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## Weight by Height and Age of Adults 18-74 Years: United States, 1971-74<sup>a</sup>

The height and weight measurements obtained as a part of the Health and Nutrition Examination Survey (HANES) conducted by the National Center for Health Statistics April 1971 through June 1974 were used to present height and weight findings among men and women aged 18-74 years in the United States.<sup>1</sup>

HANES is a program in which measures of nutritional status are collected for a scientifically designed sample representative of the civilian noninstitutionalized population of the United States in a broad range of ages.

These HANES findings are based on the examination of the 13,671 persons aged 18-74 years selected from a total sample of 20,749 examined persons aged 1-74 years. A nationwide probability sample of 28,043 persons was selected to be examined from eligible households in the 65 primary sampling units that were visited between April 1971 and June 1974. The HANES nutrition examination included a general medical examination by a physician to identify indicators of nutritional deficiencies, a skin examination by a dermatologist, and a dental examination by a dentist. Body measurements were taken by a trained technician; dietary information was obtained by the 24-hour recall method; and a food frequency questionnaire was administered. Numerous laboratory tests were performed on whole blood, serum, plasma, and urine. A description of the sampling process and HANES operation has been published.<sup>1</sup>

Estimates in this report are based on weighted observations. The data obtained for the examined persons were inflated to the level

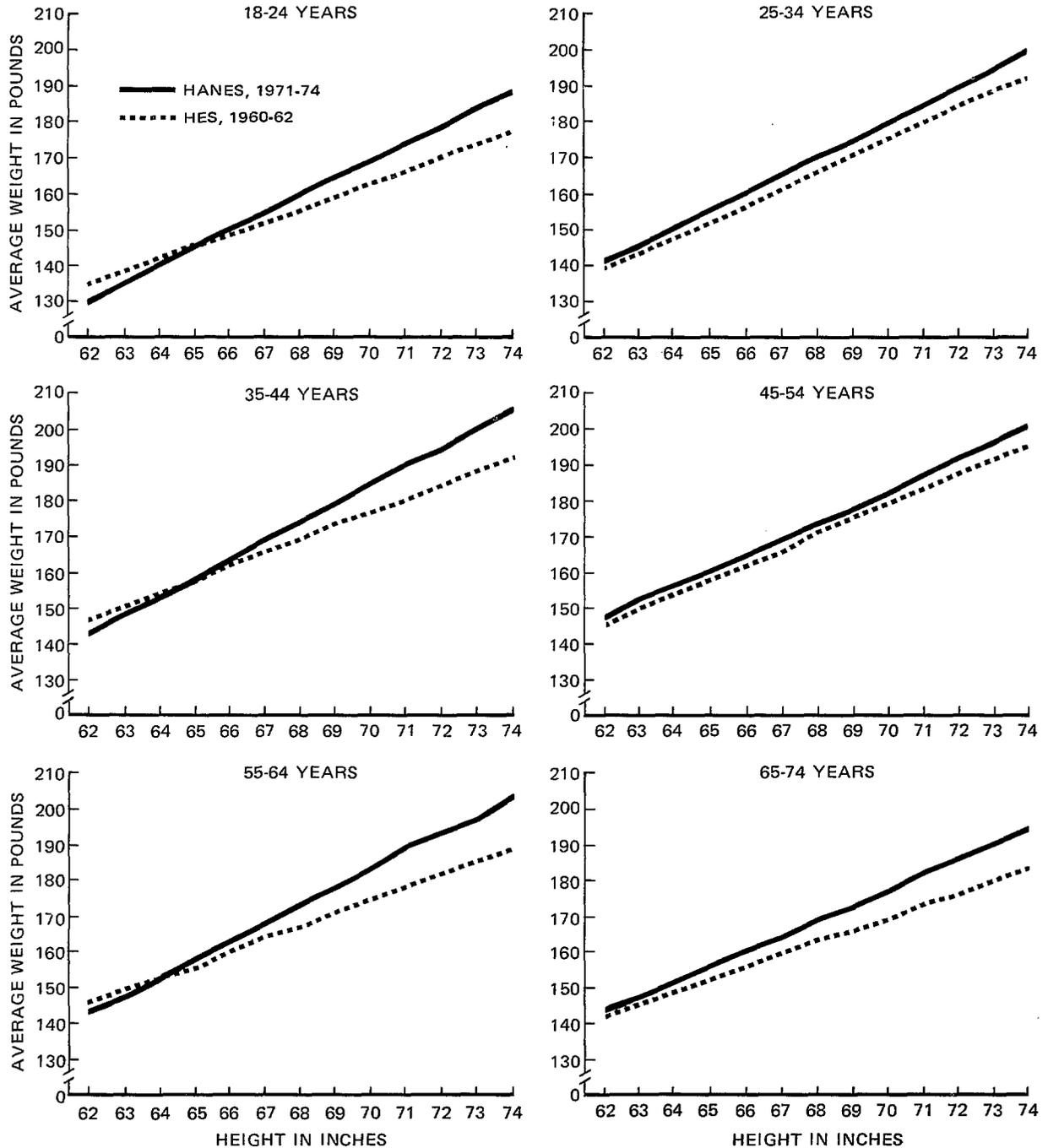
of the total population, using the appropriate weights to account for both sampling fractions and response results. The relationship of weight to height by age, sex, and race among the U.S. population based on findings from the HANES program will be analyzed and discussed in a future report, *Weight by Height and Age of Adults 18-74 years, United States, 1971-1974*.<sup>2</sup> Selected data from that report are presented here in tables 1-5 and figures 1 and 2.

