## Interaction table: Associations between highest qualification and grip strength in men and women.

|  | Below 45 | 45 to <50 | 50 to <55 | 55 to <60 | 60 to <65 | Above 65 |
| --- | --- | --- | --- | --- | --- | --- |
| **Highest Qualification** | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 |
| **Women** |  |  |  |  |  |  |
| Degree & higher | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| A-levels, professional, or equiv. | -0.59 [-0.78, -0.39] | -0.70 [-0.87, -0.52] | -0.80 [-0.96, -0.65] | -0.83 [-0.97, -0.69] | -0.71 [-0.84, -0.58] | -0.56 [-0.72, -0.40] |
| O-levels, CSEs, or equiv. | -1.02 [-1.20, -0.84] | -1.21 [-1.36, -1.06] | -1.29 [-1.43, -1.14] | -1.18 [-1.32, -1.04] | -1.01 [-1.14, -0.89] | -0.85 [-1.01, -0.70] |
| No qualification | -3.30 [-3.71, -2.88] | -3.38 [-3.69, -3.07] | -2.89 [-3.11, -2.68] | -2.46 [-2.63, -2.30] | -1.92 [-2.05, -1.79] | -1.62 [-1.76, -1.47] |
| **Men** |  |  |  |  |  |  |
| Degree & higher | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| A-levels, professional, or equiv. | 0.74 [0.41, 1.07] | 0.49 [0.20, 0.78] | 0.15 [-0.10, 0.41] | 0.02 [-0.20, 0.24] | -0.13 [-0.31, 0.06] | -0.23 [-0.44, -0.03] |
| O-levels, CSEs, or equiv. | 1.39 [1.10, 1.67] | 0.51 [0.25, 0.76] | -0.05 [-0.29, 0.20] | -0.41 [-0.64, -0.18] | -0.63 [-0.83, -0.43] | -0.78 [-1.01, -0.56] |
| No qualification | -1.85 [-2.40, -1.29] | -2.36 [-2.79, -1.93] | -2.05 [-2.38, -1.73] | -2.03 [-2.29, -1.76] | -1.89 [-2.08, -1.69] | -1.66 [-1.85, -1.46] |
| 1Coefficient: Difference in mean outcome (unit) (95% Confidence Interval) | | | | | | |

## Interaction table: Associations between IMD and grip strength in men and women.

|  | Below 45 | 45 to <50 | 50 to <55 | 55 to <60 | 60 to <65 | Above 65 |
| --- | --- | --- | --- | --- | --- | --- |
| **Index of Multiple Deprivation** | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 |
| **Women** |  |  |  |  |  |  |
| 1 (most affluent) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| 2 | 0.05 [-0.20, 0.30] | -0.13 [-0.34, 0.08] | -0.18 [-0.37, 0.01] | -0.14 [-0.31, 0.02] | -0.04 [-0.18, 0.10] | -0.12 [-0.28, 0.04] |
| 3 | -0.25 [-0.51, 0.00] | -0.32 [-0.53, -0.11] | -0.36 [-0.54, -0.17] | -0.36 [-0.53, -0.19] | -0.32 [-0.46, -0.18] | -0.38 [-0.54, -0.21] |
| 4 | -0.66 [-0.90, -0.41] | -0.84 [-1.05, -0.63] | -0.88 [-1.07, -0.69] | -0.73 [-0.90, -0.56] | -0.71 [-0.85, -0.57] | -0.65 [-0.81, -0.49] |
| 5 (least affluent) | -1.39 [-1.62, -1.15] | -1.51 [-1.71, -1.31] | -1.65 [-1.84, -1.46] | -1.56 [-1.73, -1.39] | -1.29 [-1.44, -1.14] | -1.09 [-1.26, -0.92] |
| **Men** |  |  |  |  |  |  |
| 1 (most affluent) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| 2 | 0.20 [-0.22, 0.61] | -0.02 [-0.37, 0.34] | -0.04 [-0.35, 0.28] | -0.17 [-0.44, 0.09] | -0.27 [-0.49, -0.06] | -0.36 [-0.58, -0.13] |
| 3 | -0.06 [-0.47, 0.36] | -0.48 [-0.83, -0.13] | -0.33 [-0.64, -0.01] | -0.73 [-1.00, -0.46] | -0.68 [-0.90, -0.46] | -0.48 [-0.71, -0.25] |
| 4 | -1.23 [-1.62, -0.84] | -1.16 [-1.51, -0.82] | -1.55 [-1.86, -1.24] | -1.50 [-1.77, -1.23] | -1.33 [-1.55, -1.11] | -1.22 [-1.45, -0.99] |
| 5 (least affluent) | -2.28 [-2.67, -1.90] | -2.70 [-3.03, -2.37] | -2.96 [-3.27, -2.65] | -3.01 [-3.28, -2.74] | -2.76 [-2.98, -2.53] | -2.43 [-2.67, -2.20] |
| 1Coefficient: Difference in mean outcome (unit) (95% Confidence Interval) | | | | | | |

