6677

Chest Width-Hip Width Index.*

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In the human skeleton the relationship between chest width and hip width is constantly changing throughout the period of development from birth to maturity. At birth the chest width exceeds the hip width in both males and females. This difference increases during the first 18 months of life due to the higher growth rate of the chest width. During the period from 18 months to 2½ years the rate of growth of the chest width is slowed down and that of the hip width is accelerated, resulting in the 2 measures becoming equal between 3½ and 4½ years. The chest width thereafter continues to grow at a slower rate than the hip width up to the age of puberty.

During the 7th year the growth rate of the hip width in the majority of females is more rapid than in the males. Thereafter hip width in the female exceeds that in the male and at the tenth year another spurt on the part of the female increases the difference. In order to express this changing relationship between hip and chest an index was used derived by dividing the chest width at any given age by the hip width. It was found that this index is above 100 in both males and females up to the fourth year, decreasing thereafter

TABLE I A—Boys
Average Chest Width-Hip Width Index from Birth to 15 Years.

Age	f	Index	S.D.
1 day	160	108.22	6.94
12 mos.	18	113.07	6.75
24	38	110.08	5.56
36	58	105.07	5.07
48	36	101.99	5.22
60	35	98.41	5.30
72	36	98.21	5.85
84	55	95.77	6.25
96	30	95.59	3.04
108	30	94.45	5.11
120	31	93.21	5.29
132	27	93.38	5.13
144	34	92.82	6.64
156	31	93.23	5.30
168	23	93.46	4.13
180	10	95.65	5.08

TABLE I B—Girls
Average Chest Width-Hip Width Index from Birth to 12 Years.

Age	f	Index	S.D.
1 day	149	109.10	6.96
12 mos.	20	111.51	7.04
24	37	110.62	7.78
36	49	103.95	4.92
48	31	100.95	6.93
60	35	96.54	6.74
72	53	94.90	6.04
84	39	94.16	4.41
96	37	94.50	4.55
108	27	92.52	5.44
120	18	90.08	4.42
132	11	89.10	4.60
144	12	88.67	2.48

* Material collected at Child Development Institute, Teachers College, Columbia University.

to reach a figure at the twelfth year of 88 in the female and 94 in the male. Tables I-A and I-B show the averages of the chest width-hip width index in both boys and girls at each age.

A special study is being made of those children who had a higher index than the average for their age and those who had a lower index than the average for their age. Present findings indicate that girls who menstruate earlier than 12½ years have an index below the average, and that those girls who menstruate later than this age have, in the majority of cases, an index greater than the average. Onset of maturity in boys is more difficult to diagnose. It was found, however, that all the obese boys with retarded genital development had an index above the average for their age.

6678

Vasomotor Responses of Mucosa of Upper Respiratory Tract to Thermal Stimuli.

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Chilling of the cutaneous surface was assumed in the past to be associated with congestion of the mucous membrane of the nose and throat and that this congestion was favorable to bacterial invasion. The reverse have been the findings in the experiments conducted. A cold stimulus applied to the cutaneous surface produces a reflex vaso-constriction and a lowering of the temperature of the mucosa of the upper respiratory tract, and a hot stimulus produces a reflex vaso-dilatation.

One hundred and sixty-four experiments were performed and distributed as follows: 81 general experiments on one normal man, 52 experiments on 8 normal men, 31 experiments on 15 hyperesthetic rhinitis cases including 3 children. These experiments were conducted in a regular laboratory room with a temperature varying between 21° and 26°C., and in which drafts were minimized. The thermo-electric method was employed with a thermopile electrode applied to the mucosa of the nose and the E. M. F. measured through a potentiometer. Cold air, cold sprays, and aluminum cups, varying in diameter from 4 to 19 cm., partly filled with chipped ice were