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Weight as an Indication of the Character of Risks for Life Insurance.*

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THE Royal Arcanum, a beneficiary organization, which has to-day nearly 50,000 members, in all the States of the Union except the Gulf States, and has paid out since January, 1868, over \$3,000,000 in life insurance to the families of its deceased members, has among its records up to March 1, 1884, details of the deaths of 974 men between the ages of twenty-one and sixty. These details include, together with the family and personal history of the individuals, statements of their age, occupation, height, weight, rate of pulse and respiration, results of auscultation and percussion of chest, and an examination of the renal secretion, certified to by a medical examiner on their entrance to the Society. At their deaths is added to these facts a certificate signed by the attending physician, giving the duration of the fatal illness, its supposed cause, symptoms, and diagnosis, and the results of the autopsy if one is held.

From this storehouse of facts, to which I have been allowed access, many important generalizations may be drawn, bearing upon the selection of lives for life insur-

ance. On only one point to-day, that of weight, and its relation to height, I address you.

You are all aware that for life-insurance purposes, tables have been constructed giving what is considered the natural standard of weight and height. These tables vary but little in different works on this subject, and that which I shall refer to to-day is embodied in the tables here given.

The general directions in companies and societies are that, while this proportion is the natural one, a variation of twenty per cent from it in either direction is not to be deemed a cause for rejection. I am inclined to think that as regards the candidates of light weight (those whose weight is below the standard), less latitude should be allowed, and that a variation of even fifteen per cent in that direction makes the risk hazardous, and that every applicant whose weight is materially below the standard, even ten to fifteen per cent, should be examined with the utmost care, not only to ascertain whether he has actually at that time any *disease*, but whether there may not be

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some tendency to disease, some weakened, malformed, or imperfectly developed organ, some functional ill performance of the vital processes of digestion, assimilation, or absorption, which, if conditions of life should be unfavorable, may prove to be the starting point of constitutional disease.

Men are thin for various reasons: some because in their families is a hereditary tendency to be so; some because they have diseased lungs, heart, or digestive organs; some because they have recently been sick or are overworked, or have too much anxiety and care, or are illy fed; and the examiner should in each instance gravely scrutinize the problem to see what is in *that* case the special cause of this effect, and whether it may not be a cause that threatens to shorten a man's years, or at least an influence which shows in what direction to look for future illness or death. And thus, for instance, if there has been in the family history any case of hereditary disease — especially of constitutional wasting disease — or if there has been in the personal history any of those symptoms or diseases that so often precede tuberculosis, such as impaired digestion, hæmorrhoidal tumors, fistulas, etc., and the applicant is at what may be called the consumptive age (under thirty-five or forty years old), he should be unhesitatingly *rejected*, as one who is not likely to live out his estimated expectancy.

With reference to this question I have made an examination of these 974 deaths with this showing: Amongst them were 138 men, who at their admission were fifteen per cent or more below the standard of weight that we have referred to, and of this 138, eighty-five, or about sixty-two per cent, died of chronic disease, seven from accident or suicide, and only forty-six of acute diseases. Of the eighty-five chronic cases, forty-two were from phthisis, tabes mesenterica, or pulmonary hæmorrhage; seven died of organic disease of the brain or medulla, caries of the vertebræ, progressive muscular atrophy, and general paralysis of the insane; six died from cancer; three from diseases of the liver; nine from urinary diseases (five of Bright's disease, two from diabetes mellitus, one from chronic cystitis and abscess of the kidneys, and one of stone in the bladder); five died of organic disease of the heart; one of pernicious anæmia, and one of "general debility." The acute cases included pneumonia and other lung diseases, typhoid fever, and diseases of the digestive organs.

Ninety-one of these men were under forty years of age when admitted, thirty between forty and fifty, and only seventeen more than fifty.

Twenty-two died in less than a year after admission, twenty-nine in between one and two years, thirty-four in between two and three years, thirty-six in between three and four years, thirteen in between four and five years, and but four lived more than five years. The average duration of their membership was about thirty-one months.

Now of these 138 only thirty-three were twenty per cent below the normal standard, 105 being in that border-land between what is usually considered safe and the line which I claim should be the dividing boundary; twenty-four of the thirty-three lightest ones were cases of chronic disease, thirteen being of phthisis.

Only nine were more than twenty-five per cent below the standard, and all but two of these died of some organic disease, four from phthisis.

