REQUIREMENTS IN METEOROLOGICAL TABLES.

By W. ADDISON, M.D., F.R.S.

THE quarterly returns of marriages, births, and deaths, contain mean readings of the thermometer, barometer, etc.; but, in order to estimate correctly the influence of weather upon sickness and mortality, it seems to be the extremes, which often occur within very short periods, that are required.

It is generally understood, that sudden alterations in the weather are prejudicial to health; nor can there be any doubt of this fact; yet such alterations are frequently obliterated by averages and means. The means of a month or a week may come out nearly alike to those of the preceding week, or of the corresponding month of the preceding year, and yet include very extensive thermometric changes, which are thus placed out of view. Every one, in his own person, is acutely sensible of a change of temperature from 50° to 24° , and *vice versa*. This may occur, and has occurred, without altering the averages of the month more than 1° or $1\frac{1}{2}^{\circ}$. In projecting a meteorological diagram, the mean curves are rounded off and depressed; whereas, what seems to be required are the extreme limits and the time.

I will give one or two examples of my meaning, from a manuscript meteorological journal now before me, embracing observations made four times a day.

It is at night, when going to bed, and in the morning, when we first encounter the outward air, that sudden changes in the weather are most acutely experienced. Let us take, then, 9 o'clock A.M. for our illustration.

On the 6th of January, 1835, at 9 in the morning, the thermometer out of doors stood at 34° F.; on the 7th, at 27° ; on the 8th, at 24° ; on the 9th, at 40° ; on the 11th, at 48° : the barometer falling, in the same interval of time, eight-tenths of an inch.

Turning to the bills of mortality for the metropolis, to find the effect, if any, of this sudden change, we find, in the week ending January 6th, the deaths from scarlet fever, 7; from measles, 15; and from hooping cough, 15; whereas, in the week ending the 23rd (when the influence of the vicissitudes of temperature between the 7th and 11th of the month might be expected to appear in the mortality table) we find the deaths from scarlet-fever, 14; from measles, 23; and from hooping-cough, 18. In the two former instances, the mortality was doubled. The inference is, that cases of sickness were both aggravated and largely increased.

Again, in April 1835, we meet with another remarkable example of a sudden depression and rise of temperature, and of the dew-point, as ascertained by Daniell's hygrometer. On the 14th of the month, the dew-point, at 9 A.M., was 50° ; on the 16th, at the same hour, it was 25° ; on the 17th, 28° ; and on the 18th, 42° . The thermometer, in the same period, ranged from 61° on the 14th to 28° in the night of the 16th—a range of 33° .

Turning again to the bills of mortality, we find, in the week ending the 28th April, an increase in the burials, as compared with the preceding week, of 332. The deaths from consumption were double: fever, scarlet-fever, measles, hooping-cough, and inflammation, being the other heads under which there was a large increase.

April we expect to be a month of genial, warm, moist, spring weather; but, as above shown, it is subject, for 24 or 48 hours, to a temperature and a dew-point appropriate only to the depth of winter. Sudden and temporary these changes may be, and are: and this is the point of the present communication. They are so sudden and temporary, that they disappear in the monthly means; and may even be lost sight of in the average of a week; but they are not so sudden or short-lived as not to have a powerful influence upon the origin and progress of epidemical distempers.

It is concluded, from the facts stated, not only that sudden atmospherical vicissitudes have a great influence upon the progress of sickness and the amount of the mortality,

but also that meteorological tables do not fulfil their proper function with reference to epidemic diseases, unless they show the full extent or the extreme points of all the most prominent or sudden atmospherical changes, and define or give a measure of the time they include.

Maidstone, Jan. 15th, 1835.

ON THE NATURE AND CAUSES OF THE PHYSIOLOGICAL PHENOMENA

COMPRISED IN THE TERM "MOUNTAIN SICKNESS"; MORE ESPECIALLY AS EXPERIENCED AMONG THE HIGHER ALPS.

By STANHOPE TEMPLEMAN SPEER, M.D.

(Concluded from p. 53 of last number.)

THE abnormal sensations constituting mountain sickness may thus be classed in a tabular form, according as they affect the different functions.

Of the nervous system.	Vertigo. Cephalalgia. Somnolence. Dyspnœa. Increased rapidity of the respiration. Sense of thoracic constriction.
Of the respiratory and circulatory systems.	Occasional oozing of blood from mucous surfaces. Syncope tendency. Cardiac palpitation. Throbbing of the vessels within the cranium. Increased rapidity of pulse.
Of the digestive functions.	Anorexia. Nausea and vomiting. Thirst. Constriction below the epigastrium. White tongue.
Of the locomotive functions.	Muscular pains. Paralysed sensation in the lower limbs.
Of the tegumentary system.	Harsh skin. Suppression of the cutaneous transpiration. Pallor of the surface. Cyanosed appearance of the countenance.

It must not be supposed that all these symptoms are to be met with in every individual, upon his attaining a considerable elevation; but in one instance or another, they have each and all been noticed in ascending the Mont Blanc. While, in the different accounts given by those who have reached its summit, we meet with many different opinions relative to the physiological phenomena there observed, some asserting that nothing unusual was felt, others, that this or that symptom was the most prominent and unpleasant, all such diversities of opinion as regards personal sensation are to be estimated at their real value, and not to be set down as indicative merely of the workings of imagination. No one doubts the influence of the sea upon those unaccustomed to it; but if a given number of such persons be taken promiscuously, there will be a great probability of receiving from them at least three or four different versions of its effect. One individual will complain of excessive nausea, without the relief afforded by vomiting; with another it will be exactly the reverse, fits of vomiting occurring, with perfect ease during the intervals; in a third, diarrhœa and abdominal uneasiness will be the prominent symptoms (of this I know several examples); a fourth will complain chiefly of severe headache, with or without gastric complication; a fifth may suffer from a combination of the above miseries; while a sixth, without obvious reason, will enjoy a complete immunity from them all. But further, these varieties in the effects produced by the motion of a vessel at sea are not only met with in different individuals, but they may occur in the same one, at different times, and under different circumstances, according to the state of health he may have previously enjoyed.

Upon the same principle may be explained the diversity of symptoms, and at the same time the occasional immunity from them, at a given elevation which may exist in differ-