

XXII. *On the Temperature of Man within the Tropics.*

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IN a paper on the Temperature of Man, which I had the honour to submit to the Royal Society in 1845, and which was published in the Philosophical Transactions for the same year, I expressed the hope of being able to continue the inquiry in the West Indies, to which I was then about to proceed.

In the present communication I propose to lay before the Society the results of the trials made whilst there, viz. during a period of about three years and a half, exclusive of trifling interruptions, and of one prolonged through several weeks, between June 1847 and October of that year, owing to illness.

In making the trials, the same instrument as that before used was employed, and with like precautions to ensure accuracy; and as then, the subject of the observations was the same individual; also, as then, the pulse and respirations were noticed at the time, and invariably in the sitting posture.

The greater number of the observations were made in Barbados, in a house situated about half a mile from the sea-shore and a few feet only above its level,—where the mean annual temperature of the atmosphere is about 80° FAHR., and the range of temperature throughout the year from about 10° to 18° in the open air.

For the sake of comparison, I shall follow as closely as possible the order observed in my former paper in stating the results.

1. *Of the Variation of Temperature during the twenty-four hours.*

To ascertain this, observations were made commonly three times a day, viz. immediately on rising, about 6 A.M., before taking any food, and before making any exertion, even in dressing, clad merely in a light dress consisting of loose drawers and gown, which in that climate are almost always sufficient for comfort;—next, about 2 P.M., sometimes an hour earlier or later, and generally after occupation, either within doors at home, or at an office a mile and a half distant nearly, to which I went in a carriage,—the occupation being chiefly that of reading or writing, or some other requiring little bodily exertion;—next, the last thing before retiring to rest at night, which was commonly at 10 o'clock, rarely later than 11.

It may be further premised, that the manner of living, as to diet and the time of meals, was much the same as in England,—breakfasting commonly at 9 o'clock, dining about 5, without intermediate luncheon, and drinking tea about 7.

The following Table exhibits the observations made in accordance with the above,

daily, during a period of thirty-six months: in an Appendix, the observations as daily recorded will be given, omitting only those which may be considered abnormal, either owing to bodily ailment, or other cause of a special kind, requiring particular notice:—

	Temperature under the tongue.			Pulse.			Respirations.			Temperature of air of room.		
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.
1845.												
July	98·2	99	98·2	56	61	60	14·7	15·5	16	78·3	81·5	79·4
August	98	98·7	98·2	53·8	53·6	57·9	15	15·7	15·8	78·7	84	80·3
September ...	98	98·9	98·9	54·3	55	62·1	15·2	15·6	15·6	78·6	84·7	80·5
October	97·9	99	98·8	53·4	56·3	61·3	14·6	15·9	16·8	78	85·4	81
November ...	98	98·6	98·7	53·3	56·5	61	14·8	15·6	16	78	83·4	79·9
December ...	98	98·6	98·6	53·8	55·2	66	14·4	15·5	15·7	75	81·8	77
1846.												
January	98·2	99	98·7	54·3	58·5	61·7	14·6	15·7	15·6	74·3	82	78·2
February ...	98·1	99·1	98·6	55·1	57·1	59·9	14·3	15·5	15·2	74	83	76·6
April	98·1	98·7	98·6	54	54·5	59·5	14·4	15·6	15·4	77	84	79
May	98·2	98·9	98·9	56·2	55·2	61·4	15	15·8	15·6	78·7	85·8	80
June	98·2	99	98·8	55·1	55·6	59·7	14·6	15·7	15·4	79	84·7	81
July	98·2	99	98·9	54·5	54·5	60·7	14·7	16	15·3	78·8	84·8	81·4
August	98·1	99	98·9	54·2	55·6	60·5	14·6	15·9	15·6	77·7	85·5	81·7
September ...	98	99	98·2	55	54	60·8	14·3	15·9	16	78·7	85·1	81·3
October	98·2	99	99	52	55	61	14·4	15·4	15·3	78·2	85·1	81·2
November ...	98·1	98·9	98·8	56·2	55·4	60·1	14·6	15·8	15·6	77·4	84·4	80
December ...	98·1	98·9	98·9	55·3	55·3	63·5	14·5	15·8	15·8	76	80·5	77·4
1847.												
January	98·1	98·9	98·8	54·8	55·3	60·8	14·4	15·4	15	74·6	81·3	77·3
February ...	98	98·8	98·8	55·5	57·6	61·7	14·2	15·5	15·3	73	81·5	76·3
March	98·1	98·8	98·9	54·8	59·2	62·7	14·5	15·6	15	74·6	83·5	77·1
April	98·1	98·7	98·8	55	56·4	62·3	14·2	15·5	15·6	74·7	82·2	77·1
May	98·1	98·9	98·8	56·6	57·8	61·3	14·5	15·8	15·6	76·7	85	79·2
October	98	99	99	54·7	56	55·7	14·5	15·1	15·7	77·7	84·8	80
November ...	98·1	98·8	98·8	53·3	54·8	59·2	14·5	15·1	15·2	76·7	82·3	79
December ...	98	98·8	98·3	52·9	53·5	58	14·1	14·6	15·3	74·5	81·1	76·9
1848.												
January	98·1	98·9	98·8	54·5	56·8	59·3	14·1	14·9	15·2	74·1	80·5	76·6
February ...	98	98·8	98·8	54·9	57	59·7	14·5	15·1	15·5	73·6	82·1	77·5
March	98	98·9	98·9	54·9	57·6	59·7	14·3	15·5	15·4	75·1	81·9	78·2
April	98	98·9	98·9	54·9	57·7	60·9	14·7	15·2	15·3	74·8	82·9	78·1
May	98·1	99	98·9	55·1	56·2	60·6	14·3	15	15·6	78·2	85·6	80·6
June	98	98·8	99	51	56·1	56·8	14·1	14·8	14·9	77·5	84·7	80·4
July	98	98·3	98·9	53	54·2	59·5	14	14·7	14·8	77·7	84·3	79·4
August	98·1	99·1	99·1	55·4	56·3	59·5	13·9	15	14·7	78·4	85·3	80·9
September ...	98·1	99·1	99·1	54·4	57·3	60·4	14	15	15·2	78·9	86·2	81·7
October	98·2	99·1	99	54·3	55·8	61	14·2	15	15·3	78·9	84·8	80·8
November ...	98·1	99·1	98·6	55·2	57·7	59·2	14·2	15·4	15·4	77	83·5	79
	98·07	98·9	99	54·4	56	60·3	14·4	15·4	15	76·7	83·6	79·8

These results, compared with those obtained in England, show marked differences, as will best appear by presenting them together.

Mean temperature under the tongue in England.			Pulse.			Respirations.			Temperature of room.		
7-8 A.M.	3-4 P.M.	12 P.M.	7-8 A.M.	3-4 P.M.	12 P.M.	7-8 A.M.	3-4 P.M.	12 P.M.	7-8 A.M.	3-4 P.M.	12 P.M.
98·74	98·52	97·92	57·6	55·2	54·7	15·6	15·4	15·2	50·9	54·7	62
In Barbados:—											
6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.
98·07	98·9	99	54·4	56	60·3	14·4	15·4	15	76·7	83·6	79

The observations from which these mean results are deduced are so consistent, as may be seen by reference to them in detail in the Appendix, as hardly to admit of doubt in relation to their accuracy.

Probably the low morning temperature of the body within the tropics, as shown above, may be owing principally to three circumstances,—to the depressing or lowering power of sleep,—to the light bed-covering used there, and the free circulation of the air in the room. A sheet and a thin coverlet were the only protection from the air; and the windows mostly being open, the outer air had free access, so that towards morning the temperature of the air of the room did not differ from that of the external air commonly more than two or three degrees. Moreover, the higher temperature observed at night, before going to rest, may have conduced to the lower morning temperature noticed on rising, as the lower temperature at night in England, with the opposite circumstances as to bed-clothing and air of sleeping-room, may have conduced to the higher morning temperature recorded there,—fluctuations these in accordance with well-known physiological laws.

2. *Of the Variation of Temperature during different seasons of the year.*

The following Table, formed from the first, exhibits the mean of the observed temperature during the several months comprised therein, as well as the mean of the indoor temperature.

