



Supplementary Information for

Sitting, squatting, and the evolutionary biology of human inactivity

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Supplementary Tables

Table S1. CVD biomarker data for Hadza participants

| ID | Sex | Age | Total Chol [mg/dl] | HDL [mg/dl] | LDL [mg/dl] | LDL-Friedewald equation [mg/dl] | Triglycerides [mg/dl] | Glucose [mg/dl] | Device-Glucose | Actigraphy Sample |
|------|-----|-----|--------------------|-------------|-------------|---------------------------------|-----------------------|-----------------|----------------|-------------------|
| HZ13 | F | 49 | 118 | 42 | 60 | 61 | 74 | 73 | CardioChek | 1 |
| HZ32 | F | 24 | 117 | 39 | 53 | 53 | 125 | 56 | CardioChek | 1 |
| HZ33 | F | 51 | 149 | 59 | 76 | 77 | 64 | 60 | CardioChek | 1 |
| HZ60 | F | 50 | 140 | 41 | 86 | 85 | 69 | 69 | CardioChek | 1 |
| HZ61 | F | 61 | 123 | 51 | | 62 | <50 | 71 | CardioChek | 1 |
| HZ62 | F | 20 | 165 | 41 | 113 | 113 | 55 | 83 | CardioChek | 1 |
| HZ63 | F | 19 | 107 | 36 | 54 | 55 | 81 | 74 | CardioChek | 1 |
| HZ68 | F | 46 | 105 | 46 | 35 | 35 | 122 | 92 | OneTouch | 0 |
| HZ69 | F | 15 | 107 | 40 | 44 | 44 | 114 | 89 | OneTouch | 0 |
| HZ70 | F | 66 | 128 | 42 | 60 | 60 | 129 | 93 | OneTouch | 0 |
| HZ71 | F | 16 | <100 | 34 | | 48 | 85 | 90 | OneTouch | 0 |
| HZ72 | F | 18 | <100 | 43 | | 32 | 121 | 98 | OneTouch | 0 |
| HZ73 | F | 23 | <100 | 40 | | 42 | 86 | 74 | OneTouch | 0 |
| HZ74 | F | 37 | <100 | 43 | | 40 | 81 | 110 | OneTouch | 0 |
| HZ75 | F | 28 | <100 | 28 | | 46 | 125 | 93 | OneTouch | 0 |
| HZ76 | F | 14 | | | | | | 90 | OneTouch | 0 |
| HZ77 | F | 44 | | | | | | 100 | OneTouch | 0 |
| HZ29 | M | 56 | 100 | 27 | | 63 | <50 | 59 | CardioChek | 1 |
| HZ45 | M | 25 | <100 | 30 | | 59 | <50 | 73 | CardioChek | 0 |
| HZ50 | M | 24 | <100 | 32 | | 52 | 75 | 65 | CardioChek | 1 |
| HZ52 | M | 32 | <100 | 33 | | 48 | 90 | 136 | CardioChek | 0 |
| HZ53 | M | 47 | <100 | 38 | | 41 | 102 | 58 | CardioChek | 1 |
| HZ54 | M | 24 | <100 | <15 | | 57 | 141 | 75 | CardioChek | 0 |

