

TABLE 3

Comparison of 1931 and 1945 Death Rates in Canadian Population  
(Death Rates per 1,000 Population)

Age	Males			Females		
	1931 Death Rate	1945 Death Rate	% Decrease	1931 Death Rate	1945 Death Rate	% Decrease
			%			%
52.....	10.60	9.89	6.7	9.20	7.51	18.4
57.....	15.49	14.99	3.2	13.64	11.09	18.7
62.....	22.82	23.29	2.1 <sup>1</sup>	20.17	17.17	14.9
67.....	35.67	35.75	0.2 <sup>1</sup>	31.14	26.85	13.8
72.....	55.63	54.17	2.6	49.20	44.24	10.1
77.....	89.00	85.46	4.0	82.11	71.70	12.7
82.....	135.86	129.99	4.3	127.36	114.17	10.4
87.....	199.33	200.34	0.5 <sup>1</sup>	186.10	182.15	2.1
92.....	283.31	299.49	5.7 <sup>1</sup>	260.01	274.46	5.5 <sup>1</sup>

<sup>1</sup>-indicates increase of the death rate.

The second important consideration suggesting caution in accepting the past trend of government annuity death rates as a guide to the future is that among annuitants in the United States and in Great Britain, in life insurance companies, there has also been a trend toward smaller death rates as time passes. Like the population trend, the trend among annuitants has persisted for many decades at a gradual, though at times irregular, rate. It is my opinion that no adequate reason exists for assuming that the general trend of mortality under Canadian Government annuities will, over a period of years, be materially different from the annuity trend elsewhere.

The third important consideration militating against the assumption of present government annuity death rates for the future is the phenomenon of "self-selection," or the converse, which can affect mortality rates substantially. The old adage that "annuitants live long lives" illustrates that, in general, only persons who consider themselves to be in good health acquire annuities, others refraining from doing so. But the intensity of this phenomenon can and does change substantially from time to time. The facts that government annuity premium rates have always been very attractive and that recent social and economic trends have caused annuities to become more and more an accepted means of providing old-age income, suggest strongly that self-selection probably has had a substantial, though immeasurable, influence on government annuity mortality. It is possible, I think, that variations of self-selection have been powerful enough to mask completely a normal trend toward smaller death rates.

#### *The Future Trend of Annuity Mortality*

Since no one can predict the future, no one can know the future trend of annuity mortality in general, or of government annuity death rates in particular. The only gauge is informed opinion—medical, economic, sociological, and actuarial. Speaking only of the latter, which in large measure reflects the other views also, opinion is unanimous that there is no valid reason for assuming, in the calculation of annuity premium rates that the past trend towards lower death rates will reverse itself. There are causes which might