





Table 2 about here

To illustrate this point, albeit anecdotally, consider NICE's advice to Diego Maradona (height=65ins, waist=37ins, anthropometric data obtained from <https://idolwiki.com/831-diego-maradona.html>). As such, Maradona's WHTR = 0.57.

Based on these observations, shorter people could become unduly stressed by incorrectly failing NICE's latest recommendation (WTHR >0.5), whilst taller individuals might be lulled into a false sense of security! Cut-off points using the waist "independent-of-height" ratio WC/Height<sup>0.5</sup> were found to either reduce or overcome this anomaly.

## References

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Table 1. The number of participants above WC cut-off points (94 cm in men and 80 cm in women, indicated by 1) by sex, height (HT) and by age groups.

Age group (yrs)	Sex	HT (cm)	16-29				30-39				40-49				50-59				60-69			
			WCcutoff01	WCcutoff01	Total	% >	WCcutoff01	WCcutoff01	Total	% >	WCcutoff01	WCcutoff01	Total	% >	WCcutoff01	WCcutoff01	Total	% >	WCcutoff01	WCcutoff01	Total	% >
Female	<145		5	8	13	<b>61.5</b>	8	6	14	<b>42.9</b>	11	19	30	<b>63.3</b>	7	15	22	<b>68.2</b>	5	22	27	<b>81.5</b>
	145-<155		205	149	354	<b>42.1</b>	216	267	483	<b>55.3</b>	202	412	614	<b>67.1</b>	163	516	679	<b>76.0</b>	138	532	670	<b>79.4</b>
	155-<165		1267	917	2184	<b>42.0</b>	970	1448	2418	<b>59.9</b>	948	2123	3071	<b>69.1</b>	709	2259	2968	<b>76.1</b>	408	1705	2113	<b>80.7</b>
	165-<175		934	861	1795	<b>48.0</b>	744	1172	1916	<b>61.2</b>	598	1402	2000	<b>70.1</b>	355	1267	1622	<b>78.1</b>	179	693	872	<b>79.5</b>
	175-<185		94	108	202	<b>53.5</b>	68	136	204	<b>66.7</b>	45	148	193	<b>76.7</b>	18	99	117	<b>84.6</b>	6	28	34	<b>82.4</b>
	≥185		2	2	4	<b>50.0</b>	1	1	2	<b>50.0</b>	1	4	5	<b>80.0</b>	0	5	5	<b>100.0</b>	0	1	1	<b>100.0</b>
<b>Total</b>			2507	2045	4552	44.9	2007	3030	5037	<b>60.2</b>	1805	4108	5913	<b>69.5</b>	1252	4161	5413	<b>76.9</b>	736	2981	3717	<b>80.2</b>
Male	<145		0	0	0		1	0	1	<b>0.0</b>	0	0	0		0	1	1	<b>100.0</b>	0	2	2	<b>100.0</b>
	145-<155		4	1	5	<b>20.0</b>	1	1	2	<b>50.0</b>	4	2	6	<b>33.3</b>	8	2	10	<b>20.0</b>	5	2	7	<b>28.6</b>
	155-<165		93	20	113	<b>17.7</b>	96	50	146	<b>34.2</b>	113	106	219	<b>48.4</b>	106	191	297	<b>64.3</b>	108	189	297	<b>63.6</b>
	165-<175		910	261	1171	<b>22.3</b>	657	523	1180	<b>44.3</b>	677	958	1635	<b>58.6</b>	554	1304	1858	<b>70.2</b>	371	1158	1529	<b>75.7</b>
	175-<185		1249	503	1752	<b>28.7</b>	871	921	1792	<b>51.4</b>	680	1416	2096	<b>67.6</b>	425	1430	1855	<b>77.1</b>	245	997	1242	<b>80.3</b>
	≥185		333	169	502	<b>33.7</b>	198	297	495	<b>60.0</b>	102	301	403	<b>74.7</b>	67	256	323	<b>79.3</b>	18	160	178	<b>89.9</b>
<b>Total</b>			2589	954	3543	26.9	1824	1792	3616	49.6	1576	2783	4359	63.8	1160	3184	4344	73.3	747	2508	3255	77.1

Seven (7/10) age-group-by-sex chi-square tests of independence and nine (9/10) chi-square tests for linear trend were significant P<0.05.