| | | | | | | | | | | |
|------|---|----|------|-----|-----|-----|-----|-----|------------|---|
| HZ55 | M | 46 | 172 | 34 | 115 | 114 | 122 | 79 | CardioChek | 0 |
| HZ56 | M | 29 | <100 | 16 | | 59 | 118 | 68 | CardioChek | 1 |
| HZ57 | M | 56 | <100 | 34 | | 40 | 125 | 69 | CardioChek | 1 |
| HZ58 | M | 20 | 115 | 33 | 71 | 68 | 68 | 59 | CardioChek | 0 |
| HZ59 | M | 31 | 111 | 38 | 61 | 61 | 60 | 56 | CardioChek | 1 |
| HZ64 | M | 24 | 107 | 34 | 60 | 61 | 62 | 51 | CardioChek | 1 |
| HZ65 | M | 18 | 125 | 31 | 78 | 77 | 85 | 74 | CardioChek | 1 |
| HZ66 | M | 78 | <100 | 22 | | 66 | 57 | 133 | CardioChek | 0 |
| HZ67 | M | 36 | <100 | 33 | | 56 | <50 | 62 | CardioChek | 1 |
| HZ78 | M | 45 | 103 | 45 | | 48 | <50 | 97 | OneTouch | 0 |
| HZ79 | M | 65 | 108 | <20 | | 79 | <50 | 82 | OneTouch | 0 |
| HZ80 | M | 67 | 123 | 48 | | 65 | 50 | 131 | OneTouch | 0 |
| HZ81 | M | 56 | 126 | 63 | | 53 | <50 | 90 | OneTouch | 0 |
| HZ82 | M | 44 | <100 | <20 | | 70 | <50 | 98 | OneTouch | 0 |
| HZ83 | M | 19 | <100 | | | 72 | 42 | 84 | OneTouch | 0 |
| HZ86 | M | 43 | <100 | 46 | | 36 | 87 | 93 | OneTouch | 0 |
| HZ87 | M | 38 | <100 | 46 | | 43 | <50 | 94 | OneTouch | 0 |
| HZ88 | M | 42 | | | | | | 85 | OneTouch | 0 |
| HZ89 | M | 56 | | | | | | 103 | OneTouch | 0 |
| HZ90 | M | 34 | | | | | | 73 | OneTouch | 0 |
| HZ91 | M | 61 | | | | | | 98 | OneTouch | 0 |
| HZ92 | M | 21 | | | | | | 84 | OneTouch | 0 |
| HZ93 | M | 24 | | | | | | 81 | OneTouch | 0 |
| HZ78 | M | 28 | | | | | | 85 | OneTouch | 0 |
| HZ79 | M | 21 | | | | | | 74 | OneTouch | 0 |

Note that the CardioChek does not calculate values of total cholesterol below 100 mg/dl, triglycerides below 50 mg/dl, or HDL below 20 mg/dl. In cases where these values fell below the threshold for measurement, the next lowest value was imputed (e.g, total

cholesterol of <100 was imputed as 99; HDL <20 was imputed as 19) for calculation of group means. Actigraphy sample refer to whether individuals were also participants in the actigraphy study (1=yes, 0=no).

Table S2. Summary data based on waking times from Samson et al. (55)

| Variable | Female | | Male | |
|-----------------------------|----------|-------|----------|-------|
| | mean | SD | mean | SD |
| Age | 36.50 | 15.36 | 38.94 | 13.13 |
| Sedentary time (hrs/day) | 10.25 | 1.86 | 10.02 | 2.24 |
| Standing time (hrs/day) | 2.20 | 0.78 | 1.83 | 1.04 |
| Average sed. bout (minutes) | 15.40 | 7.22 | 16.50 | 11.53 |
| Transitions (per day) | 48.01 | 11.31 | 48.67 | 17.04 |
| MVPA (minutes/day) | 75.17 | 75.44 | 102.29 | 77.14 |
| MVPA bouts (minutes/day) | 49.28 | 73.70 | 76.59 | 73.92 |
| Sleep onset | 22:00:00 | | 22:00:00 | |
| Sleep end | 7:00:00 | | 7:00:00 | |

Table S3. Summary data based on waking times from Yetish et al. (54)

| Variable | Female | | Male | |
|-----------------------------|----------|-------|----------|-------|
| | mean | SD | mean | SD |
| Age | 36.50 | 15.36 | 38.94 | 13.13 |
| Sedentary time (hrs/day) | 11.47 | 1.85 | 11.26 | 2.27 |
| Standing time (hrs/day) | 2.26 | 0.79 | 1.87 | 1.05 |
| Average sed. bout (minutes) | 15.93 | 6.32 | 17.47 | 12.33 |
| Transitions (per day) | 51.40 | 11.78 | 51.55 | 17.30 |
| MVPA (minutes/day) | 75.70 | 75.28 | 103.07 | 77.53 |
| MVPA bouts (minutes/day) | 49.28 | 73.70 | 77.19 | 74.23 |
| Sleep onset | 22:00:00 | | 22:00:00 | |
| Sleep end | 5:40:00 | | 5:40:00 | |

Table S4. Pair-wise comparisons of postures used by Hadza adults

| | sit | kneel | lie down | squat |
|------------|----------|---------|----------|---------|
| kneel | 2.90E-14 | - | - | - |
| lie down | 1.10E-15 | 0.6251 | - | - |
| squat | < 2e-16 | 0.0017 | 0.0073 | - |
| ground sit | < 2e-16 | < 2e-16 | < 2e-16 | < 2e-16 |