	Mean temperature under the tongue.	Air of room.		Mean temperature under the tongue.	Air of room.
1845.			1847.		
July	98 ^o ·43	76 ^o ·00	January	98 ^o ·60	77 ^o ·70
August	98·30	80·60	February ...	98·53	80·26
September ...	98·60	81·20	March	98·60	77·40
October	98·56	81·46	April	98·53	78·00
November ...	98·46	80·56	October	98·66	80·83
December ...	98·40	77·90	November ...	98·56	79·66
1846.			December ...	98·36	77·36
January	98·63	78·16	1848.		
February ...	98·60	77·88	January	98·60	77·06
April	98·46	80·00	February ...	98·53	77·73
May	98·66	81·50	March	98·60	78·40
June	98·66	81·56	April	98·60	78·26
July	98·36	81·00	May	98·66	81·46
August	98·70	81·60	June	98·60	80·86
September ...	98·40	81·36	July	98·36	80·46
October	98·73	81·50	August	98·76	81·56
November ...	98·60	80·60	September ...	98·76	82·26
December ...	98·63	77·96	October	98·76	81·50
			November ...	98·60	79·83
				98·54	79·75

Comparing the temperature under the tongue with that of the air of the room, it will be seen that there is some accordance between them, though not a strict one, as if other circumstances than differences of atmospheric temperature have a marked

effect in modifying the temperature of the body within the tropics, where the variations of atmospheric temperature throughout the year are so inconsiderable—circumstances, for instance, of state of health, kind of life led as to exercise, diet, &c., and quality of atmosphere, as to degree of moisture or dryness, and the direction and force of the winds.

3. *Of the Effect of Active Exercise on the Temperature and of Rest after Exercise.*

On most occasions, when active exercise was taken, especially when on military duty, the dress worn was heavier and warmer than that in common use, to which partly the increase of temperature observed may be justly referred. This remark applies to the majority of the following observations:—

	Tongue.	Pulse.	Respirations.	Air of room.
December 17, 1846, 1 P.M. After attending an inspection of a regiment on parade, exposed to the sun about half an hour	99·3	66	17	82
December 28, 1846, 3 P.M. After returning from office in Barbados, with some difficulty in carriage, the latter part of the road being flooded, a torrent rushing over it, 4·39 inches of rain having fallen between 9 A.M. and 3 ^h 30 ^m P.M.....	99·	56	17	75
December 28, 1846, 4 P.M. The last hour sitting lightly clad	98·1	52	16	77
January 5, 1847, 4 P.M. After visiting hospitals	99·3	54	16	82
January 5, 1847, 4 P.M. The last hour sitting lightly clad, reading	98·0	50	14	78
January 6, 1847, 1 P.M. After inspecting an hospital	99·2	54	15	82
January 6, 1847, 4 P.M. Since 1 P.M. chiefly reading, lightly clad	98·2	50	14	81
March 26, 1847, 4 P.M. After inspecting hospitals, &c., occupied several hours, the greater part of the time walking.....	99·8	70	16	85
March 29, 1847, 6 A.M. After rising, before any exertion	98·4	56	15	68
March 29, 1847, 9 A.M. After a walk of three hours, ascending and descending a hill in the neighbourhood of Port of Spain, Trinidad; perspiring ...	99·1	68	17	79
March 29, 1847, 7 ^h 30 ^m P.M. After a ride of about four hours, most of the way at a quick pace; perspiring	99·6	78	17	80
April 3, 1847, 6 A.M. Just risen	98·2	54	14	73
April 3, 1847, 1 P.M. At the foot of the fall of the Marraca, in Trinidad, approached by a steep ascent through forest, an hour's walk, preceded by a ride at a quick pace of several miles; perspiring, temperature of hand 99°·5; that of the air (81° at the fall) was comparatively low from the evaporation of copious spray	100·	110	20	81
April 3, 1847, 6 ^h 15 ^m P.M. On return from Marraca; the last few miles in an open carriage	98·7	68	16	79
April 10, 1848, 3 ^h 30 ^m P.M. After inspecting the hospital at St. Vincent and riding an hour or two.....	99·4	62	16	85
April 11, 1848, 3 ^h 30 ^m P.M. After visiting the barracks; perspiring	99·4	78	17	84
July 15, 1848, 1 P.M. After a ride of about an hour from Courland Bay, Tobago	99·6	64	16	83
July 15, 1848, 6 ^h 30 ^m P.M. After visiting barracks, &c.	99·7	64	15	81

These results (many more of the like kind might be given) show how readily, when in health, the temperature of the body rises from active exercise and subsides on rest,—both, very much in the same manner and degree as in a cooler climate; and also, unless the exercise be severe, how the temperature is proportionally more affected than either the pulse or respiration.

4. *Of the Effect of Carriage Exercise on the Temperature.*

The carriage used was a light one adapted to the climate, open behind as well as in front, and well-protected from the sun, except when low, by a deep hood: the rate of going was commonly between six and seven miles an hour; a servant drove.

	Tongue.	Pulse.	Respira- tions.	Air of room.
January 28, 1846, 9 P.M. After coming from Mount Wilton, about 900 feet above the level of the sea.....	97·9	70	15	73
August 27, 1846, 5 P.M. After a drive of about sixteen miles, going to and returning from Villa Nova, in Barbados, in a cool situation about 700 feet above the level of the sea.....	97·8	48	14	80
September 3, 1846, 11 P.M. After coming from Villa Nova.....	97·7	58	16	79
November 18, 1846, 5 P.M. After a drive of about twenty-four miles in the heat of the day, going and returning, and some walking exercise in a low district of Barbados, fasting.....	98·3	60	16	82
November 18, 1846, 10 P.M. Feeling weary, after dinner, followed by tea...	99·1	58	15	79
November 21, 1846, 11 ^h 30 ^m P.M. After coming from Villa Nova.....	97·7	58	16	79
December 18, 1846, 5 P.M. After coming from Blackman's, situated like Villa Nova, and about the same distance; took a good deal of walking exercise there; the wind high.....	98·6	70	15	80
December 18, 1846, 9 P.M. Feeling weary, hot and thirsty.....	99·7	80	16	79
February 4, 1847, 12 P.M. After coming from Villa Nova.....	97·5	58	15	74
April 25, 1847, 10 ^h 30 ^m P.M. After coming from Villa Nova.....	97·1	54	14	77
June 14, 1848, 10 P.M. After coming from Villa Nova.....	98·2	58	15	82

Many other instances, of which I have notes, might be adduced to show the effects of carriage exercise in lowering the temperature,—an effect previously observed in England. Those given, which were chiefly at night, were best marked, no doubt owing to the temperature of the air then being lower than by day, and the heat from the reflected and direct rays of the sun being then entirely avoided. When coming from the higher grounds of the interior of Barbados at night, and often when ascending them by day, the feeling of coolness was such as to render agreeable some additional clothing, which was always provided, though the difference of atmospheric temperature was only of a very few degrees. The latter observations, those of the 18th of November 1846 and of the 18th of December, are given as showing the tendency to augmentation of temperature of body in an undue degree after unusual depression, preceded by fatiguing exercise. The rise, so far as it was abnormal, was probably owing to the influence of the fatigue, for it was not witnessed if such exercise had not been taken.

