|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Comparative Mortality—England and Wales.* | | | | | | | | |
|  | **J**  **?** | **B á**  **1** | **Diseases of Liver.** | **Phthisis.** | **Diseases of Nervous**  **System.** | **Diseases üf Circu­latory System.** | **Diseases of Respira­tory System.** | **Diseases of Urinary System.** |
| All males ....  Occupied and retired | **I,OOO** | **16** | **27** | **186** | **105** | **144** | **174** | **52** |
| males .... | **I,OO4** | **16** | **27** | **187** | **103** | **146** | **177** | **52** |
| Unoccupied males | **2,884** | **42** | **68** | **583** | **«79** | **294** | **310** | **II2** |
| Clergy .... | **524** | **2** | **14** | **55** | **64** | **88** | **53** | **38** |
| Agriculturists | **602** | **7** | **13** | **85** | **62** | **96** | **86** | **29** |
| Railway engine-drivers | **610** | **4** | **18** | **65** | **74** | **107** | **84** | **36** |
| Civil Service . | **723** | **5** | **40** | **129** | **80** | **102** | **78** | **51** |
| Navvies, &c. . | **740** | **6** | **9** | **95** | **63** | **113** | **154** | **29** |
| Shopkeepers . | **872** | **I?** | **34** | **161** | **96** | **124** | **139** | **5'** |
| Coal-miners . | **885** | **5** | **17** | **89** | **87** | **134** | **196** | **35** |
| Building trades . | **934** | **14** | **21** | **190** | **94** | **134** | **163** | **54** |
| Metals | **Il027** | **II** | **23** | **189** | **109** | **151** | **213** | **56** |
| Textiles .... | **1,055** | **IO** | **21** | **190** | **123** | **165** | **193** | **61** |
| Dockers .... | **ι,48t** | **50** | **22** | **308** | **112** | **198** | **365** | **64** |
| Potters .... | **1.493**  **1,646** | **8** | **21** | **285** | **131** | **219** | **473** | **53** |
| Seamen .... | **26** | **34** | **262** | **170** | **238** | **220** | **83** |
| File-makers . | **ι,7∞** | **14** | **15** | **387** | **225** | **198** | **325** | **160** |
| Innkeepers | **1,781** | **III** | **201** | **271** | **188** | **207** | **252** | **127** |
| Inn-servants . | **1,883** | **131** | **49** | **543** | **146** | **2II** | **224** | **100** |
| Costermongers | **2,007** | **59** | **40** | **554** | **167** | **276** | **392** | **86** |
| General labourers | **2,235** | **40** | **37** | **491** | **233** | **324** | **444** | **96** |

and it is no doubt due to the inhalation or absorption of irritating or poisonous particles through the nature of their occupation. The clergy, who have the lowest alcoholic mortality, show a remark­ably low level of organic disease of all kinds; railway engine-drivers, who come next, suffer more from circulatory and respiratory diseases, navvies and coal-miners still more, while civil servants arc more susceptible to phthisis. Agriculturists, though with a higher alcoholic mortality, nearly equal the clergy in general healthi­ness, which must be attributed to the open-air life. The low alcoholic level of coal-miners and navvies is striking, because both are hard-drinking classes; their position can only be explained by the fact that they drink beer, and it goes far to prove the innocuousness of beer when combined with hard work. The enormous and absurdly disproportionate mortality from diseases of the liver among innkeepers, and in a lesser degree among unoccupied males, is obviously due to a preference for stating that cause on certificates in place of alcoholism. The condition of unoccupied males revealed by this table is worth a volume of sermons. The mortality among them between the ages of 25 and 65 is higher than that of any other class of the community. It is also worth noting that poverty is good for health. The clergy are the poorest of the educated and professional classes; and agricultural labourers, who are the poorest of the manual working classes, are nearly as healthy all round except that they are somewhat more liable to phthisis; their com­parative mortality figure from all causes is only 621.

*Longevity.—*A great deal of statistical information with regard to the comparative longevity or expectation of life at different ages among abstainers and non-abstainers has been collected by life-insurance companies and friendly societies. The following table is given in the syllabus of temperance teaching in elementary schools issued in 1909:—

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Expectancy of Life.* | | | | | |
| **Age.** | **General Expectancy nf Total Male Population (Registrar- General).** | **General Expectancy based nn Experience of Insurance Offices.** | **Odd­fellows.** | **Recha- bites (abstain­ers).** | **United Kingdom Temperance Institution (abstainers).** |
| **20** | **4i∙0** | **43∙2** | **41∙4** | **48-8** | **46 ∙9** |
| **25** | **37∙O** | **39∙ι** | **37'6** | **44∙3** | **43 0** |
| **30** | **33∙ι** | **35∙ι** | **34∙o** | **39∙7** | **38∙8** |
| **35** | **29∙2** | **31∙2** | **3°∙3** | **35∙ι** | **34-6** |
| **40** | **25∙6** | **27∙4** | **26∙8** | **30∙6** | **3O∙3** |
| **45** | *22∙2* | **23∙7** | **23∙3** | **26· I** | **26· I** |
| **50** | **18∙9** | **2O∙I** | **I9∙9** | **21-8** | **22∙O** |
| **55** | **15∙8** | **16∙7** | **16∙6** | **I7∙7** | **18∙1** |
| **60** | **12∙9** | **13-6** | **13∙6** | **13∙8** | **14∙6** |