Mean weights for given heights were obtained from a linear regression equation for men and women for the six age groups 18-24, 25-34, 35-44, 45-54, 55-64, and 65-74 years. The equations of weight on height were fitted by the least-squares method, which holds that the line of "best fit" is one for which the sum of the squares of the residual errors is a minimum. Although linear regression of weight on height was used, the relationship between weight and height is not strictly linear, that is, the line of relationship does not correspond precisely to a linear line of trend, which describes the average change in weight as accompanied by a unit of change in height. The constants—regression coefficient ( $b$ ) and  $Y$ -intercept ( $a$ )—in the regression equation  $Y = a + bx$  and the standard error of estimate around these regression lines for 12 age-sex groups are shown in table 1. More detailed examination of the linear relationship of weight to height will be reported in the future report.<sup>2</sup>

Height-weight tables are presented for men and women within the age range 18-74 years, with mean weight values for each inch of height for the height range of 62-74 inches for men and 57-68 inches for women (tables 2 and 3). Three additional values below and above the mean weight also given in the tables represent esti-

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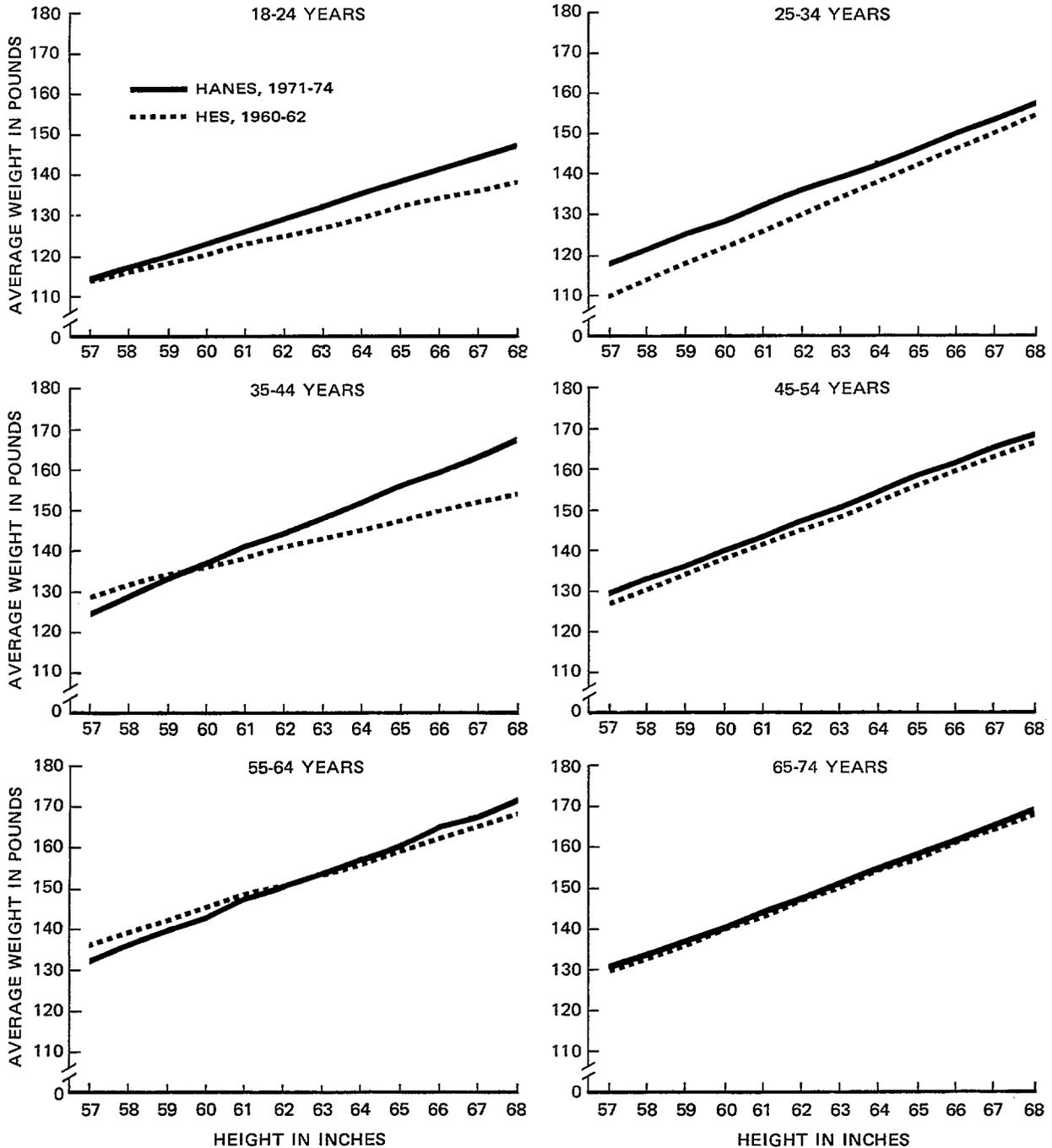
Figure 1. AVERAGE WEIGHTS<sup>1</sup> OF MEN BY AGE GROUP AND HEIGHT:  
UNITED STATES, 1960-62 AND 1971-74