5. *Of the Effect of Gentle Walking Exercise on the Temperature.*

The following observations were made when convalescing from illness (an anthrax with extensive sloughing and general derangement of health), a time when the body in a delicate state seems to be very readily acted on and to show the effects with unusual distinctness:—

	Tongue.	Pulse.	Respira- tions.	Air of room.
March 7, 1847, 6 ^h 15 ^m A.M. Just risen	97°·8	52	14	74°
March 7, 1847, 3 P.M. During the last two hours taking gentle exercise within doors, making some chemical experiments	98·3	56	15	82
August 17, 1847, 5 ^h 45 ^m A.M. Just risen	97·8	62	15	77
August 17, 1847, 7 ^h 45 ^m A.M. During last half hour walking slowly in shaded gallery, exposed to the wind; feelings agreeable; feet and hands warm	97·8	68	16	80
August 19, 1847, 5 ^h 45 ^m A.M. Just risen	98·6	62	15	79
August 19, 1847, 8 A.M. Last half hour walking in gallery; not exposed to the wind; perspiring gently	98·4	70	17	81
August 21, 1847, 5 ^h 35 ^m A.M. Just risen	98·4	60	15	78
August 21, 1847, 7 ^h 30 ^m A.M. After walking about half an hour; hands and feet glowingly warm	98·2	76	17	81
August 22, 1847, 5 ^h 45 ^m A.M. Just risen	98·5	62	16	79
August 22, 1847, 7 ^h 45 ^m A.M. After walking in gallery about half an hour, very lightly clad, exposed to the wind; hands and feet very warm	98·2	78	17	82

To appreciate the effect of gentle exercise on the temperature, it requires to be mentioned and kept in mind, that had not such exercise been taken, the thermometer would have risen on its second application from $\cdot 3^{\circ}$ to $\cdot 5^{\circ}$ higher than at the first.

The feeling of increased warmth in the hands and feet from gentle exercise has been noticed in three instances. The diffusion of heat to the extremities, owing no doubt to a freer circulation of the warming medium—the blood—may partly account for the cooling effect under the tongue, and probably in the deep-seated parts from the exercise under consideration. The high temperature commonly observed in the extremities within the tropics, is a circumstance very deserving of note. In the daily observations appended, a record is given of the temperature of the hand during two months, noticed three times a day; from which it appears that on an average it was less than that under the tongue by only 1° . For the purpose of ascertaining the heat of the hand, the bulb of the thermometer was placed between the middle of the palm and the ball of the thumb, and so covered was gently pressed.

6. *Of the Effect of Change of the Temperature of the Atmosphere on the Temperature.*

In illustration of this effect, I shall notice only a very few of the observations obtained in the West Indies, corroborative of those collected many years ago in the island of Ceylon.

The situation of Villa Nova has already been mentioned: it was there that most of them were made, that spot being well-fitted for trials of the kind, the temperature there by day rarely exceeding 80° , even at the hottest time, and always below 80° at night, often requiring the closure of the bed-room windows, and occasionally a blanket in addition to the bed-clothes.

	Tongue.	Pulse.	Respira- tions.	Air of room.
November 15, 1847, 6 A.M. Just risen, at Villa Nova	98 ^o	56	15	76
November 15, 1847, 2 P.M.	98·7	50	15	76
November 15, 1847, 9 ^h 30 ^m P.M.	97	58	16	76
November 16, 1847, 6 A.M.	98·4	54	15	76
November 16, 1847, 1 ^h 30 ^m P.M.	98·5	50	16	78
November 16, 1847, 9 ^h 30 ^m P.M. Windows closed; feet and hands agreeably warm	97·8	58	16	76
November 17, 1847, 6 ^h 15 ^m A.M.	98·3	54	14	75
November 17, 1847, 9 ^h 25 ^m . At home, in the neighbourhood of Bridgetown	98·8	54	16	77
November 22, 1847, 1 ^h 30 ^m P.M. At home, variously occupied	99·2	62	16	79
November 22, 1847, 4 P.M. Last hour; sitting reading; raining; feel cold; hand 85°	97·9	48	14	75
December 24, 1847, 6 A.M. At home; just risen	98·1	52	14	74
December 24, 1847, 1 ^h 3 ^m P.M. At home; variously employed	99·1	58	16	80
December 24, 1847, 9 ^h 30 ^m P.M. Villa Nova; arrived there 5 P.M.	97·8	56	14	74
December 25, 1847, 6 ^h 15 ^m A.M. Villa Nova; just risen; slept warm; win- dows closed	98·9	60	14	73
December 25, 1847, 12 A.M. Agreeably cool.....	98·5	54	14	76
December 25, 1847, 5 P.M. A feeling almost of cold.....	98·5	52	14	74
December 25, 1847, 9 ^h 30 ^m P.M.	97·85	52	15	74
December 26, 1847, 6 ^h 15 ^m A.M.	98·5	60	15	73
December 26, 1847, 9 ^h 15 ^m P.M. At home; left Villa Nova at noon	98·7	64	16	80

The observations made at Villa Nova, if compared with those made in England, will be found to approximate, especially as regards the morning and night temperature, and may be adduced in confirmation of the explanation given under Section 1, regarding the contrast of observed temperatures there adverted to.

7. Of the Effect of Excited and Sustained Attention on the Temperature.

A few instances may suffice to illustrate this effect, selecting those in which it was most strongly marked; between which and those least notable there is a fine gradation, according to degree of exertion of mind, which it would be difficult to appreciate on account of interfering disturbing circumstances.

	Tongue.	Pulse.	Respira- tions.	Air of room.
December 22, 1846, 3 ^h 30 ^m P.M. After delivering a discourse in public, in a well-aired room, lasting about an hour	o			o
December 22, 1846, 5 ^h 20 ^m P.M.	99·8	78	16	82
December 22, 1847, 6 A.M. Just risen	98·9	58	15	80
December 22, 1847, 6 A.M. Just risen	98·1	52	13	75
December 22, 1847, 3 ^h 15 ^m P.M. After delivering a discourse in the same place as the preceding and of about the same length	100·3	90	15	82
December 22, 1847, 9 ^h 30 ^m P.M.	98·9	66	15	77
December 23, 1847, 6 A.M.	97·9	54	14	75
June 24, 1848, 3 ^h 30 ^m P.M. After occupation similar to that last mentioned, and in the same place	99·9	82	15	81
August 30, 1848, 2 P.M. After delivering a chemical lecture in a close and crowded room	100·1	84	15	88
August 30, 1848, 9 P.M.	99·4	62	14	82
August 31, 1848, 6 A.M.	98·2	58	14	80
September 6, 1848, 2 P.M. Similarly occupied; the heat of the room greater; immediately after the pulse was 100	100·4	80	16	88
September 6, 1848, 9 P.M.	99·2	64	15	81
September 7, 1848, 5 ^h 45 ^m A.M.	98·2	54	14	78

The additional observations—those made some hours after the exertion—are given as illustrating an important fact, viz. the rapid manner in which, when the body is free from disease, the functions on rest return to their ordinary state; whilst, on the contrary, when disease is present, especially of an organic kind, even though latent in relation to the most obvious class of symptoms, indications of it may be obtained by attention to the temperature, pulse and respiration; and often, as in instances of pulmonary disease, in a very remarkable and decided manner.

8. *On the Effect of Cool and Well-ventilated Rooms, and of Close and Heated Rooms on the Temperature.*




























As regards ventilation, and consequently coolness where there is a concourse of people, the cathedral church of Barbados, and HARRISON'S school-room adjoining, in which lectures were given on the opening of the "REID School of Practical Chemistry," may be mentioned as good and bad examples. In illustration of the effects of each, I shall give a few observations on temperature, noted down when made, which was within about half an hour after quitting the church and the school, conveyed in a carriage, attending in the one divine service, in the other a lecture. The temperature of the air marked, as usual, was that of my sitting-room, which was cooler by several degrees than the school-room, but less cool commonly than the church.