This is, in brief, a summary of the deaths of such of the 974 deceased members as were at the time of their admission fifteen per cent or more *below* the usual weight, and in order that the results may be shown more clearly to you I have drawn them up in tabular form and printed them, that you may at a single glance see how extraordinarily prone to constitutional disease are such candidates. And I feel confident that the table will prove conclusively that such risks ought not to be accepted in life insurance.

LIST OF 138 DEATHS AMONG PERSONS WHO WEIGHED FIFTEEN PER CENT OR MORE BELOW THE NORMAL STANDARD.

Height, Feet, Inches.	Standard Weight, Pounds.	Fifteen per Cent less.		Twenty per Cent less.	
		Pounds.	Pounds.	Pounds.	Pounds.
5 0	120	102	96		
5 1	124	105	99		
5 2	128	108 $\frac{1}{2}$	102		
5 3	132	112	106		
5 4	136	116	109		
5 5	140	119	112		
5 6	144	122	115		
5 7	150	127	120		
5 8	156	133	125		
5 9	162	138	130		
6 0	168	143	135		
6 1	174	148	140		
6 2	180	153	144		

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Mos.	Cause of Death.
21	56	5 6 $\frac{1}{2}$	121	7	Abscess of Liver.
27	38	10	136	3 $\frac{1}{2}$ yrs.	Marasmus.
33	33	10	136	5 $\frac{1}{2}$ yrs.	Acute Bronchitis.
34	28	8	127	4	Brain.
36	28	9 $\frac{1}{2}$	130	11	Melancholia (Suicide).
37	36	9 $\frac{1}{2}$	140	11 $\frac{1}{2}$	Ulceration of Bowels.
46	29	9	130	4	Cholera Morbus.
58	43	10	135	21	Diabetes Mellitus.
75	34	10	135	17	Chronic Laryngitis.
89	24	9	128	9	Phthisis.
104	33	9	122	26	Tuberculosis of Intestines.
105	31	8	125	20	Phthisis.
118	21	8	125	9	Typhoid.
122	36	10 $\frac{1}{2}$	136	13	Organic Disease of Medulla.
144	42	6 4 $\frac{1}{2}$	148	28	Congestion of Lungs.
154	29	6 $\frac{1}{2}$	118	14	Pyæmia.
160	26	10	130	6	Typhoid Fever.
166	43	11	145	23	Bright's Disease.
178	31	10	123	21	Ulceration of Bowels.
193	47	10	140	21	Pneumonia.
195	42	2 $\frac{1}{2}$	155	8 $\frac{1}{2}$	Pneumonia.
201	54	9	135	11	Pneumonia.
211	28	8	120	11	Pneumonia.
215	23	10	140	28	Pneumonia.
220	48	10 $\frac{1}{2}$	145	33	Heart (Organic).
230	35	11 $\frac{1}{2}$	125	29	Phthisis.
239	32	0	148	25	Peritonitis.
249	31	10	140	19	Phthisis.
253	35	8	125	31	Cystitis.
254	22	10	120	35	Ulceration of Bowels.
265	51	9	120	26	Rheumatism of Heart.
270	31	8	116	21	Empyema.
274	24	0	152	29	Cancer.
282	34	9 $\frac{1}{2}$	135	40	Pneumonia.
286	40	7	125	3	Asthma and Nervous Exhaustion.
288	42	8	125	3	Dysentery.
293	43	9 $\frac{1}{2}$	136	42	Cancer.
305	46	9	135	38	Disease of Liver.
310	35	10	136	7	Typhoid Fever.
311	27	9	135	29	Pulmonary Hæmorrhage.
317	53	0	150	23	Pernicious Anæmia.
320	27	9 $\frac{1}{2}$	130	40	Phthisis.
378	32	7	122	30	Phthisis.
381	31	8	133	33	Cancer.
383	24	6	115	8	Typhoid.
386	25	0	137	33	Phthisis.
391	24	6 2	150	35	Phthisis.
394	58	4 $\frac{1}{2}$	115	43	Bright's Disease.
398	32	8 $\frac{1}{2}$	135	37	Phthisis.
401	22	10 $\frac{1}{2}$	132	22	Phthisis.
409	56	8 $\frac{1}{2}$	130	7 $\frac{1}{2}$	Drowned.
414	46	10 $\frac{1}{2}$	140	38	Accident.
421	22	10 $\frac{1}{2}$	130	52	Phthisis.
425	50	8 $\frac{1}{2}$	128	17 dys.	Cerebral Congestion.
429	29	0	150	38	Typhoid Fever.
430	23	9 $\frac{1}{2}$	140	22	Typhoid Fever.
436	29	11	145	48	Phthisis.
438	44	9	135	30	Chronic Diarrhœa.
440	30	1 $\frac{1}{2}$	156	13	Otitis Interna, etc.
443	22	7	116	25	Phthisis.
445	39	6	120	34	Phthisis.
451	33	8 $\frac{1}{2}$	134	22	Gastritis.
453	27	7	121	40	Bronchitis.
461	40	10	139	51	Pneumonia.
462	28	6	120	35	Cerebro-Spinal Meningitis.
471	41	4	115	16	Bright's Disease.
474	48	11	145	32	Ulceration & Perforation of Bowels.
475	25	10	135	35	Typhoid Fever.
481	34	8	130	43	Phthisis.
487	39	4 $\frac{1}{2}$	115	23	Pneumonia.
493	33	0	150	40	Phthisis.
502	42	6 0	145	42	Psoas Abscess, etc.
510	58	5 10	135	59	Phthisis.
537	49	5 10	135	58	Carbuncle.
552	52	10 $\frac{1}{2}$	135	48	Cancer.
555	38	6 $\frac{1}{2}$	119	42	Cerebro-Spinal Meningitis.
556	31	6	120	28	Phthisis.
569	34	11 $\frac{1}{2}$	150	15	Valvular Disease of the Heart.
595	52	0 0	150	47	Pneumonia.
606	28	5 10	130	32	Chronic Gastritis.
612	40	6 1	150	43	Phthisis.