<sup>1</sup> Estimated values from regression equations of weights for specified age groups.

NOTE: For 1960-62 and 1971-74, height was measured without shoes. For 1960-62 clothing weight was estimated as averaging 2 pounds, which were deducted from weights shown; for 1971-74 clothing weight ranged from 0.20 to 0.62 pound, which was not deducted from weights shown.

Figure 2. AVERAGE WEIGHTS<sup>1</sup> OF WOMEN BY AGE GROUP AND HEIGHT:  
UNITED STATES, 1960-62 AND 1971-74



<sup>1</sup> Estimated values from regression equations of weights for specified age groups.

NOTE: For 1960-62 and 1971-74, height was measured without shoes. For 1960-62 clothing weight was estimated as averaging 2 pounds, which were deducted from weights shown; for 1971-74 clothing weight ranged from 0.20 to 0.62 pound, which was not deducted from weights shown.

mates of the range of 60, 80, and 90 percent, respectively, of the population around the mean weight:

$$Y \pm .8416 S_{y \cdot x}$$

$$Y \pm 1.2816 S_{y \cdot x}$$

$$Y \pm 1.6449 S_{y \cdot x}$$

For example, assuming normality, the predicted mean plus or minus .8416 standard error of the estimate indicates the range of weights that is expected to include 60 percent of the examined persons of a specific height for a given age and sex group.

In this instance one would expect 30 percent of the individuals to be within this weight range below and above the mean weight, with 20 percent falling outside either of these ranges, values roughly equivalent to the lower and upper 20th percentiles, respectively, of the distribution of weight by height for age and sex groups. The other two estimates around the mean ( $Y \pm 1.2816 S_{y \cdot x}$  and  $Y \pm 1.6449 S_{y \cdot x}$  standard error of estimate) represent an area of 80 and 90 percent of the particular height group, which is roughly equivalent to the lower and upper 10th and 5th percentile, respectively, of the distribution of weight by height for age and sex groups.

The height-weight tables—tables 2 and 3 are summarized in table 4—show that the average weights by height for men and women increase with age but in different patterns. Average weights of men increase rapidly until the age group 25-34 years. The rate of increase then flattens out, with the average weights peaking in the age group 45-54 years for those men of heights less than 68 inches and declining thereafter. The average weights of men of heights 68 inches and more peak at ages 35-44 years and then tend to decline.

The average weights of women advance rapidly to the age group 35-44 years. They increase less rapidly in the age groups 45-54 and 55-64 years, peak at the latter age group, and then decline.

The average weights of men and women by height as measured in the Health and Nutrition Examination Survey of 1971-74 were generally

greater than those from the Health Examination Survey (HES) of 1960-62 (table 5). Among age group 18-24 years the differences between averages during this period increased as height increased. This direction was less evident for men than for women, particularly in the shorter heights.

At ages 25-34 years, the pattern was reversed for women. The difference between the average weights of women in HANES and in HES decreased as height increased.

The differences in average weights for men and women 35-44 years showed the same pattern. When compared with HES findings, HANES data showed the average weights of shorter men and women to be less than those in HES and more than those in HES for taller persons and persons of medium height. Differences in average weights for taller persons and those of medium height ranged from 1 to 13 pounds.

Average weights of women aged 45-54 years in the HES were with one exception 2 pounds less than those of women in HANES. For men in this same age group, the average weights were 2 pounds less for those in HES who were shorter than 69 inches and from 2 to 5 pounds less for those who were taller.

At ages 55 and over, the average weight for women in HANES differed little from that of women in HES. On the other hand, differences between average weight of men in HANES and that of men in HES showed an increase in the difference with increase in height. Men in HANES above average height (69 inches and more) weighed more on the average—7 to 14 pounds at ages 55-64 and 7 to 11 pounds at ages 65-74 years—than men in HES did.