	Tongue.	Pulse.	Respirations.	Air of room.
February 28, 1847, 1 P.M. Just come from church	98·4	54	16	83
March 7, 1847, 1 P.M. Just come from church	98·5	54	15	84
March 5, 1848, 2 ^h 45 ^m P.M. Just come from church	98·5	56	15	82
August 2, 1848, 2 ^h 30 ^m P.M. Just come from school-room	99·8	66	13	85
August 9, 1848, 2 P.M. Just come from school-room	99·8	60	16	82
August 16, 1848, 2 ^h 30 ^m P.M. Just come from school-room	99·9	64	16	87
October 18, 1848, 3 ^h 30 ^m P.M. Room less crowded	99·5	58	15	82
October 25, 1848, 5 ^h 15 ^m P.M. Room less crowded	99·4	62	15	83

9. *On the Effect of taking Food and Wine on the Temperature.*

The effect of a meal in moderation, whether the light one of breakfast or the fuller and heavier one of dinner, was to raise the temperature; and this also when wine was sparingly used at the latter, viz. to the extent of two or three glasses; but when more freely drunk, as it commonly is in company, then often its influence on temperature appeared to be depressing. I shall give a few instances in illustration:—

	Tongue.	Pulse.	Respirations.	Air of room.
December 21, 1846, 10 P.M. Dinner at 6; wine chiefly champagne and Madeira; no headache; no malaise.....	°			°
February 6, 1847, 10 P.M. Dinner at 7; the wines similar	98·1	70	15	77
February 13, 1848, 11 ^h 30 ^m P.M. Dinner at 6; about seven miles distant in the country, from whence just returned; kind of wine not noticed	97·8	70	15	71
March 9, 1848, 10 ^h 30 ^m P.M. Dinner at 7; kind of wine not noted down ...	97·3	64	16	78
May 29, 1848, 12 P.M. Dinner at 7; wines chiefly champagne and claret ...	97·9	64	15	77
August 9, 1848, 11 P.M. Dinner at 7; the wines like the last	98	72	16	79
	98	70	15	79

	<i>Mean Temp^{re} 60.° Fahr.</i>	<i>Mean Temp^{re} 56.° Fahr.</i>	<i>Mean Temp^{re} 53.° Fahr.</i>	<i>Mean Temp^{re} 51.° Fahr.</i>
<i>1848.</i>				
<i>March. 11.th</i>				
<i>20.th</i>				
<i>23.rd</i>				
<i>25.th</i>				
<i>27.th</i>				
<i>28.th</i>				
<i>31.st</i>				
<i>April 4.th</i>				
<i>6.th</i>				
<i>10.th</i>				
<i>May 22.nd</i>				
<i>Aug^t 18.th</i>				
<i>28.th</i>				
<i>Oct^r 31.st</i>				

It is deserving of remark, that whenever wine was used, except in great moderation, though never to the excess of an inebriating effect, on the following morning the temperature under the tongue was found to be more or less above the average, and the pulse commonly quicker than usual. It is also worthy of remark, that occasionally the effect at night was to increase the temperature of the body, and that in a marked manner; but whether from some peculiar quality of the wine used, or from some deranged state of the system or other adventitious circumstance, I have not been able to determine.

10. *Of the Effect of Sea-sickness on the Temperature.*

During a voyage from Barbados to St. Christopher, and from thence to Barbados in May and June 1848, in a transport, stopping at some of the intermediate islands, an opportunity offered of making some observations on the effect of sea-sickness, from which I suffered more or less on the several days noticed in the subjoined Table. The degree of sickness, often amounting to vomiting, was such as to render rising disagreeable. Little food was taken on those days, excepting chicken broth with some bread; no wine was drunk. The observations were made in the sitting posture in bed in a well-ventilated cabin.

	Temperature under the tongue.			Pulse.			Respirations.			Temperature of cabin.		
	6-7 A.M.	12-2 P.M.	6-10 P.M.	6-7 A.M.	12-2 P.M.	6-10 P.M.	6-7 A.M.	12-2 P.M.	6-10 P.M.	6-7 A.M.	12-2 P.M.	6-10 P.M.
May 14.	98·7	98·9	°.....	58	68	...	16	16	...	81°	83°	°
15.	98·8	.....	.....	60	...	...	14	...	...	80	...	...
18.	98·2	98·6	.....	54	64	...	14	15	...	80	81	...
26.	98·7	.....	.....	60	...	...	15	...	...	79	...	...
27.	98·8	.....	.....	60	...	...	15	...	...	79	...	...
31.	.....	98·7	99·1	...	58	58	...	15	14	...	82	82
June 1.	98·6	98·8	99·3	58	56	58	14	15	15	81	83	83
2.	98·7	98·3	.....	56	58	...	14	14	...	81	80	...
3.	98·7	99·2	99·4	58	56	60	15	16	15	80	82	82
4.	98·7	.....	.....	58	...	...	14	...	...	80	...	...
	98·65	98·75	99·23	57·55	60·28	58·66	14·44	15·14	14·66	80·24	81·71	82·33

It appears from these few observations, that under the influence of sea-sickness, the morning temperature was higher than ordinary and the pulse somewhat quicker; when the former was lowest, as on the 18th of May, then the vessel being in smooth water, there was scarcely any uneasiness experienced. Comparing the several observations, perhaps the inference may be justifiable, that the tendency of sea-sickness, when not in its severest form, is of an equalizing kind in relation to the temperature, pulse and respiration,—a tendency no doubt promoted by the little variation to which the sea atmosphere is liable, especially within the tropics. On so obscure a subject, however, as sea-sickness, this remark is offered with some hesitation.

11. *Of the Temperature at Sea, when not under the influence of Sea-sickness.*

In returning from the West Indies in the well-appointed steam-packet Clyde, I availed myself of the opportunity to continue the observations on temperature. The results are given in the following Table, commencing on the day after leaving St. Thomas, when all feeling of sea-sickness had ceased, and ending on the 2nd of December, the day before coming in sight of the coast of England. The weather during the greater part of the voyage was favourable: after leaving Fayal, on the 27th of November, it was more or less tempestuous; on the 29th and 30th, it was necessary to have the cabin ports closed. The observations were made in a well-ventilated cabin in the sitting posture,—the port commonly open excepting at night. The diet was fuller and more nourishing than that used in the West Indies, the appetite increasing on passing into a cooler climate; rather more wine was used, viz. a pint of sound Bordeaux at dinner; and the clothing was rendered warmer as required by diminution of warmth of atmosphere:—

	Position of ship at noon.		Temperature under the tongue.			Pulse.			Respirations.			Temperature of cabin.		
	Lat. N.	Long. W.	6-7 A.M.	12-2 P.M.	10 P.M.	6-7 A.M.	12-2 P.M.	10 P.M.	6-7 A.M.	12-2 P.M.	10 P.M.	6-7 A.M.	12-2 P.M.	10 P.M.
Nov.														
16.	22° 39'	61° 8'	98·5	98·8	98·9	54	50	60	14	15	16	78	81	78
17.	24 16	58 11	98·2	98·3	98·4	56	54	66	14	16	15	76	77	77
18.	25 39	55 30	98·2	98·7	98·2	56	52	60	14	16	15	75	77	77
19.	27 33	53 13	98·6	99·3	...	52	72	...	14	15	...	77	79	
20.	29 19	50 45	98·6	98·1	97·7	60	56	60	14	15	15	77	77	77
21.	31 6	48 9	98·5	97·9	97·8	56	50	62	14	15	15	75	75	73
22.	32 53	45 16	98·7	97·7	97·7	54	54	60	14	14	15	71	73	72
23.	34 43	41 18	98·2	98	98·1	54	56	58	15	15	15	71	71	72
24.	36 23	37 21	98·5	98·1	98·6	58	54	60	14	15	15	69	67	67
25.	37 21	33 34	98·3	98·5	...	52	56	...	14	14	...	64	66	
26.	38 28	30 2	98·5	98·7	...	56	56	...	14	14	...	66	69	
27.	38 32	28 40	98·3	98·5	97·5	54	54	54	14	15	15	68	67	66
28.	41 2	25 18	98·4	98·7	98·3	52	58	60	14	16	15	66	61	65
29.	43 19	21 32	98·6	99·4	98	56	62	58	14	15	15	65	63	68
30.	44 59	17 13	98·1	98·9	97·3	54	56	54	14	15	14	61	59	64
Dec.														
1.	46 33	12 7	98·4	98·9	97·9	54	60	56	14	14	14	59	59	63
2.	48 33	6 44	98·7	98	97·6	58	62	48	14	15	...	58	57	59

Comparing these results with those obtained in England and in the West Indies, they will be found to accord more with the former than the latter, the morning being on an average higher than those obtained at night. The small range of temperature is also worthy of note, and its decrease with diminution of atmospheric temperature. In those instances in which the variation was greatest, the higher temperature noted down, was in the middle of the day, commonly in connection with active walking exercise just before taken,—and the lower than ordinary at the same period of the day, was, after sitting for an hour or two exposed to the wind on deck.

Conclusions.

