

in febrile conditions, we have no means of knowing which is cause and which is effect, or whether both are not due to some common underlying cause. Moreover, since we cannot settle this question, we cannot deduce any theoretical arguments in favor of quinine or any other drug as an antipyretic, because every *reason why* a pyretic temperature should be reduced by any given drug implies a theory as to the production of that pyretic temperature. For example: Binz, Liebermeister, and their followers assume that the multiplication of microscopic cells in the blood is one cause of fever heat, and that "quinine checks the formation and the amœboid movements of white blood corpuscles," (Binz.) and probably of all similar organisms. Whence the reasonable inference, that if this cause of fever-heat be removed the temperature must be reduced by just so much, but unfortunately, while the latter effect may be demonstrated, the former cannot, and the theory, though an ingenious one, appears to have sprung from the practice rather than to have originated it. Moreover, to accept this explanation one must not only be a believer in the germ theory of disease, but also go further and hold opinions as to the way in which the germs conduct themselves in disease. Now I think that, as practical physicians, we ought to be guided by the results of careful observation rather than by such vague speculation. I will therefore leave the theoretical part of the subject as barren in results and contributing no evidence for or against quinine as an antipyretic. Before passing to the practical side of the question it may not be amiss, however, to give a few quotations on body temperatures from the latest authorities on this subject. Most observers agree that the temperature in health varies according to age, sex, time of day, muscular exercise, activity of physiological processes, &c., &c., and that in febrile diseases these variations are much greater than in health. According to Wagner the lowest temperature occurs in healthy adults in the middle of the night—about one to two o'clock A.M.—and the highest temperature in the afternoon hours. A variation of  $1^{\circ}$  C. is compatible with perfect health. The temperature is slightly higher in infancy and in old age, and in children the temperature is more easily affected than in adult life. Hence