## DISCUSSION

Comparison of an individual's actual weight with a standard weight is the most widely used criterion of leanness or fatness. Interest in this measure stems from the findings of life insurance and epidemiological studies relating excess body weight status to unfavorable morbidity and mortality experiences. The earliest and most commonly used method for measuring excess body weight due to fat is to compare the height

and weight of persons with tables showing average or standard weight. By using this method the life insurance studies determined excess body weight status, which is defined as the deviation of actual weight for a given sex, age, and height from the average weight tables, times 100, obtained initially from the Medico-Actuarial Investigations (1912)<sup>4</sup> and later from the Build and Blood Pressure Study (1959).<sup>5</sup> Other studies such as the Framingham Heart Study<sup>6</sup> defined excess body weight due to obesity as a relative weight of 20 percent or more above the median weight for a given height and sex.

Since it is recognized that height and weight alone are incomplete indications of obesity, "desirable" weight tables that take into consideration measurements of body build have been developed by the Metropolitan Life Insurance Company. These tables for adults 25 years and over show ranges of weights for given heights. This was in answer to the criticism that height-weight tables ignored the disadvantages of the increase in body weight with advancing years as well as variations in body build that influence the weight of individuals. The average weights in the tables are for categories of body frame in which the determination of frame size has not been specified or defined in terms of body measure. The user must exercise clinical judgment about type of body frame.

Such data are not satisfactory for studying the influence of obesity on mortality. Obesity, an excess accumulation of fat, is used inter-

changeably with overweight or excess body weight above standard weight. Total body weight is a measure of bone, muscle, and fat, and departure from average weight may be due to one or a combination of these body components. Overweight prevention and control is directed against overweight due to fat, which is primarily attributed to excess food intake over the energy demands of the individual. This is the major form of overweight in the United States.

The height-weight tables in this report present estimates over and under excess body weight of men and women by height and age. There are no estimates of excess body fat other than what can be inferred from the deviation of actual weight from the mean weight; such estimates will not yield information of how much of the weight difference is accounted for by excess fat.

The tables in this report are not presumed to indicate "ideal" or "desirable" weight but only to present a reference base for the person's observed weight. This approach of predicting weight from height showed a correlation which ranged from the order of +.460 at ages 35-44 years to +.390 at ages 45-54 years for men of ages 18-74 years (table 1). Corresponding correlation values for women ranged from +.270 at ages 35-44 years to +.246 at ages 45-54 years. The highest correlation for men showed that about 20 percent of the variance of weight is accounted for by the variance of height. For women this value was about 7 percent.

## REFERENCES

<sup>1</sup>National Center for Health Statistics: Plan and operation of the Health and Nutrition Examination Survey, United States, 1971-1973. *Vital and Health Statistics*. Series 1-Nos. 10a and 10b. DHEW Pub. No. (HSM) 73-1310. Health Services and Mental Health Administration, Washington, U.S. Government Printing Office, Feb. 1973.

<sup>2</sup>National Center for Health Statistics: Weight by height and age of adults, United States, 1971-74. *Vital and Health Statistics*. Series 11. Health Resources Administration, DHEW, Hyattsville, Md. To be published.

<sup>3</sup>National Center for Health Statistics: Weight by height and age of adults, United States, 1960-62. *Vital and Health Statistics*. PHS Pub. No. 1000. Series 11-No.

14. Public Health Service. Washington. U.S. Government Printing Office, May 1966.

<sup>4</sup>Association of Life Insurance Medical Directors and Actuarial Society of America: *Medico-Actuarial Mortality Investigation*, Vol. 1. New York. 1912.

<sup>5</sup>Society of Actuaries: *Build and Blood Pressure Study*, Vol. 1. Chicago. 1959.

<sup>6</sup>Kannel, W. B., Pearson, G., and McNamara, P. M.: Obesity as a force of morbidity and mortality, in Felix P. Heald, ed., *Adolescent Nutrition and Growth*. New York. Appleton-Century-Crofts, 1962.

<sup>7</sup>Karpinos, B. D.: Weight-height standards based on World War II experience. *J. of Am. Stat. Assoc.* 53:408-419, June 1958.

Table 1. Coefficients of correlation and constants for linear regression equations and standard error of estimate of weight (W) on height (H) of adults aged 18-74 years: United States, 1971-74

Sex and age	Correlation	a	b	$S_{y \cdot x}$
<u>Men</u>				
18-24 years-----	.438	-172.63	4.842	27.3
25-34 years-----	.420	-168.67	4.941	30.5
35-44 years-----	.460	-187.49	5.277	27.4
45-54 years-----	.390	-131.83	4.454	28.4
55-64 years-----	.426	-173.99	5.069	28.5
65-74 years-----	.404	-131.64	4.385	26.0
<u>Women</u>				
18-24 years-----	.259	-56.28	2.965	28.0
25-34 years-----	.263	-88.62	3.587	32.1
35-44 years-----	.270	-94.02	3.815	35.0
45-54 years-----	.246	-77.17	3.587	33.8
55-64 years-----	.249	-68.24	3.492	33.4
65-74 years-----	.285	-76.38	3.583	29.0

