

Supplementary Table 1

Author/ Year	Sample Size, Population, Mean/ Median Age, Racial Distribution, Sex distribution	Study Design	Cortisol Analysis Method	Mean or Median Cortisol Measurement	Blood Pressure Measurement Method	Mean or Median Blood Pressure Measurement	Test Statistic and Results on Relationship between Cortisol and Blood Pressure
Bautista 2019	<p><b>Sample size:</b> n = 75</p> <p><b>Population:</b> Wisconsin residents</p> <p><b>Mean age:</b> 46.9 years (95% CI = 44.6, 49.2)</p> <p><b>Racial distribution:</b> 98.7% White</p> <p><b>Sex distribution:</b> 37.3% Male</p> <p><b>Country:</b> United States</p>	Cross-sectional	<p><b>Amount:</b> 1/8" bundle of hair, most proximal 3 cm of hair strands</p> <p><b>Location:</b> Back of the head</p> <p><b>Analysis:</b> ELISA (Alpco 11-CORHU-E01-SLV) (sensitivity of 1 ng/mL)</p>	<b>Median:</b> 78.1 pg/mg	<p><b>Device:</b> Oscillometric device (Omron Model HBP-1300)</p> <p><b>Measured <math>\geq 2</math> times:</b> Yes; 3 measurements taken with 1 minute in between. Average of last two measurements used for analysis</p> <p><b>Position:</b> Sitting</p>	<p><b><u>High Hair Cortisol Group</u></b> <b><u>(&gt; 78.1 pg/mg)</u></b> <b>Mean SBP</b> = 123.1 mmHg (95% CI = 118.2, 127.9) <b>Mean DBP</b> = 77.9 mmHg (95% CI = 74.5, 81.4)</p> <p><b><u>Low Hair Cortisol Group</u></b> <b><u>(&lt; 78.1 pg/mg)</u></b> <b>Mean SBP</b> = 119.5 mmHg (95% CI = 116.2, 122.8) <b>Mean DBP</b> = 74.1 mmHg (95% CI = 71.1, 77.0)</p> <p><b><u>Total Sample</u></b> <b>Mean SBP</b> = 121.3 (95% CI = 118.4, 124.2) <b>Mean DBP</b> = 76.0 (95% CI = 73.7, 78.2)</p>	<p>Odds ratio</p> <p><b><u>Frequentist</u></b> <b><u>Limits for prior odds ratio:</u></b> <b><u>1/∞, ∞</u></b> Crude: OR = 2.13 (95% CI = 0.73, 6.20) Adjusted: OR = 2.35 (95% CI = 0.71, 7.80) Adjusted &amp; stress: OR = 3.60 (95% CI = 0.93, 13.98)</p> <p><b><u>Bayesian</u></b> <b><u>Limits for prior odds ratio:</u></b> <b><u>1.00, 4.00</u></b> Crude: OR = 2.04 (95% CI = 1.43, 2.73) Adjusted: OR = 2.07 (95% CI = 1.52, 2.80) Adjusted &amp; stress : OR = 2.23 (95% CI = 1.68, 3.04)</p> <p><b><u>Bayesian</u></b> <b><u>Limits for prior odds ratio:</u></b> <b><u>0.72, 3.10</u></b> Crude: OR = 1.67 (95% CI = 1.16, 2.30) Adjusted: OR = 1.68 (95% CI = 1.21, 2.33) Adjusted &amp; stress: OR = 1.81 (95% CI = 1.33, 2.51)</p>

Chan 2014	<p><b>Sample size:</b> n = 57; 18 obese, 39 non-obese</p> <p><b>Population:</b> Obese and non-obese adults</p> <p><b>Median age:</b> Obese: 48 years (range: 28 - 67) Non-obese: 38 years (range: 20 - 76)</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> Obese: 61% female Non-obese: 51% Female</p> <p><b>Country:</b> Canada</p>	Cross-sectional	<p><b>Amount:</b> 20-50mg, most proximal 3cm of hair strands</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Modified immunoassay (ELISA) (Alpco Diagnostics [Salem, NH, USA])</p>	