The following are some of the conclusions that appear to be either proved or rendered probable by the preceding results, or by those given in the Tables appended,—supposing, as it is believed, that, were the observations extended to many individuals, no material discrepancy would be witnessed.

1. That the average temperature of man within the tropics is a little higher, nearly 1°, than in a temperate climate, such as that of England.
2. That within the tropics, as had before been found in cooler regions, the temperature of the body is almost constantly fluctuating,—varying according to the variety of agencies to which it is subject, some of which are distinct, others obscure.
3. That the order of fluctuation observed there is different from that in a cooler climate, the minimum degree of temperature being commonly early in the morning, after the night's rest, and not at night previous to going to rest.
4. That all exertion, whether of body or mind, except it be very gentle, coming under the designation of passive rather than active exercise, has a heightening effect on the temperature, while the latter, the passive kind, has rather a lowering tendency, especially carriage exercise.
5. That heavy clothing, especially if tight and close, obstructing the admission and circulation of air, tends to raise the temperature unduly, especially under active exercise; and that close, ill-ventilated rooms, especially when crowded, have in a marked manner the same tendency.
6. That when the body is in a healthy state, then on rest after exercise or exposure to any other exciting cause, it rapidly recovers its normal condition as to temperature.
7. That when labouring under disease, however slight, the temperature is abnormally elevated; and that—judging from observations made, but not recorded, in the Tables—its undue degree is some criterion of the intensity of the diseased action.
8. That within the tropics there is comparatively little difference of temperature between the surface of the body, especially the extremities and the internal parts;—and that there the skin is more active in its function of transpiration and the kidneys are less active as secreting organs; with which it may be conjectured is connected a rapid production and desquamation of cuticle, and the absence, in great part or entirely, of lithic acid in the urinary secretion. This latter fact, however, may be explained in a different manner, on the supposition that the acid is not formed in the blood, or if formed, in a greatly diminished quantity.
9. That the effect of wine, unless used in great moderation, is commonly lowering, that is as to temperature, whilst it accelerates the heart's action, followed after a while by an increase of temperature.
10. That the tendency of sea-sickness is to check what may be considered the natural fluctuation of the temperature, and when severe, like disease, to elevate the temperature.

11. That the tendency of a sea voyage, apart from sea-sickness, is to equalize the temperature without elevating it, an equalization that is best witnessed in voyaging in a tropical sea, where the atmospheric temperature is so little variable.

12. That even at sea, with a change of atmospheric temperature, there is a tendency to change of temperature of the body, the average increasing in proceeding towards the tropics, and diminishing in receding from them.

These conclusions obviously admit of application, and that variously in relation to health and disease. It would be unsuitable to the occasion to dwell on this part of the subject; I shall merely remark, that it is a happy circumstance for man, and seems wisely ordered, that fluctuation of temperature should be connected with a healthy state of the system, and probably conducive to it, in whatever manner produced, whether by change of climate, or atmospheric variation, or by exercise, whether of body or mind. The excellent health which the crews of the West Indian steam-packets have, that are in constant transition from heat to cold, is a striking proof of this, and other instances of a like kind, were it necessary, might be adduced in confirmation.

Lesketh How, Ambleside,

February 14, 1850.

APPENDIX.

The thermometer used in making the observations contained in these Tables, was compared with a standard one, and was found to require no correction in its scale for the degrees of temperature indicated when placed under the tongue.

	Temperature under the tongue and in hand.						Pulse.			Respirations.			Temp. of air of room.			
	6-7 A.M.		12-2 P.M.		9-11 P.M.		6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
	Tongue.	Hand.	Tongue.	Hand.	Tongue.	Hand.										
July 1845.	12.	98·7	97·5	99·5	98	98·25	97·5	64	66	62	15	15	16	80	84	82
	13.	98·35	97·5	99·1	98	98·5	98	58	54	64	17	15	16	79	78	80
	14.	98·4	97·5	99·1	98	98·95	98	58	60	70	15	16	17	77	84	80
	15.	98·7	98	99·3	98·5	99·2	98	60	76	76	15	16	16	78	83	80
	18.	98·4	97·25	99·3	98	99·5	98·5	60	64	70	15	16	17	78	83	77
	19.	98·4	97·5	99·2	98	99	97·5	62	62	60	16	16	16	77	83	79
	20.	98·1	97·25	98·6	97·5	98·7	97·25	56	52	52	15	15	16	77	74	79
	21.	98·6	97·5	99	97·5	98·8	97·5	54	64	54	15	15	16	78	83	80
	22.	97·5	96	98·4	97·5	98·3	97	56	56	60	15	16	16	78	81	81
	23.	97·8	97	98·9	97·5	.....	.....	54	60	.....	16	16	.....	79	84	.....
	24.	97·9	96·25	.....	.....	98·4	97	54	.....	54	15	.....	16	79	.....	79
	25.	97·8	97	98·8	97·5	98·3	97·5	50	62	62	15	16	16	78	85	80
	26.	98·1	97·5	99·1	98	98·7	97·25	62	60	54	14	15	16	78	85	81
	27.	98·2	97	98·6	97	98·1	96·5	52	54	54	15	15	15	80	86	79
	28.	98·2	96·5	98·7	97·25	98·4	97·5	54	54	64	15	15	16	78	84	80
	29.	98·2	96·75	.....	.....	98·7	97·5	50	.....	64	14	.....	16	78	.....	80
30.	98·1	96·5	98·9	97·5	98·4	97·5	50	62	50	14	16	50	78	85	79	
31.	98·2	97	99·1	97·7	98·3	.....	56	61	61	15	16	16	79	85	80	
		98·2	97·1	99	97·7	98·2	97·35	56	61	66·5	14·7	15·5	16	78·3	81·5	79·4
August 1845.	4.	98·4	97	99	97·5	99	97·5	56	64	60	15	16	16	79	83	82
	5.	98	96·5	98·7	97·25	98	96·5	52	52	52	15	15	15	78	85	78
	6.	97·7	97	99·1	97·5	98	97	54	54	60	14	16	16	78	84	79
	7.	98·25	97·5	98·7	97·7	98·7	98	60	54	54	16	16	15	78	85	82
	8.	97·7	96·7	98·3	96·5	98·3	97·5	50	52	60	15	16	16	78	85	81
	9.	98·2	97	98·5	97	98·6	97·5	52	54	62	15	16	16	79	84	80
	10.	93·9	97	98·7	97·5	97·8	96·7	52	58	64	16	16	16	79	85	80
	11.	98·5	97·5	98·8	97	98·5	97·25	60	52	56	16	15	16	80	85	80
	12.	97·8	97	98·9	98	98·9	98	54	54	62	15	15	16	79	87	81
	13.	97·9	97	98·8	97·5	98·3	97·5	54	52	58	14	15	16	78	83	80
	14.	97·7	96·5	99	97·5	98·7	97·5	50	54	56	15	16	16	78	88	80
	15.	97·8	97	98·7	97·75	98·7	97	52	52	54	14	15	16	79	85	81
	16.	97·9	96·5	98·7	97·5	98·7	97·5	52	54	54	15	16	15	79	86	81
	17.	97·9	97	98·4	97·25	98·2	97·3	54	50	62	15	16	15	79	82	80
	18.	98·1	97	98·7	97	98·7	97·5	54	50	60	14	15	16	77	87	82
	19.	98·3	97	98·4	97·5	98·5	97	54	50	60	14	15	15	78	87	82
20.	98·3	97·5	98·7	97·5	98·8	97·5	52	56	56	15	16	15	78	77	78	
21.	98·2	97	98·5	97	98·4	97·5	56	54	58	15	15	16	78	82	78	
22.	98	97	98·7	97·7	98·6	97·7	52	54	54	15	16	15	78	83	80	
23.	98	97·7	99	98·5	98·5	97·7	52	54	54	15	16	15	78	85	81	
24.	98·2	97·7	99	98	98·6	97·5	52	50	54	15	15	15	77	84	81	
25.	98·1	97	98·7	97·5	98·7	97·5	54	56	56	16	15	16	78	84	77	
27.	97·9	97	98·8	97·5	98·8	97·5	54	52	62	15	16	16	78	86	80	
28.	98·1	97	.....	.....	.....	.....	60	.....	.....	16	.....	.....	78	.....	.....
30.	98·2	.....	99	.....	98·9	.....	54	58	60	15	16	15	79	86	81	
31.	97·9	.....	98·6	.....	99·2	.....	54	50	60	15	15	16	80	86	82	
		98	97	98·7	97·4	98·16	97·4	53·8	53·6	57·9	15	15·7	15·8	78·7	84	80·3