### SYMBOLS

Data not available-----	---
Category not applicable-----	...
Quantity zero-----	-
Quantity more than 0 but less than 0.05----	0.0
Figure does not meet standards of reliability or precision-----	*

Table 2. Average weights and selected percentiles for each inch of height: Men, aged 18-74 years, United States, 1971-74

Height	Age group in years						Height	Age group in years					
	18-24	25-34	35-44	45-54	55-64	65-74		18-24	25-34	35-44	45-54	55-64	65-74
	Weight in pounds							Weight in pounds					
62 inches-----	175	191	188	194	190	186	69 inches-----	209	224	224	224	225	216
	165	180	178	183	180	176		199	213	214	213	215	206
	153	167	166	171	167	165		187	200	202	201	202	195
	<u>130</u>	<u>141</u>	<u>143</u>	<u>147</u>	<u>143</u>	<u>143</u>		<u>164</u>	<u>174</u>	<u>179</u>	<u>177</u>	<u>178</u>	<u>173</u>
	107	115	120	123	119	121		141	148	156	153	154	151
	95	102	108	111	106	110		129	135	144	141	141	140
	85	91	98	100	96	100		119	124	134	130	131	130
63 inches-----	180	195	193	199	194	190	70 inches-----	213	229	229	229	230	220
	170	184	183	188	184	180		203	218	212	218	220	210
	158	171	171	176	171	169		191	205	207	206	207	199
	<u>135</u>	<u>145</u>	<u>148</u>	<u>152</u>	<u>147</u>	<u>147</u>		<u>168</u>	<u>179</u>	<u>184</u>	<u>182</u>	<u>183</u>	<u>177</u>
	112	119	125	128	123	125		145	153	161	158	159	155
	100	106	113	116	110	114		133	140	149	146	146	144
	90	95	103	105	100	104		123	129	139	135	136	134
64 inches-----	185	200	198	203	200	194	71 inches-----	218	234	235	234	236	225
	175	189	188	192	190	184		208	223	225	223	226	215
	163	176	176	180	177	173		196	210	213	211	213	204
	<u>140</u>	<u>150</u>	<u>153</u>	<u>156</u>	<u>153</u>	<u>151</u>		<u>173</u>	<u>184</u>	<u>190</u>	<u>187</u>	<u>189</u>	<u>182</u>
	117	124	130	132	129	129		150	158	167	163	165	160
	105	111	118	120	116	118		138	145	155	151	152	149
	95	100	108	109	106	108		128	134	145	140	142	139
65 inches-----	190	206	203	207	205	199	72 inches-----	223	239	239	238	240	229
	180	195	193	196	195	189		213	228	229	227	230	219
	168	182	181	184	182	178		201	215	217	215	217	208
	<u>145</u>	<u>156</u>	<u>158</u>	<u>160</u>	<u>158</u>	<u>156</u>		<u>178</u>	<u>189</u>	<u>194</u>	<u>191</u>	<u>193</u>	<u>186</u>
	122	130	135	136	134	134		155	163	171	167	169	164
	110	117	123	124	121	123		143	150	159	155	156	153
	100	106	113	113	111	113		133	139	149	144	146	143
66 inches-----	195	210	208	211	210	203	73 inches-----	228	244	245	243	244	233
	185	199	198	200	200	193		218	233	235	232	234	223
	173	186	186	188	187	182		206	220	223	220	221	212
	<u>150</u>	<u>160</u>	<u>163</u>	<u>164</u>	<u>163</u>	<u>160</u>		<u>183</u>	<u>194</u>	<u>200</u>	<u>196</u>	<u>197</u>	<u>190</u>
	127	134	140	140	139	138		160	168	177	172	173	168
	115	121	128	128	126	127		148	155	165	160	160	157
	105	110	118	117	116	117		138	144	155	149	150	147
67 inches-----	199	215	214	216	215	207	74 inches-----	233	249	250	247	250	237
	189	204	204	205	205	197		223	238	240	236	240	227
	177	191	192	193	192	186		211	225	228	224	227	216
	<u>154</u>	<u>165</u>	<u>169</u>	<u>169</u>	<u>168</u>	<u>164</u>		<u>188</u>	<u>199</u>	<u>205</u>	<u>200</u>	<u>203</u>	<u>194</u>
	131	139	146	145	144	142		165	173	182	176	179	172
	119	126	134	133	131	131		153	160	170	164	166	161
	109	115	124	122	121	121		143	149	160	153	156	151
68 inches-----	204	220	219	220	220	212							
	194	209	209	209	210	202							
	182	196	197	197	197	191							
	<u>159</u>	<u>170</u>	<u>174</u>	<u>173</u>	<u>173</u>	<u>169</u>							
	136	144	151	149	149	147							
	124	131	139	137	136	136							
	114	120	129	126	126	126							

NOTES: Examined persons were measured without shoes; clothing weight ranged from 0.20 to 0.62 pound, which was not deducted from weights shown.