<p><b>Median Obese:</b> 57 pg/mg (range: 33-424)</p> <p><b>Median Non-obese:</b> 46 pg/mg (range: 27–200)</p>	Not provided	<p><b>Obese</b> <b>Median SBP:</b> 119 mmHg (range: 102-138) <b>Median DBP:</b> 76 mmHg (range: 64-88)</p> <p><b>Non-obese</b> <b>Median SBP:</b> 110 mmHg (range: 92-138) <b>Median DBP:</b> 70 mmHg (range: 56-82)</p>	<p>Spearman's rank correlation coefficient</p> <p><b>SBP:</b> <math>r = 0.28</math>, <math>p &lt; 0.05</math> <b>DBP:</b> <math>r = 0.20</math></p>
Feller 2014	<p><b>Sample size:</b> n = 654</p> <p><b>Population:</b> Older adults</p> <p><b>Mean age:</b> 65.8 ± 8.4 years</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 54% Female</p> <p><b>Country:</b> Germany</p>	Cross-sectional	<p><b>Amount:</b> 3mm diameter, 3cm segment</p> <p><b>Location:</b> Posterior vertex of scalp</p> <p><b>Analysis:</b> Commercially available immunoassay with chemiluminescence detection (CLIA, IBL-Hamburg, Germany)</p>	<b>Mean:</b> 35.1 ± 32.8 pg/mg	Not provided	<p><b>Mean SBP:</b> 135.9 ± 16.3 mmHg</p> <p><b>Mean DBP:</b> 78.9 ± 9.3 mmHg</p>	<p><b>Standardized simple linear regression coefficient (<math>\beta</math>)</b> SBP: <math>\beta = -0.006</math> (p = 0.87) DBP: <math>\beta = -0.09</math> (p = 0.03)</p> <p><b>Standardized multiple linear regression coefficient <math>\beta</math> (adjusted for sex and age)</b> SBP: <math>\beta = -0.05</math> (p = 0.22) DBP: <math>\beta = -0.07</math> (p = 0.07)</p>

Kuehl 2015	<p><b>Sample size:</b> n = 85</p> <p><b>Population:</b> Adults with and without major depressive disorder (MDD)</p> <p><b>Mean age:</b> 42.7 ± 2.3 years</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 63.5% Female</p> <p><b>Country:</b> United States</p>	Cross-sectional	<p><b>Amount:</b> 3 mm in diameter cut into 3-cm segments</p> <p><b>Location:</b> Not provided</p> <p><b>Analysis:</b> Commercially available immunoassay with chemiluminescence detection (CLIA)</p>	<p><u><b>Women</b></u>  <b>Mean Non-MDD:</b> 3.3 pg/mg (SE: 0.6)  <b>Mean MDD:</b> 8.8 pg/mg (SE: 3.4)</p> <p><u><b>Men</b></u>  <b>Mean Non-MDD:</b> 6.1 pg/mg (SE: 1.4)  <b>Mean Non-MDD:</b> 4.5 pg/mg (SE: 2.1)</p>	Not provided	<p><u><b>Women</b></u>  <b>Mean Non-MDD SBP:</b> 121.4 mmHg (SE: 3.3)  <b>Mean Non-MDD DBP:</b> 74.7 mmHg (SE: 2.2)</p> <p><b>Mean MDD SBP:</b> 130.7 mmHg (SE: 4.5)  <b>Mean MDD DBP:</b> 78.1 mmHg (SE: 2.7)</p> <p><u><b>Men</b></u>  <b>Mean Non-MDD SBP:</b> 130.7 mmHg (SE: 4.5)  <b>Mean Non-MDD DBP:</b> 78.1 mmHg (SE: 2.7)</p> <p><b>Mean MDD SBP:</b> 135.1mmHg (SE: 3.6)  <b>Mean MDD DBP:</b> 81.5 mmHg (SE: 2.2)</p>	<p>Pearson's correlation coefficient</p> <p><b>Bivariate</b>  <b>SBP:</b> <math>r = 0.170</math>  <b>DBP:</b> <math>r = 0.103</math></p> <p><u><b>Adjusted for sex</b></u>  <b>SBP:</b> <math>r = 0.287</math> (<math>p = 0.04</math>)  <b>DBP:</b> <math>r = 0.218</math></p>
