

Supplementary data

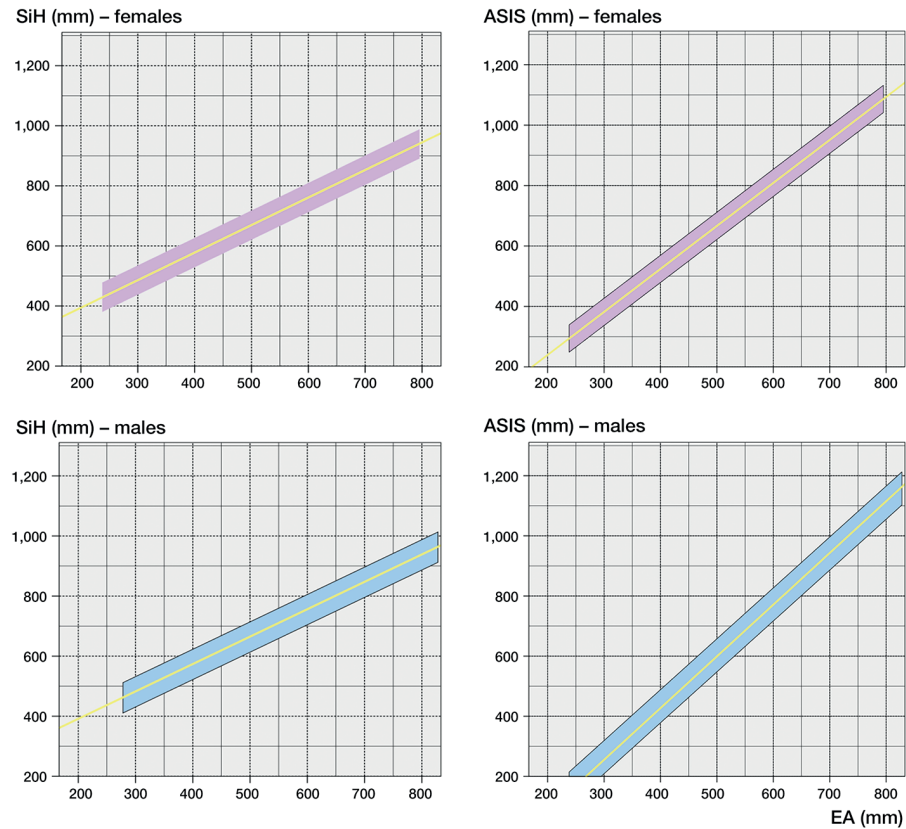


Figure 4. Entire Arm Length (EA) plotted against ASIS and Sitting Height (SiH) in males and females, with linear regression line superimposed (yellow), along with 95% prediction interval (pink and blue shaded regions). These representative examples were calculated from the individual proportions in Table 3.

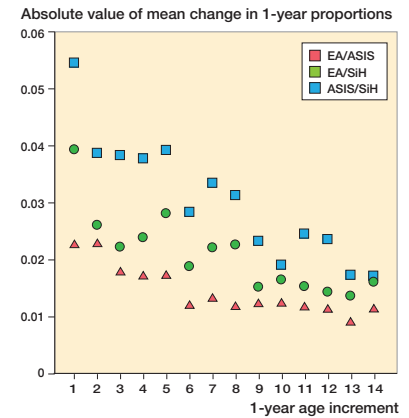


Figure 6. The absolute value of changes in selected body proportions over 1-year age intervals.

Table 1. Quadratic regression results, females, axial proportions

Dependent variable	Independent variable	a	b	c	R- squared
SiH/StH	Age (years)	0.00086	-0.02190	0.65248	0.8104
ASIS/StH	Age (years)	-0.00068	0.01803	0.46165	0.8660
ASIS/SiH	Age (years)	-0.00280	0.06812	0.67741	0.8564

In the general a quadratic equation be modeled from the above table as:
 (Dependent variable) = a(Independent variable)² + b(Independent variable) + c
 All models were statistically significant (p < 0.0001 for all)

Table 2. Quadratic regression results, males, axial proportions

Dependent variable	Independent variable	a	b	c	R- squared
SiH/StH	Age (years)	0.00074	-0.01837	0.64185	0.7968
ASIS/StH	Age (years)	-0.00054	0.01516	0.46820	0.8030
ASIS/SiH	Age (years)	-0.00220	0.06184	0.68500	0.8803

In the general a quadratic equation be modeled from the above table as:
 (Dependent variable) = a(Independent variable)² + b(Independent variable) + c
 All models were statistically significant (p < 0.0001 for all)