The weight values were computed from the regression equation of weight on height by age. The values above and below the expected mean value represent the  $\pm 1.8416$ ,  $\pm 1.2816$ , and  $\pm 1.6449$  standard error of the estimate covering within this range 60, 80, and 90 percent of the population around the mean, respectively. The first range is expected thus to identify 20, 10, and 5 percent of the population of the specific height on either side of the range.

Figures in   are the expected means.

Table 3. Average weights and selected percentiles for each inch of height for women by age group: United States, 1971-74

Height	Age group in years						Height	Age group in years					
	18-24	25-34	35-44	45-54	55-64	65-74		18-24	25-34	35-44	45-54	55-64	65-74
	Weight in pounds							Weight in pounds					
57 inches-----	160 150 138 <u>114</u> 90 78 68	171 159 145 <u>118</u> 91 77 65	183 170 154 <u>125</u> 96 80 67	185 172 157 <u>129</u> 101 86 73	187 175 160 <u>132</u> 104 89 77	178 167 154 <u>130</u> 106 93 82	63 inches-----	178 168 156 <u>132</u> 108 96 86	192 180 166 <u>139</u> 112 98 86	206 193 177 <u>148</u> 119 103 90	206 193 178 <u>150</u> 122 107 94	208 196 181 <u>153</u> 125 110 98	199 188 175 <u>151</u> 127 114 103
58 inches-----	163 153 141 <u>117</u> 93 81 71	174 162 148 <u>121</u> 94 80 68	187 174 158 <u>129</u> 100 84 71	189 176 161 <u>133</u> 105 90 77	191 179 164 <u>136</u> 108 93 81	182 171 158 <u>134</u> 110 97 86	64 inches-----	181 171 159 <u>135</u> 111 90 89	195 183 169 <u>142</u> 115 101 89	210 197 181 <u>152</u> 123 107 94	210 197 182 <u>154</u> 126 110 98	212 200 185 <u>157</u> 129 114 102	202 191 178 <u>154</u> 130 117 106
59 inches-----	166 156 144 <u>120</u> 96 84 74	178 166 152 <u>125</u> 98 84 72	191 178 162 <u>133</u> 104 88 75	192 179 164 <u>136</u> 108 93 80	195 183 168 <u>140</u> 112 97 85	185 174 161 <u>137</u> 113 100 89	65 inches-----	184 174 162 <u>138</u> 114 102 92	199 187 173 <u>146</u> 119 105 93	214 201 185 <u>156</u> 127 111 98	214 201 186 <u>158</u> 130 115 102	215 203 188 <u>160</u> 132 117 105	206 195 182 <u>158</u> 134 121 110
60 inches-----	169 159 147 <u>123</u> 99 87 77	181 169 155 <u>128</u> 101 87 75	195 182 166 <u>137</u> 108 92 79	196 183 168 <u>140</u> 112 97 84	198 186 171 <u>143</u> 115 100 88	188 177 164 <u>140</u> 116 103 92	66 inches-----	187 177 165 <u>141</u> 117 106 95	203 191 177 <u>150</u> 123 109 97	217 204 188 <u>159</u> 130 114 101	217 204 189 <u>161</u> 133 118 105	219 207 192 <u>164</u> 136 121 109	209 198 185 <u>161</u> 137 124 113
61 inches-----	172 162 150 <u>126</u> 102 90 80	185 173 159 <u>132</u> 105 91 79	199 186 170 <u>141</u> 112 96 83	199 186 171 <u>143</u> 115 100 87	202 190 175 <u>147</u> 119 104 92	192 181 168 <u>144</u> 120 107 96	67 inches-----	190 180 168 <u>144</u> 120 108 98	206 194 180 <u>153</u> 126 112 100	221 208 192 <u>163</u> 134 118 105	221 208 193 <u>165</u> 137 122 109	222 210 195 <u>167</u> 139 124 112	213 202 189 <u>165</u> 141 128 117
62 inches-----	175 165 153 <u>129</u> 105 93 83	189 177 163 <u>136</u> 109 95 83	202 189 173 <u>144</u> 115 99 86	203 190 175 <u>147</u> 119 104 91	205 193 178 <u>150</u> 122 107 95	195 184 171 <u>147</u> 123 110 99	68 inches-----	193 183 171 <u>147</u> 123 111 101	210 198 184 <u>157</u> 130 116 104	225 212 196 <u>167</u> 138 122 109	224 211 196 <u>168</u> 140 125 112	226 214 199 <u>171</u> 143 128 116	217 206 193 <u>169</u> 145 132 121

NOTES: Examined persons were measured without shoes; clothing weight ranged from 0.20 to 0.62 pound, which was not deducted from body weight.