Langerak 2015	<p><b>Sample size:</b> n = 123</p> <p><b>Population:</b> HIV patients</p> <p><b>Mean age:</b> 47.3 ± 11.5 years</p> <p><b>Racial distribution:</b> 93.5% Caucasian</p> <p><b>Sex distribution:</b> 17.1% Female</p> <p><b>Country:</b> Netherlands</p>	Cross-sectional	<p><b>Amount:</b> Approximately 150 hairs, proximal 3 cm of the hair strands</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Commercially available ELISA kit (DRG Instruments GmbH, Marburg, Germany)</p>	<p><b>Mean*:</b> 16.4 ± 16.8 pg/mg</p> <p>*n - 123</p>	Not provided	<p><b>Mean SBP*:</b> 130 mmHg (range: 94–187 mmHg)</p> <p><b>Mean DBP*:</b> 81 ± 12 mmHg</p> <p>*n = 91</p>	<p>Pearson's correlation coefficient</p> <p><b>SBP:</b> <math>r = 0.25</math> (<math>p &lt; 0.01</math>)</p> <p><b>DBP:</b> <math>r = 0.08</math></p>
Manenschiijn 2011	<p><b>Sample size:</b> n = 195</p> <p><b>Population:</b> Healthy individuals</p> <p><b>Mean age:</b> 36 years (range: 18–63)</p> <p><b>Racial distribution:</b> 90.6% Caucasian</p> <p><b>Sex distribution:</b> 53.8% Female</p> <p><b>Country:</b> Netherlands</p>	Cross-sectional	<p><b>Amount:</b> Approximately 100 strands of hair cut into 3cm segments, ≥ 10mg</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Commercially available ELISA Kit (DRG Instruments GmbH, Marburg, Germany)</p>	Not provided	Not provided	<p><b>Mean SBP*:</b> 135 mmHg (95% CI, 129–140)</p> <p><b>Mean DBP*:</b> 82 mmHg (95% CI, 78–86)</p> <p>*n = 46</p>	<p>Not provided</p> <p>“... no correlation with ... systolic and diastolic blood pressure (<math>p = 0.109</math> and <math>p = 0.365</math>, respectively”</p>

Mazgelytė 2021	<p><b>Sample size:</b> n = 163 total; n = 38 metabolic syndrome patients, n = 125 without metabolic syndrome</p> <p><b>Population:</b> Young- and middle-aged men</p> <p><b>Median age:</b> Individuals without metabolic syndrome: 35 years (IQR: 18) Individuals with metabolic syndrome: 42.5 years (IQR: 10)</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 100% Male</p> <p><b>Country:</b> Lithuania</p>	Cross-sectional	<p><b>Amount:</b> 3 cm, most proximal segment of the hair strand</p> <p><b>Location:</b> Scalp</p> <p><b>Analysis:</b> Ultra high-performance liquid chromatography (Shimadzu Nexera X2 UHPLC-MS/MS system, Shimadzu Corp., Kyoto, Japan)</p>	<p><u><b>Individuals with Metabolic Syndrome</b></u> <b>Median:</b> 85.73 ng/g (IQR: 150.88)</p> <p><u><b>Individuals without Metabolic Syndrome</b></u> <b>Median:</b> 36.50 ng/g (IQR: 98.26)</p>	Not provided	Not provided	<p>Spearman's rank correlation coefficient</p> <p><b>SBP:</b> <math>r = 0.34, p = 9.55 \times 10^{-6}</math></p> <p><b>DBP:</b> <math>r = 0.32, p = 3.05 \times 10^{-5}</math></p>