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
September 1845.	1.	98	98·9	99·3	54	52	66	15	16	15	78	86	81
	2.	98·3	99·3	99·9	60	56	70	14	15	15	79	86	81
	3.	98·1	98·6	99·3	54	50	58	14	16	15	78	82	80
	4.	98·1	99·1	99·1	60	56	66	15	15	16	79	85	80
	5.	98	98·9	98·9	52	54	60	15	16	14	78	85	79
	6.	98	98·3	99·1	46	50	66	14	15	16	79	80	81
	7.	97·95	98·7	99	50	48	64	15	16	16	77	84	80
	8.	98·2	99·1	98·6	54	50	60	15	15	16	77	86	80
	9.	97·9	99·1	99	52	56	62	15	16	16	78	83	80
	10.	98·1	98·9	98·5	54	56	70	15	16	16	78	85	80
	11.	98·6	99	98·4	70	54	52	15	15	16	78	80	80
	12.	97·8	98·9	98·6	52	52	60	15	15	15	78	85	78
	13.	98·1	99·2	99	52	56	62	15	16	16	78	82	80
	14.	97·9	98·6	98·9	52	52	62	15	16	15	78	84	80
	15.	98·1	99	98·7	52	60	54	15	16	16	78	85	82
	16.	98	98·5	98·6	60	60	60	16	16	15	78	85	82
	17.	98·1	98·9	98·8	60	56	58	16	16	15	78	85	81
	18.	98·2	99	99·3	56	60	70	15	15	16	79	87	82
	19.	98·3	99	99·2	56	56	62	14	15	15	79	86	82
	20.	98·4	99·5	99·3	54	58	60	15	16	16	77	86	77
	21.	98·5	98·8	98·9	52	56	58	14	15	15	80	85	82
	22.	98·2	99·4	99·4	52	62	76	15	16	15	79	84	81
	23.	98·3	99·4	99	56	60	68	16	16	16	78	85	81
	24.	98	98·8	98·3	52	52	51	15	16	15	80	86	80
	26.	98·1	98·4	99	52	52	62	15	16	16	77	85	81
	27.	97·9	98·5	98·7	54	58	62	15	16	16	78	85	82
	28.	97·7	98·5	98·7	52	54	58	15	15	16	80	87	81
	29.	97·9	98·9	98·9	52	52	62	15	15	15	78	86	80
	30.	97·9	99·3	99·3	54	58	62	15	15	16	78	86	82
		98	98·9	98·9	54·3	55	62·1	15·2	15·6	15·5	78·6	84·7	80·5