The weight values were computed from the regression equation of weight on height by age. The values above and below the expected mean value represent the  $\pm 1.8416$ ,  $\pm 1.2816$ , and  $\pm 1.6449$  standard error of the estimate covering within this range 60, 80, and 90 percent of the population around the mean, respectively. The first range is expected thus to identify 20, 10, and 5 percent of the population of the specific height on either side of the range.<sup>7</sup>

Figures in   are the expected means.

Table 4. Average weights<sup>1</sup> for men and women aged 18-74 years, by age group and height:  
United States, 1971-74<sup>2</sup>

Sex and height	Age group in years					
	18-24	25-34	35-44	45-54	55-64	65-74
<u>Men</u>	Weight in pounds					
62 inches-----	130	141	143	147	143	143
63 inches-----	135	145	148	152	147	147
64 inches-----	140	150	153	156	153	151
65 inches-----	145	156	158	160	158	156
66 inches-----	150	160	163	164	163	160
67 inches-----	154	165	169	169	168	164
68 inches-----	159	170	174	173	173	169
69 inches-----	164	174	179	177	178	173
70 inches-----	168	179	184	182	183	177
71 inches-----	173	184	190	187	189	182
72 inches-----	178	189	194	191	193	186
73 inches-----	183	194	200	196	197	190
74 inches-----	188	199	205	200	203	194
<u>Women</u>						
57 inches-----	114	118	125	129	132	130
58 inches-----	117	121	129	133	136	134
59 inches-----	120	125	133	136	140	137
60 inches-----	123	128	137	140	143	140
61 inches-----	126	132	141	143	147	144
62 inches-----	129	136	144	147	150	147
63 inches-----	132	139	148	150	153	151
64 inches-----	135	142	152	154	157	154
65 inches-----	138	146	156	158	160	158
66 inches-----	141	150	159	161	164	161
67 inches-----	144	153	163	165	167	165
68 inches-----	147	157	167	168	171	169

<sup>1</sup>Estimated values from regression equations of weight on height for specified age groups.

<sup>2</sup>Height was measured without shoes. Two pounds were deducted from HES data to allow for weight of clothing; total weights of all clothing for HANES ranged from 0.20 to 0.62 pound, which was not deducted from weights shown.

Table 5. Comparison of average weights for men and women in HES (1960-62) and HANES (1971-74), by age and height: United States

Sex and height	HES 1960-62	HANES 1971-74	Excess of HANES over HES	HES 1960-62	HANES 1971-74	Excess of HANES over HES	HES 1960-62	HANES 1971-74	Excess of HANES over HES
<u>Men</u>									
18-24 years			25-34 years			35-44 years			
62 inches-----	135	130	-5	139	141	+2	147	143	-4
63 inches-----	138	135	-3	143	145	+2	150	148	-2
64 inches-----	142	140	-2	148	150	+2	154	153	-1
65 inches-----	145	145	-	152	156	+4	158	158	-
66 inches-----	149	150	+1	157	160	+3	162	163	+1
67 inches-----	152	154	+2	161	165	+4	166	169	+3
68 inches-----	156	159	+3	166	170	+4	169	174	+5
69 inches-----	159	164	+5	170	174	+4	173	179	+6
70 inches-----	163	168	+5	175	179	+4	177	184	+7
71 inches-----	166	173	+7	179	184	+5	180	190	+10
72 inches-----	170	178	+8	184	189	+5	184	194	+10
73 inches-----	173	183	+10	188	194	+6	188	200	+12
74 inches-----	177	188	+11	192	199	+7	192	205	+13
<u>Women</u>									
57 inches-----	114	114	-	110	118	+8	129	125	-4
58 inches-----	116	117	+1	114	121	+7	132	129	-3
59 inches-----	118	120	+2	118	125	+7	134	133	-1
60 inches-----	120	123	+3	122	128	+6	136	137	+1
61 inches-----	123	126	+3	126	132	+6	138	141	+3
62 inches-----	125	129	+4	130	136	+6	141	144	+3
63 inches-----	127	132	+5	134	139	+5	143	148	+5
64 inches-----	129	135	+6	138	142	+4	145	152	+7
65 inches-----	132	138	+6	142	146	+4	147	156	+9
66 inches-----	134	141	+7	146	150	+4	150	159	+9
67 inches-----	136	144	+8	150	153	+3	152	163	+11
68 inches-----	138	147	+9	154	157	+3	154	167	+13
<u>Men</u>									
45-54 years			55-64 years			65-74 years			
62 inches-----	146	147	+1	146	143	-3	142	143	+1
63 inches-----	150	152	+2	149	147	-2	146	147	+1
64 inches-----	154	156	+2	153	153	-	149	151	+2
65 inches-----	158	160	+2	156	158	+2	152	156	+4
66 inches-----	162	164	+2	160	163	+3	156	160	+4
67 inches-----	166	169	+3	164	168	+4	159	164	+5
68 inches-----	171	173	+2	167	173	+6	163	169	+6
69 inches-----	175	177	+2	171	178	+7	166	173	+7
70 inches-----	179	182	+3	174	183	+9	169	177	+8
71 inches-----	183	187	+4	178	189	+11	173	182	+9
72 inches-----	187	191	+4	182	193	+11	176	186	+10
73 inches-----	191	196	+5	185	197	+12	180	190	+10
74 inches-----	195	200	+5	189	203	+14	183	194	+11
<u>Women</u>									
57 inches-----	127	129	+2	136	132	-4	130	130	-
58 inches-----	130	133	+3	139	136	-3	133	134	+1
59 inches-----	134	136	+2	142	140	-2	136	137	+1
60 inches-----	138	140	+2	145	143	-2	140	140	-
61 inches-----	141	143	+2	148	147	-1	143	144	+1
62 inches-----	145	147	+2	150	150	-	147	147	-
63 inches-----	148	150	+2	153	153	-	150	151	+1
64 inches-----	152	154	+2	156	157	+1	154	154	-
65 inches-----	156	158	+2	159	160	+1	157	158	+1
66 inches-----	159	161	+2	162	164	+2	161	161	-
67 inches-----	163	165	+2	165	167	+2	164	165	+1
68 inches-----	166	168	+2	168	171	+3	168	169	+1