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Mos.	Cause of Death.
616	44	5 8	127	32	Bright's Disease.
619	22	5 10	140	45	Phthisis.
621	54	5 0	145	30	General Debility.
625	48	5 0	125	48	Intussusception.
628	31	5 6	120	20	Phthisis.
629	50	5 8	125	39	Pneumonia.
644	49	5 11 1/2	145	59	Phthisis following Pneumonia.
653	23	5 10	134	56	Catarrho-Malarial Fever.
664	49	5 9	135	9	Diabetes Mellitus.
666	34	5 10 1/2	144	44	Phthisis.
690	37	5 8 1/2	135	55	Phthisis.
696	24	5 9 1/2	136	18	Cancer.
699	25	5 6	120	37	Phthisis.
703	27	5 10 1/2	126	27	Phthisis.
707	42	5 6	120	53	Typhoid Pneumonia.
709	35	5 8	130	43	Stone in Bladder.
713	24	5 10	138	24	Phthisis.
716	42	5 10	140	57	Disease of Lungs and Heart, Chronic.
719	27	5 10	135	28	Phthisis.
722	23	5 10	140	19	Measles.
730	28	5 10	130	15	Phthisis.
752	51	5 9 1/2	125	29	Typhoid Pneumonia.
769	35	5 9	135	48	Pulmonary Hæmorrhage, Phthisis.
773	40	5 8 1/2	125	57	Softening of Brain.
779	21	5 3	110	18	Phthisis.
780	51	5 8 1/2	135	16	Apoplexy.
784	38	5 10 1/2	145	40	Congestive Chill.
789	32	6 0	150	35	Typhoid.
790	31	6 0 1/2	150	41	Bright's.
791	35	5 11	136	43	Phthisis.
792	59	5 6	122	41	Cerebral Hæmorrhage.
797	22	5 10 1/2	128	23	Phthisis.
801	28	5 10	135	31	Marasmus.
807	32	5 11	127	47	Phthisis.
812	38	5 10	140	45	Softening of Liver.
816	47	5 10	130	57	Progressive Muscular Atrophy.
819	34	5 7 1/2	125	7 1/2	Typhoid.
828	28	5 11 1/2	143	48	Phthisis.
839	46	5 9	135	32	Paralysis of Heart.
842	50	5 8 1/2	130	44	General Paralysis of Insane.
846	33	5 10	140	10	Caries of Spine.
860	23	5 11 1/2	148	46	Inflammation of Brain, Acute.
874	22	5 10 1/2	140	44	Typhilitis.
898	48	5 11	147	34	Apoplexy.
902	49	5 10	125	31	Congestion of Liver, Acute.
903	28	5 11	145	51	Casualty.
920	34	6 0	143	14	Pneumonia.
922	38	5 10	135	31	Pleuro-Pneumonia.
923	43	6 0	145	48	Pneumonia.
929	28	5 10	135	2	Suicide.
937	31	4 11	98	69	Drowned.
940	25	6 0	145	56	Phthisis.
944	22	5 10	140	19	Pneumonia.
945	50	6 0	150	66	Cancer.
955	36	5 9 1/2	125	65	Drowned.
960	28	5 9	135	63	Typhoid.
972	21	5 5 1/2	111	40	Paralysis of Heart.