October 1845.	1.	97·6	99·1	98·9	54	54	58	15	14	16	78	86	82
	2.	97·9	99·3	99	54	62	60	15	15	15	78	86	81
	3.	98	99	99	52	54	66	15	16	16	78	87	82
	4.	97·9	98·8	98·7	51	56	62	14	16	16	78	86	80
	5.	98·1	98·6	98·4	56	56	54	14	16	15	79	85	80
	6.	97·9	99·1	98·7	56	66	60	14	15	15	79	84	84
	7.	98·2	.....	98·7	52	.....	64	14	.....	16	80	.....	82
	8.	98·5	98·6	98·8	52	56	56	15	15	16	78	86	82
	9.	97·8	98·6	98·4	53	54	60	15	16	16	77	86	82
	10.	98·2	.....	98·9	54	.....	68	15	.....	16	78	.....	82
	11.	98	98·7	98·9	52	58	56	14	16	16	78	87	82
	12.	97·9	98·7	.....	52	52	.....	15	16	.....	78	86	.....
	13.	98	98·7	98·8	53	56	62	15	16	16	78	87	82
	14.	98	99·1	98·8	52	56	62	14	15	16	77	87	81
	15.	98·1	99	98·9	54	58	56	15	16	16	78	85	80
	16.	98·2	98·8	98·9	54	62	62	15	17	15	79	86	81
	17.	98·2	99·6	99·4	56	58	64	15	16	16	80	87	83
	18.	97·9	98·9	99	52	60	76	14	16	17	80	82	77
	19.	98	99·4	98·8	64	66	56	16	16	15	78	83	79
	20.	98	99·7	98·6	56	62	70	15	16	16	77	84	79
	21.	98	99·5	99	54	60	58	15	17	16	77	84	80
	22.	97·9	98·9	98·8	50	60	60	14	17	17	77	86	82
	23.	98·2	99·1	98·9	56	60	60	15	16	16	79	87	82
	24.	98·1	99	99·4	58	60	62	14	16	16	79	87	82
	25.	97·9	98·9	99·3	56	54	60	15	16	16	78	86	82
	26.	97·9	98·7	98·9	50	60	52	15	16	15	78	84	80
	27.	97·9	99·1	99·1	53	60	60	15	16	15	80	84	80
	28.	97·7	.....	.....	54	.....	.....	15	.....	.....	78	.....	.....
	29.	.....	98·7	99	.....	54	56	.....	16	16	.....	86	81
	30.	97·8	98·7	99	52	58	62	15	17	16	78	85	81
	31.	97·8	98·6	98·7	52	56	60	15	16	16	78	83	81
	97·9	99	98·8	53·4	56·3	61·3	14·6	15·9	16·8	78	85·4	81	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
November 1845.	1.	97.8	98.7	99	54	56	60	15	16	16	78	85	81
	2.	97.8	98.6	98.8	52	56	66	15	16	16	78	85	81
	3.	97.9	98.8	99	52	60	66	15	17	16	79	86	82
	4.	97.8	98.9	98.9	53	58	62	15	16	16	78	86	81
	5.	97.9	99.1	99.1	54	56	64	15	16	16	80	85	82
	6.	98	98.7	98.6	53	56	60	15	16	15	77	83	80
	7.	98	98.7	98.7	54	56	60	15	15	16	78	80	80
	8.	98.1	99.4	99	52	58	68	15	16	15	78	84	81
	9.	98	98.6	98.5	52	54	56	15	15	15	77	83	80
	10.	98.1	98.6	98.8	56	56	64	15	15	16	78	86	81
	11.	98.2	98.8	98.8	56	56	64	14	16	16	79	86	81
	12.	97.8	98.2	98.5	54	52	62	14	15	16	79	79	78
	13.	98.2	98.8	98.5	54	56	58	15	16	16	79	83	81
	14.	98	99.2	98.6	50	60	54	14	15	15	78	82	80
	15.	97.9	98.6	98.2	54	54	58	15	15	16	78	81	79
	16.	98	98.5	98.4	56	56	60	15	15	15	78	84	78
	17.	98	98.5	98.9	52	56	62	15	15	15	78	81	79
	18.	98	98.5	98.7	50	54	58	15	16	16	78	82	79
	19.	98.1	98.9	98.6	54	60	60	15	16	15	77	84	80
	20.	98	99	98.6	54	56	58	15	15	16	77	84	80
	21.	97.9	98.3	98.9	54	54	60	14	16	16	77	84	80
	22.	98	99.2	98.3	54	62	60	14	16	16	79	85	79
	23.	98.5	98.8	98.5	54	56	60	15	15	16	78	85	77
	24.	97.9	99	99.2	50	58	66	14	16	17	77	83	81
	25.	98.4	99.1	98.6	54	58	58	16	17	16	78	85	78
	26.	97.8	98.3	99	52	54	56	15	16	15	77	83	80
	27.	98.5	98.6	99	52	54	62	14	16	16	78	83	80
	28.	98.2	99.2	98.2	56	60	70	15	16	16	78	81	78
	98	98.6	98.7	53.3	56.5	61	14.8	15.6	16	78	83.8	79.9	
December 1845.	1.	97.9	98.6	98.4	48	54	58	15	15	16	78	80	77
	2.	97.9	98.4	98.5	52	52	60	14	15	16	77	82	79
	3.	97.8	98.9	98.8	50	56	56	14	16	16	77	81	77
	4.	98.1	98.7	98.5	54	56	60	14	16	16	77	79	79
	5.	97.9	98.4	98.5	52	56	70	15	16	17	77	81	79
	6.	98.1	98.7	98.4	52	56	60	14	15	16	77	81	79
	7.	97.9	98.3	98.2	50	52	76	15	16	17	77	82	77
	8.	98	98.5	.....	64	60	...	14	15	...	75	82	
	9.	98.4	98.5	98.9	52	56	56	14	15	16	75	83	77
	10.	97.9	98.4	98.8	54	52	60	14	15	15	76	82	78
	11.	97.9	98.9	98.4	56	56	62	14	16	15	75	83	79
	12.	97.8	.....	.....	56	...	...	14	...	...	77	...	
	13.	97.9	98.4	98.8	54	54	62	15	15	15	97	81	78
	14.	98	98.5	98.6	54	54	56	13	15	16	75	81	78
	15.	97.7	98.3	98.9	50	54	60	14	15	15	70	80	77
	16.	98.2	98.8	98.2	50	54	60	15	16	16	76	82	78
	17.	98.4	98.8	98.6	52	58	66	15	16	16	77	83	78
	18.	97.9	98.6	.....	50	52	...	15	15	...	75	82	
	19.	98.4	98.8	98.7	58	52	64	15	16	16	73	80	78
	20.	97.8	98.8	.....	52	50	...	15	16	...	74	82	
	21.	98.1	98.9	98.6	66	56	60	16	16	15	73	80	74
	22.	97.6	98.6	98.5	52	56	60	14	16	16	74	82	77
	23.	97.9	98.6	99	60	54	56	14	16	15	73	82	76
	24.	97.8	98.6	98.6	54	58	56	14	16	15	74	82	78
	25.	98.3	99.2	98.9	52	60	66	15	16	16	74	81	76
	26.	98.1	98.7	99.2	52	56	58	14	14	15	74	80	76
	27.	98.2	99.3	98.4	54	58	60	15	15	16	73	82	75
	28.	98.3	.....	98.6	56	...	70	14	...	15	72	...	75
	29.	98.1	98.4	98.5	52	52	58	14	15	16	72	82	78
	30.	98.3	98.5	98.4	54	58	76	15	16	16	75	82	78
	31.	98.2	98.6	98.6	60	56	66	15	16	17	76	82	76
	98	98.6	98.6	53.8	55.2	66	14.4	15.5	15.7	75	81.3	77	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
January 1846.	1.	98·2	98·5	99·2	54	56	78	15	15	16	72°	83°	79°
	2.	98	.....	.....	52	.....	.....	14	.....	.....	76		
	3.	98·5	99	98·8	56	62	66	15	15	17	74	80	78
	4.	98·1	98·8	98·8	56	56	62	15	16	16	76	82	77
	5.	98·2	99·1	98·5	56	60	76	15	16	15	75	83	78
	6.	98·3	98·9	98·7	54	60	70	15	16	16	72	81·5	78
	7.	98·3	99	98·7	56	60	62	14	16	15	76	81	78
	8.	98·2	98·8	98·5	54	56	62	15	16	16	74	82	77
	9.	98·3	99·3	.....	58	66	.....	15	16	.....	76	82	
	18.	98·2	99·1	98·6	52	60	58	15	16	15	76	84	78
	19.	98·2	98·7	98·9	54	58	60	14	16	15	76	82	79
	20.	98·2	99·1	98·7	54	60	60	14	16	16	76	83	79
	23.	98·3	98·9	98·5	56	60	56	14	15	15	75	83	79
	24.	98·1	98·9	99·2	56	60	60	15	16	15	76	82	79
	25.	98·1	98·7	98·9	50	52	52	14	15	15	75	81	78
	26.	98·2	.....	.....	54	.....	.....	14	.....	.....	75		
	29.	98·3	98·9	.....	52	52	.....	14	16	.....	72	82	
		98·2	99	98·7	54·3	58·5	61·7	14·6	15·7	15·6	74·3	82	78·2
	February 1846.	3.	98·3	99·6	98·7	54	62	74	15	16	16	72	82	76
4.		97·9	98·8	.....	58	54	.....	15	15	.....	73	78	
5.		98·5	99·1	98·5	60	56	56	14	16	15	74	82	75
6.		98·3	99·3	98·5	56	58	58	14	16	15	73	81	76
7.		98·3	99·3	98·8	52	56	66	14	16	16	72	82	76
8.		98·2	99·3	98·2	52	58	70	14	16	16	72	85	76
9.		98·3	99·2	98·9	62	62	64	15	15	16	76	85	78
10.		97·9	99	.....	50	56	.....	14	16	.....	75	82	
12.		98	98·8	98·8	52	52	50	14	15	15	72	82	75
13.		98·2	98·6	98·6	52	54	62	14	15	15	73	84	75
14.		98·3	99·1	98·5	58	56	56	14	16	15	75	84	76
15.		97·9	.....	98·8	52	.....	60	14	.....	15	75	.....	81
16.		98	99·3	99·1	52	60	62	14	16	15	75	84	78
17.		98·1	98·8	98·4	58	58	60	14	15	15	75	83	76
18.		98·1	99	98·5	56	56	56	15	16	15	75	83	78
19.		98	99·1	98·6	52	56	60	15	16	15	75	83	78
20.		98	99·3	98·4	56	60	66	14	15	16	75	85	79
21.		98·3	99·3	98·8	56	58	70	14	16	16	76	83	78
22.		98	98·8	99·1	58	56	62	15	15	15	75	85	80
23.	98·4	99·2	98·8	56	58	56	14	16	14	77	85	78	
	98·1	99·1	98·6	55·1	57·1	59·9	14·3	15·5	15·2	74	83	76·6	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.				
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.		
April 1846.	9.	97.8	98.3	98.5	52	54	56	14	15	15	74	79	77	
	10.	98.2	98.5	98.6	56	56	52	15	14	15	77	83	78	
	11.	98.2	98.8	.....	56	58	.....	14	16	.....	77	84	
	12.	98.4	99	98.6	56	54	64	14	16	16	77	85	80	
	13.	98.1	99.2	99	54	56	72	15	16	16	78	84	77	
	14.	98.1	99.3	98.2	52	58	70	14	16	16	76	83	79	
	15.	98.3	98.7	98.5	54	52	62	14	15	15	77	84	79	
	16.	97.9	98.8	98.7	56	52	64	14	15	16	77	85	79	
	17.	98.1	98.6	98.4	54	52	60	14	15	15	77	84	79	
	18.	98.1	99.3	98.5	52	56	58	14	16	15	77	84	80	
	19.	98.2	98.6	98.3	56	54	56	14	16	16	77	82	79	
	20.	98.2	98.6	98.5	50	52	52	15	15	15	77	83	79	
	21.	98.3	98.9	98.8	52	54	58	15	16	15	76	84	79	
	22.	98.3	98.9	98.6	56	56	54	15	15	14	75	83	79	
	23.	98.3	99.3	.....	52	56	.....	14	15	.....	77	85	
	24.	98.3	99.1	98.6	60	54	60	16	16	16	77	86	80	
	25.	98.1	99	98.8	52	56	62	14	16	16	78	85	81	
	26.	98.3	99.1	98.8	54	54	56	14	17	16	77	85	82	
	27.	98.2	99.1	99	52	56	58	14	17	15	79	85	81	
	28.	98.2	98.8	.....	54	56	.....	15	16	.....	78	86	
	29.	.....	98.9	98.7	.....	50	54	.....	16	15	.....	85	80
	30.	98.1	98.6	98.6	54	50	62	15	15	16	77	82	79	
		98.1	98.7	98.6	54	54.5	59.5	14.4	15.6	15.4	77	84	79	
	May 1846.	1.	98.1	98.5	99	54	54	62	15	16	16	77	82	79
		2.	98.1	99.1	99	54	56	66	14	16	15	76	85	78
		3.	98.4	98.9	99.2	54	56	64	15	16	15	77	85	80
		4.	98.1	99	99	52	56	62	15	16	16	76	85	81
		5.	98.2	99	98.8	56	54	66	15	16	16	77	84	81
		6.	98.1	98.9	52	54	15	15	77	86	
		7.	98.3	99	98.5	60	56	72	16	16	16	79	86	81
8.		98.2	98.8	98.7	56	56	58	15	16	16	78	86	80	
9.		98.2	98.8	.....	56	56	.....	15	16	.....	79	86	
10.		98.1	99.1	99.3	54	56	60	15	16	16	79	86	81	
11.		98.1	98.9	99.1	56	56	64	15	17	16	78	86	81	
12.		98.4	99.1	98.7	54	56	58	15	16	16	79	86	82	
13.		98.1	98.5	98.4	54	48	54	15	16	15	78	84	81	
14.		98.6	99.1	98.9	54	60	60	15	16	16	78	86	81	
15.		98.3	98.9	98.4	52	54	80	14	15	16	78	86	81	
16.		98.1	99.1	98	56	58	60	16	16	16	79	87	82	
17.		98.3	98.9	98.1	62	54	72	14	17	16	80	88	81	
18.		98	99.2	98.6	70	56	56	14	16	16	77	88	82	
19.		98.1	98.7	98.9	54	54	60	15	16	16	80	87	82	
20.		98.1	.....	.....	56	.....	.....	14	.....	.....	79		
21.		98.2	99	98.4	54	58	54	15	16	15	80	87	81	
22.		98.4	98.7	98.8	54	50	58	15	16	16	79	88	77	
23.		98.4	99.1	98.7	60	56	70	15	16	16	81	87	82	
24.		98.2	99	98.5	58	56	56	15	16	15	79	88	82	
25.		98.2	99.1	.....	56	56	.....	14	16	.....	79	88	
26.		98.3	98.6	98.5	60	52	58	15	15	15	79	79	81	
27.		98.4	99.1	98.7	56	56	56	14	14	15	80	82	82	
28.		98.3	99	99	56	56	60	15	16	14	81	86	84	
29.		98.4	99.4	98.8	60	60	60	15	16	16	82	88	83	
30.		98.5	99.3	99.3	56	56	62	15	16	16	80	87	83	
31.		98.2	99	99	54	52	58	15	15	16	80	85	76	
	98.2	98.9	98.8	56.1	55.2	62	15	15.8	15.6	78.7	85.8	80		