NOTE: Height was measured without shoes. Two pounds were deducted from HES data to allow for weight of clothing; total weights of all clothing for HANES ranged from 0.20 to 0.62 pound, which was not deducted from weights shown.

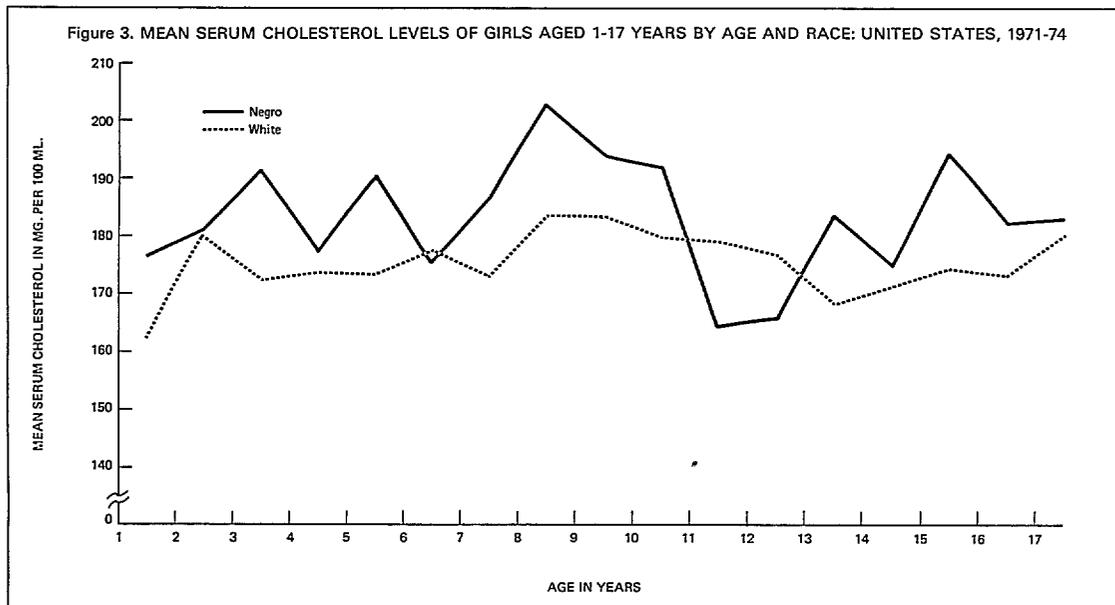
STATISTICAL NOTES

The sampling plan for the 65 examination locations in the Health and Nutrition Examination Survey (HANES) followed a highly stratified multistage probability design in which a sample of the civilian noninstitutionalized population of the conterminous United States aged 1-74 years was selected. Successive elements dealt with in the process of sampling were the primary sampling unit, census enumeration district, segment (a cluster of households), household, eligible person, and sample person. The sampling design provided for oversampling among persons living in poverty areas, preschool children, women of childbearing age, and the elderly.

The weight and height measures are shown as population estimates, that is, the body measure findings for each individual have been "weighted" by the reciprocal of the probability of selecting the person. An adjustment for persons in the sample who were not examined and poststratified ratio adjustments were also made so that the final sampling estimates of the population size are brought into closer alignment with the independent U.S. Bureau of the Census estimates for the civilian noninstitutionalized population of the United States as of November 1, 1972, by race, sex, and age.

CORRECTION TO ADVANCE DATA NUMBER 8

In the key to figure 3 on page 4, — should indicate Negro, and ..... should indicate White as shown below.



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