## Interaction table: Associations between ethnicity and grip strength in men and women.

|  | Below 45 | 45 to <50 | 50 to <55 | 55 to <60 | 60 to <65 | Above 65 |
| --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 |
| **Women** |  |  |  |  |  |  |
| White | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| South Asian | -5.30 [-5.74, -4.86] | -5.29 [-5.71, -4.87] | -5.38 [-5.79, -4.97] | -5.51 [-5.93, -5.08] | -4.94 [-5.37, -4.50] | -4.46 [-4.98, -3.94] |
| Black | 0.34 [-0.08, 0.76] | 0.62 [0.25, 0.99] | 0.44 [0.04, 0.83] | 0.59 [0.11, 1.06] | 0.36 [-0.16, 0.87] | 1.25 [0.71, 1.78] |
| Mixed | 0.09 [-0.53, 0.70] | 0.30 [-0.28, 0.88] | 0.03 [-0.61, 0.68] | -0.56 [-1.30, 0.19] | -0.14 [-0.91, 0.63] | -0.96 [-1.87, -0.04] |
| Other | -2.35 [-2.85, -1.86] | -2.79 [-3.25, -2.32] | -2.54 [-2.99, -2.09] | -2.56 [-3.01, -2.10] | -1.86 [-2.38, -1.34] | -1.28 [-1.94, -0.61] |
| **Men** |  |  |  |  |  |  |
| White | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| South Asian | -7.42 [-7.99, -6.85] | -6.70 [-7.30, -6.11] | -7.47 [-8.06, -6.88] | -7.86 [-8.45, -7.26] | -7.87 [-8.48, -7.26] | -7.66 [-8.23, -7.09] |
| Black | -0.92 [-1.59, -0.25] | -0.25 [-0.90, 0.39] | 0.20 [-0.49, 0.90] | -0.24 [-1.06, 0.57] | -1.79 [-2.68, -0.90] | -1.64 [-2.46, -0.82] |
| Mixed | -0.15 [-1.28, 0.98] | -0.08 [-1.22, 1.07] | 0.27 [-1.08, 1.62] | -0.75 [-2.09, 0.60] | -1.09 [-2.43, 0.25] | -0.22 [-1.72, 1.27] |
| Other | -4.44 [-5.23, -3.66] | -4.79 [-5.56, -4.01] | -4.45 [-5.29, -3.62] | -5.04 [-5.90, -4.18] | -5.08 [-5.98, -4.17] | -3.42 [-4.42, -2.42] |
| 1Coefficient: Difference in mean outcome (unit) (95% Confidence Interval) | | | | | | |