Similar statistics have been prepared showing the relative mortality experience among insured persons. Mr R. Μ. Moore gives the

following proportional figures at different ages for all the societies embraced in the Institute of Actuaries tables, as compared with the abstaining section of the United Kingdom Temperance and Provident Institution, which is taken as 100:—

|  |  |  |  |
| --- | --- | --- | --- |
| *Mortality Experience of Non-Abstainers to Abstainers as* **100.** | | | |
| **. Age.** | **Mortality Experience.** | **Age.** | **Mortality Experience.** |
| **15-19** | **67** | **55-59** | **144** |
| **20-24** | **21** | **60-64** | **132** |
| **25-29** | **172** | **65-69** | **120** |
| **30-34** | **194** | **70-74** | **116** |
| **35-39** | **190** | **75-79** | **91** |
| **40-44** | **181** | **80~84** | **107** |
| **45-49** | **179** | **85-89** | **107** |
| **50-54** | **165** | **90-94** | **127** |

The United Kingdom Temperance Institution has a general as well as an abstaining section. The experience of the twenty-two years 1884-1905 gives the following result; percentage of actual to expected deaths―general section, 79·53; temperance section, 54∙25. Other offices having abstaining sections show similar results, thus:—

|  |  |
| --- | --- |
| General. | Temperance. |
| Sceptre Life Association (25 years) . . 79·67  Scottish Temperance Life Assurance Co. | 53∙O5 |
| (25 years) 64 | 46 |

*Pathology.—*Dr Sims Woodhead thus summarizes the results of ex­perimental investigation into the direct action of alcohol upon living cells and tissues.

Alcohol plays a prominent part in bringing about degeneration of nerves, muscles and epithelial cells; it determines the accumula­tion of waste products in the tissues by paralysing the tissue cells, interfering with oxidation, with secretion and with excretion; it induces the proliferation of the lower forms of tissue, often at the expense of the more highly developed tissues, which in its presence undergo marked degenerative changes; it interferes directly with the production of immunity against specific infective diseases, and reasoning from analogy it may be assumed that it plays an equally important part in impairing the resistance of tissue to the advance of the active agents in the production of disease that may have already obtained a foothold in the body.

With regard to this aspect of the subject it must be remembered that laboratory experiments by which alcohol is placed in direct contact with cells and tissues are an entirely different thing from the dietetic use of beverages containing dilute alcohol with other things. It would be interesting to know how the tissues would behave when similarly treated with common salt, lemon juice, vinegar, theine, caffeine or other substances in general dietetic use, or with ordinary tonics such as quinine, quassia and dilute acids.

*Inebriety.—*Much study has been devoted to inebriety as a diseased condition. It generally results from long-continued and excessive indulgence in alcohol and is characterized by dipsomania or a craving for alcohol, which is chronic or periodical and which the subject cannot resist. It is accompanied by organic changes in the nervous system, which probably begin in the stomach, but end in disintegration of the brain cells with the development of alcoholic insanity. The only chance of cure lies in complete abstinence from liquors with, at first, suitable medical treatment. The recognition of this fact has led to the establishment of special institutions for this purpose, both of a voluntary and a compulsory character. An account of the laws relating to the subject is given under the heading of Inebriety. In accordance with the Jaw three classes of institutions have been established in the United Kingdom:—(1) Certified inebriate reformatories, to which patients are committed by the courts for various periods of detention. They are 11 in number, and during 1908—the last year reported— the committals to them numbered 262 (218 women and 44 men). The total number committed since their establishment in 1897 is 3002 (2548 women and 484 men); the highest number in any one year was 493 (428 women and 65 men) in 1907. (2) State Inebriate Reformatories, more of a penal character, for persons committed but too refractory for the previous class. There are two, one for women and one for men; the average number under detention in 1908 was 74 women and 42 men; the admissions were 27 women and 10 men. (3) Licensed retreats, for voluntary patients. In 1908 they numbered 20, and had under treatment 493 patients (288 women and 205 men). In all about 800 habitual inebriates are thus treated. The results cannot be stated with any precision, but they are certainly disappointing. The Inebriates After-Cure Association gives the following analysis of 407 cases discharged from reformatories and looked after in the years 1903-8:—Satis­factory result, 82 (50 women, 32 men); unsatisfactory, 114 (78 women, 36 men); not known, 221 (162 women, 49 men). One explanation of the failure of treatment and the frequency of relapses