Table 2. The number of participants (%) above ( $n \geq 5$ ) or below ( $n < 5$ ) the WHTR cut-off point (0.5) by sex, by height (HT) and by age groups.

Sex	Age group (yrs)	16-29				30-39				40-49				50-59				60-69			
		WHTR cut-off			% $\geq 5$	WHTR cut-off			% $\geq 5$	WHTR cut-off			% $\geq 5$	WHTR cut-off			% $\geq 5$	WHTR cut-off			% $\geq 5$
		HT (cm)	n < 5	n $\geq 5$		Total	n < 5	n $\geq 5$		Total	n < 5	n $\geq 5$		Total	n < 5	n $\geq 5$		Total	n < 5	n $\geq 5$	
Female	<145	4	9	13	<b>69.2</b>	5	9	14	<b>64.3</b>	1	29	30	<b>96.7</b>	2	20	22	<b>90.9</b>	0	27	27	<b>100.0</b>
	145-<155	165	189	354	<b>53.4</b>	141	342	483	<b>70.8</b>	142	472	614	<b>76.9</b>	108	570	678	<b>84.1</b>	91	578	669	<b>86.4</b>
	155-<165	1282	902	2184	<b>41.3</b>	992	1425	2417	<b>59.0</b>	980	2091	3071	<b>68.1</b>	727	2241	2968	<b>75.5</b>	414	1699	2113	<b>80.4</b>
	165-<175	1155	640	1795	<b>35.7</b>	972	943	1915	<b>49.2</b>	894	1106	2000	<b>55.3</b>	534	1087	1621	<b>67.1</b>	273	599	872	<b>68.7</b>
	175-<185	136	66	202	<b>32.7</b>	121	83	204	<b>40.7</b>	100	93	193	<b>48.2</b>	46	71	117	<b>60.7</b>	11	23	34	<b>67.6</b>
	>185	4	0	4	<b>0.0</b>	1	1	2	<b>50.0</b>	3	2	5	<b>40.0</b>	2	3	5	<b>60.0</b>	1	0	1	<b>0.0</b>
Total		2746	1806	4552	39.7	2232	2803	5035	55.7	2120	3793	5913	64.1	1419	3992	5411	73.8	790	2926	3716	78.7
Male	<145	0	0	0		0	1	1	<b>100.0</b>	0	0	0		0	1	1	<b>100.0</b>	0	2	2	<b>100.0</b>
	145-<155	3	2	5	<b>40.0</b>	1	1	2	<b>50.0</b>	0	6	6	<b>100.0</b>	1	9	10	<b>90.0</b>	0	7	7	<b>100.0</b>
	155-<165	62	51	113	<b>45.1</b>	19	127	146	<b>87.0</b>	23	196	219	<b>89.5</b>	10	287	297	<b>96.6</b>	19	278	297	<b>93.6</b>
	165-<175	677	494	1171	<b>42.2</b>	283	897	1180	<b>76.0</b>	210	1425	1635	<b>87.2</b>	143	1714	1857	<b>92.3</b>	91	1438	1529	<b>94.0</b>
	175-<185	1070	682	1752	<b>38.9</b>	580	1212	1792	<b>67.6</b>	379	1717	2096	<b>81.9</b>	228	1627	1855	<b>87.7</b>	109	1133	1242	<b>91.2</b>
	>185	335	167	502	<b>33.3</b>	190	305	495	<b>61.6</b>	101	302	403	<b>74.9</b>	66	256	322	<b>79.5</b>	17	161	178	<b>90.4</b>
Total		2147	1396	3543	39.4	1073	2543	3616	70.3	713	3646	4359	83.6	448	3894	4342	89.7	236	3019	3255	92.7

In all 10 age-by-sex sub-tables, the chi-square tests of independence and chi-square tests for linear trend were significant  $P < 0.001$ .