Mazgelytė 2022	<p><b>Sample size:</b> n = 144</p> <p><b>Population:</b> Healthy 50-64-year-old women</p> <p><b>Median age:</b> 55 years (IQR: 7)</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 100% Female</p> <p><b>Country:</b> Lithuania</p>	Cross-sectional	<p><b>Amount:</b> 3 cm, most proximal segment of the hair strand</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Ultra-high-performance liquid chromatography-tandem mass spectrometry (UHPLC-MS/MS)</p>	<p><b>Median:</b> 3.43 ng/g (IQR: 6.75)</p>	Not provided	<p><b>Median SBP:</b> 127 (IQR: 21) mmHg</p> <p><b>Mean DBP:</b> <math>80 \pm 9.08</math> mmHg</p>	<p>Spearman's rank correlation coefficient</p> <p><b>SBP:</b> <math>r = 0.246, p = 0.003</math></p> <p><b>DBP:</b> <math>r = 0.227, p = 0.006</math></p>
Nafisa 2021	<p><b>Sample size:</b> n = 1000; 500 cases, 500 controls</p> <p><b>Population:</b> Patients with abnormal coronary angiograms and age- and sex-matched controls</p> <p><b>Mean age:</b> <math>51.69 \pm 9.51</math> years</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 22% Female</p> <p><b>Country:</b> Pakistan</p>	Case-control	<p><b>Amount:</b> Half diameter of a lead pencil, most proximal to the scalp</p> <p><b>Location:</b> Back of the head</p> <p><b>Analysis:</b> ELISA (Alpco Diagnostics, Salem, NH)</p>	<p><u><b>Patients with Coronary Atherosclerosis</b></u> <b>Mean:</b> <math>226.82 \pm 212.1</math> pg/mg <b>Median:</b> 158.86 (range: 17.65–1331.33) pg/mg</p> <p><u><b>Controls</b></u> <b>Mean:</b> <math>85.38 \pm 67.83</math> pg/mg <b>Median:</b> 72.77 (range: 13.41–889.07) pg/mg</p>	Not provided	Not provided	<p>Odds ratio</p> <p><b>Matched OR:</b> 3.40 (95% CI: 2.59, 4.46) <math>p = 0.0001</math></p> <p><b>Adjusted OR:</b> 1.96 (95% CI: 0.86–5.04) <math>p = 0.107</math></p>

O'Brien 2013	<b>Sample size:</b> n = 135  <b>Population:</b> Diverse sample of adults  <b>Mean age:</b> 30.26 ± 12.80 years  <b>Racial distribution:</b> 52% Caucasian  <b>Sex distribution:</b> 65% Female  <b>Country:</b> United States	Cross-sectional	<b>Amount:</b> 100 strands, 3 cm  <b>Location:</b> Posterior vertex of the head  <b>Analysis:</b> Sensitive and specific enzyme immunoassay (ELISA; Salimetrics, LLC, State College, PA, USA; catalog #1- 3002)	<b>Mean:</b> 14.47 ± 19.13 pg/mg	Not provided	<b>Mean SBP:</b> 119.14 ± 14.99 mmHg  <b>Mean DBP:</b> 79.55 ± 9.89 mmHg	Pearson's correlation coefficient  <b>SBP:</b> $r = 0.25, p < 0.01$  <b>DBP:</b> $r = 0.08$
Richards 2022	<b>Sample size:</b> n = 25  <b>Population:</b> African American older adults  <b>Mean age:</b> 72.2 ± 5.2 years  <b>Racial distribution:</b> 100% African American  <b>Sex distribution:</b> 92% Female  <b>Country:</b> United States	Cross-sectional (secondary analysis)	<b>Amount:</b> Approximately 30–50 strands of hair  <b>Location:</b> Posterior vertex of the scalp  <b>Analysis:</b> Salimetrics immunoassay (ELISA)	<b>Mean:</b> 2.2 ± 1.4 pg/mg	<b>Device:</b> Oscillometric device (Omron, Kyoto, Japan)  <b>Measured ≥ 2 times:</b> Yes; taken three times with a one-minute break in between. Average of these three measurements was used in analysis  <b>Position:</b> Sitting with legs uncrossed	<b>Mean SBP:</b> 136.4 ± 19.6 mmHg  <b>Mean DBP:</b> 76.6 ± 12.3 mmHg	Pearson's correlation coefficient  <b>SBP:</b> $r = -0.009, p = 0.966$  <b>DBP:</b> $r = -0.099, p = 0.638$
