement, Figure 24. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Bend Wrist**



Supplement, Figure 25. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Press Base or Hand**



Supplement, Figure 26. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Finger Pinch**



Supplement, Figure 27. Box-plots of the differences between individual-level reports and group-level exposure estimates (individual – JEM) at each exposure intensity level for three exposure metrics: (A) JEM Mean, (B) JEM Bias Corrected Mean, and (C) JEM Median. Distributions of individual (top axis) and JEM (right axis) are plotted. Bias-corrected mean determined using empirical quantile mapping methods (EQM). Exposure Variable: **Work Outdoors**