LIST OF 122 DEATHS AMONG PERSONS WHO WERE MORE THAN FIFTEEN PER CENT IN EXCESS OF THE NORMAL STANDARD WEIGHT.

Height, Feet and Inches.	Standard Weight, Pounds.	Fifteen per Cent Excess, Pounds.	Twenty-five per Cent Excess, Pounds.
5 0	120	138	150
5 1	124	142 1/2	155
5 2	128	147	160
5 3	132	152	165
5 4	136	156	170
5 5	140	161	175
5 6	144	166	180
5 7	150	172	187 1/2
5 8	156	178	195
5 9	162	186	203 1/2
5 10	168	193	210
5 11	174	200	218
6 0	180	207	225

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Mos.	Cause of Death.
2	26	5 11	245	3	Brain (Congestion).
6	57	5 6	175	7	Heart (Cardiac Asthma).
11	36	5 10	235	8	Heart (Embolism).
14	36	5 10 1/2	200	1	Yellow Fever.
17	36	5 10	210	3	Brain (Paralysis).
20	50	5 11 1/2	260	4	Heart (Fatty).
41	35	5 8	225	10	Bright's.
78	43	5 8	200	11	Ulcer of Stomach.
92	44	5 6	192	18	Casualty.
97	45	5 6	190	17	Gastric Ulcer.
99	46	5 9	198	21	Suicide.
115	41	5 6 1/2	190	12	Cholera.
134	54	5 10	215	29	Rheumatism and Heart.
135	35	5 8	180	4	Cerebritis.
145	56	5 10	200	19	Brain Congestion.
162	39	5 9 1/2	194	34	Spinal Injury.