## Interaction table: Associations between education and grip strength in men and women, stratified by ethnicity.

|  | White | South Asian | Black | Mixed | Other |
| --- | --- | --- | --- | --- | --- |
| **Highest Qualification** | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 |
| **Women** |  |  |  |  |  |
| Degree & higher | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| A-levels, professional, or equiv. | -1.17 [-1.24, -1.10] | -0.81 [-1.34, -0.29] | -1.32 [-1.88, -0.76] | -0.49 [-1.34, 0.35] | -0.69 [-1.25, -0.13] |
| O-levels, CSEs, or equiv. | -1.43 [-1.49, -1.36] | -0.91 [-1.40, -0.43] | -0.59 [-1.13, -0.04] | -0.52 [-1.31, 0.27] | -1.00 [-1.61, -0.39] |
| No qualification | -3.75 [-3.83, -3.68] | -2.77 [-3.29, -2.24] | -3.66 [-4.37, -2.94] | -3.19 [-4.29, -2.09] | -2.27 [-2.96, -1.58] |
| **Men** |  |  |  |  |  |
| Degree & higher | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| A-levels, professional, or equiv. | -0.45 [-0.55, -0.35] | -0.81 [-1.53, -0.09] | 0.17 [-0.77, 1.12] | 0.03 [-1.50, 1.56] | -0.75 [-1.73, 0.22] |
| O-levels, CSEs, or equiv. | 0.01 [-0.09, 0.11] | -1.04 [-1.72, -0.37] | 2.29 [1.32, 3.25] | 1.63 [0.06, 3.20] | -0.28 [-1.45, 0.88] |
| No qualification | -3.35 [-3.46, -3.24] | -3.27 [-4.00, -2.54] | -1.41 [-2.47, -0.36] | -1.87 [-3.63, -0.11] | -3.09 [-4.18, -2.00] |
| 1Coefficient: Difference in mean outcome (unit) (95% Confidence Interval) | | | | | |

## Interaction table: Associations between IMD and grip strength in men and women, stratified by ethnicity.

|  | White | South Asian | Black | Mixed | Other |
| --- | --- | --- | --- | --- | --- |
| **Index of Multiple Deprivation** | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 | **Coef. (95% CI)**1 |
| **Women** |  |  |  |  |  |
| 1 (most affluent) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| 2 | -0.11 [-0.19, -0.03] | -0.43 [-1.19, 0.32] | 1.17 [-0.35, 2.69] | 0.68 [-0.53, 1.90] | -0.01 [-0.86, 0.84] |
| 3 | -0.28 [-0.36, -0.20] | -0.96 [-1.66, -0.26] | 0.46 [-0.93, 1.86] | 0.07 [-1.12, 1.27] | -0.29 [-1.11, 0.54] |
| 4 | -0.54 [-0.62, -0.46] | -1.59 [-2.23, -0.95] | 0.55 [-0.71, 1.81] | 0.24 [-0.89, 1.38] | -0.48 [-1.23, 0.27] |
| 5 (least affluent) | -1.10 [-1.18, -1.02] | -1.73 [-2.38, -1.09] | -0.49 [-1.71, 0.73] | 0.33 [-0.74, 1.40] | -0.50 [-1.22, 0.22] |
| **Men** |  |  |  |  |  |
| 1 (most affluent) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) | 0.00 (ref) |
| 2 | -0.16 [-0.27, -0.04] | -0.75 [-1.84, 0.33] | 0.23 [-2.37, 2.83] | 0.35 [-1.92, 2.62] | 0.99 [-0.54, 2.52] |
| 3 | -0.37 [-0.49, -0.25] | -1.67 [-2.68, -0.66] | -1.54 [-4.10, 1.02] | 0.15 [-2.04, 2.33] | -1.30 [-2.75, 0.16] |
| 4 | -0.93 [-1.05, -0.81] | -2.26 [-3.18, -1.34] | -1.98 [-4.34, 0.38] | -2.03 [-4.11, 0.06] | -1.04 [-2.38, 0.30] |
| 5 (least affluent) | -2.11 [-2.23, -1.99] | -2.30 [-3.20, -1.40] | -3.17 [-5.44, -0.91] | -1.93 [-3.86, 0.00] | -0.65 [-1.88, 0.57] |
| 1Coefficient: Difference in mean outcome (unit) (95% Confidence Interval) | | | | | |