

stration of the *germ theory* of disease marks a new era in medicine.

We no longer ascribe the wide-spreading epidemic, the death-dealing pestilence, to the direct visitation of a wrathful Providence, or to the occult influence of the moon's phase. In these diseases, born and bred in *jilth*, we recognize the violation of some or all of the laws of sanitation, the specific, direct cause we know to be a germ, or *bacterium*, peculiar to each disease, now in most cases known and isolated.

For this knowledge we are indebted to the labors of Pasteur, Koch, Lister, and other enthusiastic workers in the now wonderful science of bacteriology. These men must be classed among the immortals in scientific investigation now, by all lovers of medical science, and soon by the world at large, when the importance of their work is fully and generally realized.

That the old fathers of medicine had an inkling of these truths is quite certain. We are told that Varro and Columella, ages ago, expressed belief that minute organisms caused malarial fevers. Diodorus believed the Athenian plague due to the influence of effluvia and decomposing debris. Kirchu in the fifteenth century believed that diseases were caused by micro-organisms. Nothing certain and definite, however, was known until the researches of the eminent French scientist, Pasteur, were made public.

We now believe that many diseases, and strongly suspect, to say the least, that all diseases are directly caused by a microscopic *contagium vivum*. We also believe that this germ, or living micro-organism, requires a suitable soil or nutrient in order to flourish, increase, and do its pathogenic work. The theory of disease prevention may then be well studied under two heads or divisions, viz. :

1. The destruction or carrying away of all substances *within* or *without* the

body, in which disease germs may grow ;

2. The destruction of these germs after they have once gained a foothold, by the use of germicides.

There are many scientists who believe that in the human body there are certain blood-cells, depending for their number and power on the state of bodily nutrition called *phagocytic* cells, whose special function is to struggle against and destroy space-invading disease-germs. Hence, for complete discussion of the subject, a third division is necessary, for which we will not have space. But before we discuss the points thus raised, let us examine the evidence, if any, in favor of the practicability of preventing disease.

Can disease be prevented? We will mention some of the most notorious and convincing examples of disease prevention. Leprosy, once prevalent in England, is now a very rare disease in that country, through the enforcement of isolation. Scurvy, since its cause and treatment became known, is now a disease seldom seen. Intermittent fever vanishes as countries are cleared, drained and cultivated. Small-pox, once the dread and scourge of the nations, now is easily prevented. Typhoid fever, in many towns and cities, is almost extinguished through proper sanitary measures. The plague and black death have become things of the past, through increased knowledge and practice of public and private hygiene. The now known preventable diseases, or diseases which we have under control, are small-pox, cholera, yellow fever, scarlet fever, typhoid fever, and diphtheria. Soon we hope will be added to the list that most destructive of all diseases in this country, tuberculosis. Theoretically, at least, we have under control all diseases due to atmospheric, dietetic, and specific causes. These are statements and facts which perhaps are not yet fully