Number.	Age.	Height, Feet and Inches.	Weight, Lbs.	Lived, Mos.	Cause of Death.
163	59	5 4	160	9	Apoplexy.
169	57	5 1	220	4	Brain (Softening).
191	34	5 9 1/2	195	27	Typho-Malaria.
194	53	5 4 1/2	175	20	Cystitis.
204	40	5 10 1/2	215	28	Narcotism.
210	41	5 7	185	18	Lungs, Congestion.
212	59	5 4 1/2	165	24	Heart, Valvular Disease.
213	42	5 5 1/2	193	30	Bright's Disease.
216	46	5 8	200	20	Casualty.
217	25	5 8 1/2	200	10	Suicide.
219	36	5 8	185	2	Casualty.
223	42	5 11 1/2	245	12	Pneumonia.
236	45	5 10	210	9	Pneumonia.
251	48	5 3	240	9	Brain Inflammation.
252	59	5 6	200	14	Heart, Valvular.
262	45	5 8	191	20	Hepatitis (Acute).
266	54	5 8 1/2	190	17	Atheroma.
273	47	5 9	205	21	Brain (Congestion).
289	43	5 5 1/2	182	22	Hæmatemesis.
291	45	5 8 1/2	212	15	Jaundice (Acute).
294	41	5 8 1/2	185	12	Heart, Hypertrophy.
300	30	5 8 1/2	200	15	Casualty.
312	37	5 9 1/2	195	11	Myelitis.
313	43	5 7	176	38	Heart.
315	30	5 10	210	45	Typhoid Fever.
316	37	5 7 1/2	195	29	Bright's Disease.
323	37	5 7	180	17	Endocarditis.
324	28	5 7 1/2	195	11	Typhoid Fever.
332	54	5 8 1/2	185	14	Casualty.
334	41	5 7	175	28	Bright's Disease.
372	45	5 8	180	44	Heart.
373	36	5 11	235	44	Aortic Aneurism.
374	40	5 7	180	53	Bright's Disease.
389	43	5 9	198	9	Bright's Disease.
404	59	5 9	191	34	Typhoid Fever.
422	50	5 8	190	34	Pneumonia.
439	35	5 10	195	22	Bright's Disease.
457	52	6 0	248	28	Heart Fatty.
460	48	5 4 1/2	193	29	Apoplexy.
465	38	5 10	235	33	Typhoid Fever.
468	58	5 10 1/2	220	15	Apoplexy.
469	44	5 10 1/2	225	31	Carbuncle.
480	36	6 0	229	1	Suicide.
483	46	5 8	180	41	Heart (Rheumatism).
491	58	5 7 1/2	186	22	Bright's Disease.
506	58	5 5 1/2	195	36	Apoplexy.
512	38	5 4 1/2	185	4	Brain (Congestion).
513	39	5 3	157	31	Rheumatism (Acute).
514	44	5 11	215	59	Bright's Disease.
515	36	5 8	180	44	Caries of Spine.
521	44	6 0 1/2	235	10	Heart (Paralysis).
523	52	6 1	220	4	Casualty.
524	32	5 7	180	2	Bowels (Congestion).
531	40	5 10 1/2	206	27	Liver (Atrophy).
534	46	5 9 1/2	250	33	Abscesses.
535	40	5 8 1/2	190	51	Brain (Softening).
539	37	5 9 1/2	200	20	Typhoid Fever.
548	56	5 9	200	5	Cerebritis.
549	48	5 8	179	42	Bright's Disease.
550	59	5 5 1/2	180	37	Casualty.
565	45	5 8	185	8	Casualty.
573	51	5 8 1/2	194	22	Spinal Sclerosis.
577	45	5 6	187	30	Pneumonia.
578	23	5 9	200	30	Malarial Fever.
582	54	5 11 1/2	240	35	Heart (Rheumatism).
585	43	5 8	185	47	Bowels (Hæmorrhage).
588	59	5 7 1/2	176	52	Liver (Degeneration).
591	33	5 2	234	57	Pneumonia.
596	32	5 6	172	56	Casualty.
599	53	5 8	206	3	Bowels (Inflammation).
601	37	5 10 1/2	194	13	Suicide.
603	54	5 11	223	21	Pneumonia.
614	51	5 6	169	20	Apoplexy.
615	56	5 8	210	24	Heart (Paralysis).
626	49	5 11	225	44	Heart (Paralysis).
649	35	5 9	200	21	Enteric Fever.
669	52	5 5	185	51	Apoplexy.
671	52	5 8	185	21	Suicide.
679	43	5 10	200	45	Apoplexy.
682	57	5 10	200	57	Bright's Disease.
683	47	5 8 1/2	185	12	Casualty.
688	58	5 8 1/2	214	10	Brain.
689	59	5 10	205	22	Brain (Paralysis).
694	50	5 9 1/2	200	21	Cancer.
698	41	5 3	160	26	Casualty.
725	36	5 8	187	51	Nephritis.
742	37	6 0 1	230	13	Bowels.
755	54	5 8	192	16	Heart.
759	54	5 9	190	54	Bright's Disease.
760	59	5 10	220	31	Brain (Softening).
799	34	5 7	180	43	Cancer.
804	31	5 7	182	5	Bladder.
823	47	5 6	170	7	Heart (Paralysis).
825	38	5 6 1/2	180	43	Nephritis (Acute).
831	58	5 8 1/2	236	17	Apoplexy.
838	48	5 6	174	72	Apoplexy.
845	36	5 8 1/2	235	41	Edema of Glottis.
852	57	5 4	182	45	Heart (Fatty).
863	51	5 5	165	21	Suicide.
872	37	5 6	170	67	Liver (Atrophy).
906	54	5 7	212	60	Bright's Disease.
915	38	5 6 1/2	170	52	Tetanus.
935	50	6 0	245	66	Heart (Valvular).
969	33	5 7 1/2	193	42	Diabetes.
969	50	5 7	175	74	Apoplexy.
971	51	5 4	180	54	Cancer.

Let us now reverse the picture. Among the 974 deaths were those of 122 members who, on joining the Society, were fifteen per cent or more *above* the weight assumed to be the normal one.

Of these, leaving out fifteen who died of casualties and five who committed suicide, fifty-six, or about forty-six per cent, died of some lingering illness, and forty-six of acute attacks.

Twenty-six of the deaths were from disease of the brain or spine (twelve being apoplectic); twenty-four from disease of the heart and circulatory system; sixteen from disease of the kidneys and urinary organs (including twelve of Bright's disease); eleven died from disease of the abdominal organs; fourteen from zymotic diseases; and seven of acute lung diseases. None died of phthisis, and but three of cancer.