Table 3. Linear regression models for females

Dependent variable	Independent variable	b	c	c lower bound [95% PI]	c upper bound [95% PI]	R-squared
StH	SiH	2.123	-194.533	-363.172	-53.019	0.969
StH	ASIS	1.475	270.124	163.850	394.011	0.974
SiH	ASIS	0.664	238.411	163.473	324.704	0.949
ASIS	K	1.988	34.418	-17.116	92.836	0.981
ASIS	T	2.849	-161.749	-248.480	-87.846	0.970
ASIS	EA	1.690	-224.733	-306.122	-154.056	0.979
ASIS	UA	3.296	-69.409	-174.182	21.482	0.941
ASIS	FA	5.014	-226.435	-324.469	-142.108	0.965
ASIS	H	5.894	-128.102	-229.207	-43.051	0.952
EA	UA	1.961	89.615	48.516	137.855	0.972
EA	FA	2.943	3.205	-37.407	44.458	0.970
EA	H	3.453	61.816	13.797	119.132	0.953
EA	SiH	1.032	-190.279	-282.417	-111.256	0.945
StH	T	4.229	22.650	-97.633	147.463	0.959
StH	EA	2.511	-71.367	-185.501	28.493	0.969
Same variable relationships in inverse order						
SiH	StH	0.442	126.662	58.296	207.406	0.969
ASIS	StH	0.661	-161.897	-242.924	-92.659	0.974
ASIS	SiH	1.429	-307.533	-429.883	-201.837	0.949
K	ASIS	0.494	-11.323	-39.847	14.937	0.981
T	ASIS	0.341	63.702	37.361	94.481	0.970
EA	ASIS	0.579	141.102	97.979	190.673	0.979
UA	ASIS	0.286	32.491	5.677	64.541	0.941
FA	ASIS	0.193	49.624	32.576	69.358	0.965
H	ASIS	0.162	26.943	12.289	44.255	0.952
UA	EA	0.496	-38.476	-62.071	-18.472	0.972
FA	EA	0.330	4.131	-9.153	18.241	0.970
H	EA	0.276	-10.957	-26.510	2.405	0.953
SiH	EA	0.912	207.655	135.363	291.398	0.945
T	StH	0.227	6.489	-21.237	35.512	0.959
EA	StH	0.386	43.655	4.977	89.947	0.969

In the general a linear equation be modeled from the above table as:
 (Dependent variable) = b(Independent variable) + c
 Upper and lower bounds for the 95% prediction interval (95% PI) can also be calculated by substituting the respective values for [c]. All models were statistically significant (p < 0.0001 for all).

Table 4. Linear regression models for males

Dependent variable	Independent variable	b	c	c lower bound [95% PI]	c upper bound [95% PI]	R-squared
StH	SiH	2.175	-212.089	-367.708	-80.908	0.967
StH	ASIS	1.365	381.465	275.551	502.438	0.988
SiH	ASIS	0.606	288.139	207.311	380.526	0.951
ASIS	K	2.025	17.109	-35.049	72.689	0.987
ASIS	T	2.755	-144.016	-220.673	-78.678	0.986
ASIS	EA	1.727	-278.784	-367.260	-201.326	0.983
ASIS	UA	3.682	-166.056	-282.313	-67.918	0.955
ASIS	FA	4.892	-243.632	-353.984	-148.914	0.963
ASIS	H	5.971	-154.197	-262.818	-62.522	0.960
EA	UA	2.138	63.999	22.989	112.701	0.977
EA	FA	2.832	22.268	-19.039	68.028	0.973
EA	H	3.427	76.393	25.056	137.441	0.960
EA	SiH	1.043	-189.452	-281.721	-110.515	0.951
StH	T	3.765	184.039	76.064	311.919	0.976
StH	EA	2.375	-8.775	-101.310	82.005	0.986
Same variable relationships in inverse order						
SiH	StH	0.445	117.38	55.900	189.914	0.967
ASIS	StH	0.724	-268.253	-352.869	-194.144	0.988
ASIS	SiH	1.570	-418.800	-558.747	-296.683	0.951
K	ASIS	0.488	-4.199	-31.249	22.011	0.987
T	ASIS	0.358	55.638	31.948	83.356	0.986
EA	ASIS	0.569	168.082	122.261	220.31	0.983
UA	ASIS	0.259	53.369	25.37	86.420	0.955
FA	ASIS	0.197	54.924	35.258	77.740	0.963
H	ASIS	0.161	30.382	14.740	48.825	0.960
UA	EA	0.457	-23.89	-46.384	-5.052	0.977
FA	EA	0.345	-2.524	-17.765	12.212	0.973
H	EA	0.280	-15.713	-32.370	-1.799	0.960
SiH	EA	0.912	209.421	139.676	290.011	0.951
T	StH	0.259	-40.634	-71.880	-14.331	0.976
EA	StH	0.415	11.414	-24.869	49.980	0.986

In the general a linear equation be modeled from the above table as:
 (Dependent variable) = b(Independent variable) + c
 Upper and lower bounds for the 95% prediction interval (95% PI) can also be calculated by substituting the respective values for [c]. All models were statistically significant (p < 0.0001 for all).