Stalder 2013	<b>Sample size:</b> n = 1,258  <b>Population:</b> Employees of a large aerospace company  <b>Mean age:</b> 39.1 years (range: 16-64)  <b>Racial distribution:</b> Not provided  <b>Sex distribution:</b> 15.2% Female  <b>Country:</b> Germany	Cross-sectional	<b>Amount:</b> ~3 mm in diameter, 3cm most proximal to the scalp  <b>Location:</b> Posterior vertex of the scalp  <b>Analysis:</b> Liquid chromatography-tandem mass spectrometry (LC-MS/MS)	<b>Median:</b> 20.7 pg/mg (range: 2.7–109.8)	<b>Device:</b> Not provided  <b>Measured ≥ 2 times:</b> Yes; twice within a 20-minute period. Average of measurements were taken and used for analysis  <b>Position:</b> Not provided	Not provided	Not provided (MAP only)

Stomby 2021	<p><b>Sample size:</b> n = 3,337; n = 203 CAD patients, n = 3,134 healthy</p> <p><b>Population:</b> Patients admitted with acute myocardial infarction and a population-based sample without a diagnosis or symptoms of CAD</p> <p><b>Mean age:</b> CAD patients: <math>57.7 \pm 6.5</math> years; healthy individuals: <math>57.3 \pm 4.4</math> years</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> CAD patients: 28% Female; health individuals: 64% Female</p> <p><b>Country:</b> Sweden</p>	Cross-sectional	<p><b>Amount:</b> 1 cm</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Competitive radioimmunoassay (RIA)</p>	<p><u><b>CAD patients</b></u> <b>Mean:</b> 75.2 pg/mg</p> <p><u><b>Healthy Individuals</b></u> <b>Mean:</b> 23.6 pg/mg</p>	Not provided	<p><u><b>CAD Patients</b></u> <b>Mean SBP:</b> 125 mmHg <b>Mean DBP:</b> 79 mmHg</p> <p><u><b>Healthy Individuals</b></u> <b>Mean SBP:</b> 132 mmHg <b>Mean DBP:</b> 83 mmHg</p>	<p>Regression coefficient (hypertension)</p> <p><math>b = 0.24</math> (SE = 0.042)</p>
Wester 2017	<p><b>Sample size:</b> n = 266</p> <p><b>Population:</b> Participants from the Lifelines cohort</p> <p><b>Median age:</b> 42 years (Females: 41 years, range: 34-48; Males: 44 years, range: 37-50)</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 75% Female</p> <p><b>Country:</b> Netherlands</p>	Cross-sectional	<p><b>Amount:</b> 20 mg, 3cm most proximal to the scalp</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Liquid chromatography-tandem mass spectrometry (LC-MS/MS) using a Xevo TQ-S system (Waters, Milford, MA)</p>	<p><b>Geometric mean:</b> 2.67 pg/mg (95% CI: 2.45–2.90)</p>	<p><b>Device:</b> DinaMap PRO100 or DinaMap PRO100V2</p> <p><b>Measured <math>\geq 2</math> times:</b> Yes</p> <p><b>Position:</b> Sitting</p>	<p><u><b>Females</b></u> <b>Median SBP:</b> 117mmHg (IQR: 109–129 mmHg) <b>Median