It will be remembered that among the *light* weights, ninety out of 138 were under forty years of age on joining, but of these *now* under consideration eighty-three of 122 were *over* forty when admitted, forty-three between fifty and sixty, and only four were less than thirty. Their average age was forty-five years.

Twenty-eight died in less than a year after being taken into the society; thirty-six in between one and two years; twenty-four in between two and three years; seventeen in between three and four years; twelve in between four and five years; and but five lived more than five years.

The average duration of their membership was twenty-seven months.

Now in that border-land, as I have called it, between fifteen per cent and twenty per cent, among the heavy weights there were but forty-seven who have died (whilst there were, it will be remembered, 105 of the light weights), and of this forty-seven, twenty died of cerebral or cardiac affections, eleven from casualties and suicides, eight of zymotic and intestinal disease, six from urinary complications, and two from cancer.

It is not until we get beyond the twenty per cent line in this class that the principal part of the deaths occur, namely, seventy-five, thirty being from brain or heart disorder. Going still farther, it appears that there were forty-nine whose weight was more than *twenty-five per cent* in excess of the standard, some of these exceeding forty per cent, and a few reaching even fifty per cent beyond that rate. But of these excessive weights the cause of death was hardly what might have been anticipated, for there is no increased preponderance of brain or heart disease, the figures of those over twenty-five per cent being twenty-two in those diseases, six of diseases of the kidneys, six casualties, nine zymotic and digestive diseases, and all other causes six, the character of the changes which proved fatal seeming to be rather those peculiar to senile degeneration than those of fatty changes, it being borne in mind that more than a third of the men of excessive weight were over fifty years old, and more than two-thirds over forty.

If, in summing up, the results of the two classes of cases be compared, it is to be noticed, first, that the *number* of those dying who are deficient in weight is greater than of those who have a superabundance of adipose tissue.

This point cannot be accurately tested, of course, without knowing how many of each class have been admitted to the order, and this could only be done by too great labor; but I am satisfied that the number of those admitted who are fifteen per cent or more *above* weight is greatly in excess of those fifteen per cent or more *below* the standard, while the deaths, as has just been said, are more frequent among the latter.

It further appears, too, that as to the character of diseases to which they succumb there are more of those light in weight who die of chronic constitutional diseases, and more of those heavy in weight who die of accident, zymotic or acute diseases, though many of the latter fall victims to diseases of the arteries and the heart. *Sudden* deaths also are much more frequent with the heavy weights.

Still farther, it seems that the deaths are not so frequent of the heavy men who are but little (fifteen to twenty per cent) *above* the standard as among the light weights who are fifteen to twenty per cent below.

The conclusion which I have therefore reached from these observations is, very briefly, this: that for life insurance purposes men whose weight is above that laid down in the usual tables are better risks than those whose weight is less; that among the latter (light weights) the usual variation of twenty per cent which is assumed to be within safe limits, is not safe, and that if we accept men, especially young men, whose weight is fifteen per cent below the standard, we are approaching dangerous standing ground, and inviting, as it were, deaths from phthisis and wasting diseases; and when we reflect how great is the mortality from phthisis in all insurance organizations we cannot too strongly emphasize the necessity of constant vigilance in this direction, and of not only exploring most carefully the chests of such men, but also of taking into account all these other features, which I think often precede the changes in lung tissue discernible by the ear, and may be observed at what may be called the pre-tuberculous stage.

With the heavy weights the case is different: free from danger of phthisis, we must, to be sure, take the greatest care to see that the heart and kidneys are healthy, and that the family history does not point to cerebral disease. With these points well guarded, I am satisfied that an excess of twenty-five per cent in weight is not dangerous in men who have not injured or are not injuring themselves by alcohol.

It may be said very truly that much in both classes must depend on the family history and inborn tendencies to disease of the parties, and that in this *resume* I have not dwelt on this subject, but in *most* of the cases here cited, the family history did *not* indicate danger from constitutional disease, because the greater number of such applicants as have anything unfavorable in those respects are rejected when they apply. These tables, therefore, have been made up largely and almost entirely of men whose deficiency or excess of weight was the *only* unfavorable feature at the time of their being accepted, this feature not having been then regarded as sufficiently important to have a determining effect on the question of rejection.—*Boston Medical and Surgical Journal.*