Table 5. Mean 1 year-changes for each, absolute values. The number of patients used in each calculation are listed in parenthesis

	Mean total	Standard deviation total	Mean change/1-year													
			2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16
EA/SH	0.415	0.074	0.01255 (27)	0.00893 (72)	0.00701 (83)	0.00764 (97)	0.00896 (83)	0.00619 (80)	0.00671 (95)	0.00781 (85)	0.00630 (75)	0.00625 (90)	0.00547 (102)	0.00623 (88)	0.00457 (70)	0.00591 (44)
T/SH	0.217	0.014	0.00873 (36)	0.00502 (50)	0.00497 (63)	0.00658 (69)	0.00629 (61)	0.00562 (51)	0.00565 (73)	0.00438 (62)	0.00384 (61)	0.00346 (75)	0.00386 (91)	0.00463 (83)	0.00473 (70)	0.00363 (42)
H/ASIS	0.208	0.031	0.01708 (57)	0.01289 (76)	0.01040 (84)	0.00887 (101)	0.00643 (92)	0.00607 (78)	0.00657 (94)	0.00638 (85)	0.00486 (75)	0.00563 (90)	0.00510 (102)	0.00491 (88)	0.00414 (70)	0.00471 (44)
FA/ASIS	0.216	0.087	0.01403 (25)	0.01050 (71)	0.00874 (83)	0.00862 (99)	0.00722 (92)	0.00918 (79)	0.00757 (94)	0.00673 (85)	0.00626 (75)	0.00622 (90)	0.00682 (102)	0.00726 (88)	0.00699 (70)	0.00739 (44)
UA/ASIS	0.261	0.106	0.02025 (25)	0.01349 (71)	0.01388 (83)	0.01422 (96)	0.01370 (92)	0.01088 (79)	0.01086 (94)	0.01399 (85)	0.01197 (75)	0.01109 (90)	0.01089 (102)	0.01044 (88)	0.00909 (70)	0.01030 (44)
H/EA	0.288	0.016	0.01764 (27)	0.01237 (72)	0.01048 (84)	0.01129 (99)	0.00865 (93)	0.00740 (79)	0.00936 (95)	0.00972 (85)	0.00721 (75)	0.00852 (90)	0.00692 (102)	0.00670 (88)	0.00591 (70)	0.00607 (44)
ASIS/SH	0.546	0.032	0.01978 (56)	0.01276 (77)	0.01260 (84)	0.01320 (101)	0.01259 (92)	0.00909 (79)	0.00967 (94)	0.00885 (85)	0.00716 (75)	0.00688 (90)	0.00758 (102)	0.00882 (88)	0.00502 (71)	0.00539 (45)
SH/SH	0.552	0.039	0.01944 (64)	0.01445 (82)	0.01334 (89)	0.01308 (107)	0.01194 (111)	0.00989 (106)	0.01151 (100)	0.00919 (98)	0.00717 (82)	0.00707 (102)	0.00773 (115)	0.00815 (104)	0.00702 (89)	0.00873 (75)
FA/EA	0.332	0.014	0.01256 (26)	0.01191 (72)	0.00990 (84)	0.00932 (99)	0.00911 (93)	0.01049 (80)	0.00866 (95)	0.00885 (85)	0.00862 (75)	0.00782 (90)	0.00852 (102)	0.00937 (88)	0.00860 (70)	0.00787 (44)
UA/EA	0.401	0.021	0.02269 (26)	0.01619 (72)	0.01511 (84)	0.01439 (99)	0.01195 (80)	0.01195 (80)	0.01170 (95)	0.01602 (85)	0.01141 (75)	0.01140 (90)	0.01108 (102)	0.01001 (88)	0.01011 (70)	0.01133 (44)
K/ASIS	0.486	0.023	0.02381 (57)	0.02762 (79)	0.01403 (85)	0.01575 (102)	0.01708 (93)	0.01353 (79)	0.01261 (94)	0.01470 (85)	0.01111 (75)	0.01068 (90)	0.01169 (102)	0.00994 (88)	0.00857 (71)	0.01017 (45)
T/ASIS	0.394	0.016	0.01364 (33)	0.01114 (50)	0.01045 (63)	0.01164 (69)	0.01058 (61)	0.01213 (50)	0.00879 (72)	0.00873 (62)	0.00665 (61)	0.00774 (75)	0.00796 (91)	0.00828 (83)	0.00878 (70)	0.00692 (42)
EA/ASIS	0.755	0.034	0.02295 (26)	0.02310 (73)	0.01811 (84)	0.01743 (96)	0.01760 (92)	0.01224 (79)	0.01355 (94)	0.01208 (85)	0.01259 (75)	0.01269 (90)	0.01194 (102)	0.01154 (88)	0.00935 (70)	0.01161 (44)
ASIS/SH	0.984	0.128	0.05471 (55)	0.03886 (77)	0.03845 (83)	0.03794 (101)	0.03941 (92)	0.02852 (79)	0.03364 (93)	0.03143 (83)	0.02339 (74)	0.01920 (90)	0.02466 (102)	0.02373 (88)	0.01742 (71)	0.01724 (44)
EA/SH	0.759	0.062	0.03945 (26)	0.02614 (72)	0.02232 (83)	0.02400 (96)	0.02824 (93)	0.01896 (80)	0.02225 (94)	0.02274 (83)	0.01533 (74)	0.01660 (90)	0.01542 (102)	0.01440 (88)	0.01370 (70)	0.01621 (43)