DBP:</b> 70 mmHg (IQR: 66–77 mmHg)</p> <p><u><b>Males</b></u> <b>Median SBP:</b> 127mmHg (IQR: 119–136 mmHg) <b>Median DBP:</b> 72 mmHg (IQR: 68–79 mmHg)</p>	<p>Regression coefficient</p> <p><u><b>Model 1 (simple linear)</b></u> <b>SBP:</b> <math>\beta = 0.132</math>, <math>p = 0.031</math> <b>DBP:</b> <math>\beta = 0.063</math>, <math>p = 0.306</math></p> <p><u><b>Model 2 (adjusted for age and sex)</b></u> <b>SBP:</b> <math>\beta = 0.058</math>, <math>p = 0.372</math> <b>DBP:</b> <math>\beta = 0.004</math>, <math>p = 0.953</math></p> <p><u><b>Model 3 (adjusted for age, sex, black hair, brown hair, hair washings, sweating on the scalp and corticosteroid use)</b></u> <b>SBP:</b> <math>\beta = 0.045</math>, <math>p = 0.494</math> <b>DBP:</b> <math>\beta = -0.021</math>, <math>p = 0.742</math></p>

Younge 2015	<p><b>Sample size:</b> n = 141</p> <p><b>Population:</b> Individuals with and without CAD</p> <p><b>Mean age:</b> 41.3 ± 14.2 years</p> <p><b>Racial distribution:</b> Not provided</p> <p><b>Sex distribution:</b> 62.9% Female</p> <p><b>Country:</b> Netherlands</p>	<p>Cross-sectional analysis of baseline data from an interventional study</p>	<p><b>Amount:</b> 100–150 hairs at least 4 cm long (1cm used to represent baseline)</p> <p><b>Location:</b> Posterior vertex of the scalp</p> <p><b>Analysis:</b> Commercially available ELISA kit (DRG Instruments GmbH, Marburg, Germany)</p>	<p><b>Median:</b> 22.3 pg/mg (IQR: 23.5 pg/mg)</p>	<p>Not provided</p>	<p><b>Mean SBP:</b> 126 ± 15 mmHg</p> <p><b>Mean DBP:</b> 78 ± 10 mmHg</p>	<p>Regression coefficient</p> <p><b>Univariable</b>  <b>SBP:</b> <math>\beta = 0.120, p = 0.144</math>  <b>DBP:</b> <math>\beta = 0.124, p = 0.129</math></p> <p><b>Multivariable model 1 (Adjusted for age, sex and BMI)</b>  <b>SBP:</b> <math>\beta = 0.065, p = 0.458</math>  <b>DBP:</b> <math>\beta = 0.080, p = 0.347</math></p> <p><b>Multivariable model 2 (Adjusted for age, sex, BMI and corticosteroid use)</b>  <b>SBP:</b> <math>\beta = 0.076, p = 0.374</math>  <b>DBP:</b> <math>\beta = 0.097, p = 0.240</math></p>
Žėkas 2019	<p><b>Sample size:</b> n = 81</p> <p><b>Population:</b> Healthy males</p> <p><b>Median age:</b> 33 (range: 25-55; IQR: 16) years</p> <p><b>Racial distribution:</b> Not specified</p> <p><b>Sex distribution:</b> 100% Male</p> <p><b>Country:</b> Lithuania</p>	<p>Cross-sectional</p>	<p><b>Amount:</b> 50mg of hair strands</p> <p><b>Location:</b> Not provided</p> <p><b>Analysis:</b> Ultra high-performance liquid chromatography (UHPLC-MS/MS; Shimadzu Nexera X2 UHPLC system, Shimadzu Corp., Kyoto, Japan)</p>	<p><b>Median:</b> 19.82 (IQR: 37.03) ng/g</p>	<p>Not provided</p>	<p><b>Median SBP:</b> 130 (IQR: 13) mmHg</p> <p><b>Median DBP:</b> 80.11 (IQR: 0.99) mmHg</p>	<p>Pearson's correlation coefficient</p> <p><b>SBP:</b> Not provided</p> <p><b>DBP:</b> <math>r = 0.26, p = 0.02</math></p>