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.				
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.		
June 1846.	1.	98.3	99.5	99.2	52	56	62	14	16	16	79	87	83	
	3.	98.4	99.4	98.9	58	58	56	15	15	15	80	88	83	
	4.	98.2	99.5	98.7	58	68	64	15	17	16	82	88	82	
	7.	98.2	98.7	98.9	60	54	70	15	15	16	78	82	82	
	8.	98.4	99.1	98.7	54	58	60	15	15	16	79	86	81	
	9.	98.4	99	98.8	54	54	60	15	16	15	79	86	81	
	10.	98.3	98.9	98.7	50	56	58	14	16	16	79	84	79	
	11.	98.2	.....	.....	56	.....	.....	15	.....	.....	78	.....	.....
	12.	98.5	99	98.6	58	54	80	16	14	17	79	86	82	
	13.	98.4	98.9	98.7	66	56	60	14	16	15	80	85	82	
	14.	98.4	98.5	.....	58	52	.....	15	15	.....	80	87	.....
	15.	98	98.7	98.9	52	50	58	14	16	16	80	85	82	
	16.	98.2	99.1	98.7	52	56	56	14	16	16	79	82	80	
	17.	98.4	99	98.7	58	58	56	15	16	14	79	85	81	
	18.	98.1	98.7	.....	52	52	.....	15	16	.....	77	81	.....
	20.	98.1	.....	.....	56	.....	.....	15	.....	.....	79	.....	.....
	23.	98.3	98.6	98.9	50	54	58	14	16	15	79	82	79	
	24.	98.1	98.8	98.8	58	54	56	15	16	15	79	85	82	
	25.	98.1	99.1	.....	56	56	.....	15	16	.....	79	85	.....
	26.	98.3	98.5	98.8	54	54	54	15	16	16	79	84	81	
	27.	98.2	98.9	98.8	54	56	52	14	16	14	79	86	78	
	28.	98	98.7	98.5	52	52	52	14	15	15	79	85	81	
	29.	98.1	99.2	98.7	52	54	62	14	16	15	79	83	80	
	30.	97.9	99.1	.....	54	62	.....	14	15	.....	77	86	.....
		98.2	99	98.8	55.1	55.6	59.7	14.6	15.7	15.4	79	84.7	81	
	July 1846.	2.	98.3	99	99.3	62	56	62	15	16	16	79	84	81
		3.	98.3	98.9	54	54	15	15	79	86
		4.	98.1	98.9	98.5	54	52	75	14	16	16	79	86	82
		5.	98.3	98.6	52	54	15	16	79	86
		6.	98.5	99	98.8	60	56	56	16	16	16	79	86	82
7.		98	98.6	98.4	52	56	80	15	17	16	79	85	80	
8.		98.3	98.8	98.6	60	50	52	15	15	15	78	83	81	
9.		98.2	98.9	99	54	56	60	14	16	15	79	86	81	
10.		98	98.6	98.8	54	54	54	14	17	16	79	86	81	
11.		98	.....	.....	56	.....	.....	14	.....	.....	80	.....	.....
12.		98.4	99	99.3	54	54	60	16	15	15	78	85	82	
13.		98.2	99	99	52	56	60	15	15	16	79	86	81	
14.		97.7	98.7	98.9	54	54	56	15	16	15	79	86	80	
15.		98.4	99	98.9	56	56	80	14	17	15	80	86	82	
16.		98.4	98.9	98.9	56	56	58	15	16	16	79	82	82	
17.		98.1	98.8	99.1	50	56	56	14	15	16	76	84	81	
18.		98.1	98.6	99	52	56	58	15	16	16	79	86	82	
19.		98.1	.....	99	52	.....	58	14	.....	16	79	.....	82
20.		98.3	99.1	99.3	52	58	56	15	17	15	78	86	82	
21.		98	98.8	.....	54	56	.....	14	17	.....	79	85	.....
23.	98.3	98.8	99	56	56	58	15	15	17	79	84	81		
24.	98.3	98.8	99.1	54	50	64	15	16	15	78	83	82		
25.	98.2	98.6	99	54	52	56	15	17	16	79	83	81		
26.	98.2	98.8	98.8	50	50	58	15	15	15	79	85	81		
27.	98.1	99	98.9	54	54	56	15	17	15	79	84	82		
28.	98.2	99.2	98.7	52	58	68	14	16	15	78	84	81		
29.	98.4	98.9	.....	54	52	.....	14	16	.....	79	84	.....	
	98.2	99	98.9	54.5	54.5	60.7	14.7	16	15.3	78.8	84.8	81.4		

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
August 1846.	1.	98·2	98·8	98·5	56	54	70	15	16	17	78	86	82
	2.	98·1	98·7	99·2	54	54	62	15	15	16	79	87	81
	3.	98·2	99·1	99·2	52	58	60	14	17	16	79	86	82
	4.	98·1	98·9	98·9	54	56	64	15	16	16	79	86	82
	5.	98·2	99·2	98·9	52	54	60	15	16	15	79	83	79
	6.	98·2	99	99·1	54	56	70	15	16	16	75	84	81
	7.	97·9	99·1	99	52	60	60	15	16	15	77	86	82
	8.	98·3	98·7	98·7	58	56	60	15	16	16	79	83	80
	9.	98·1	98·6	98·8	54	54	56	15	15	16	79	85	81
	10.	98·2	98·9	98·9	54	54	60	15	16	15	79	87	83
	11.	98·2	98·4	99	54	54	62	14	14	16	78	83	81
	12.	98·3	99·2	98·9	56	60	64	15	16	16	80	86	82
	13.	98·5	99·1	98·8	56	54	60	15	15	16	79	84	81
	14.	98·1	98·9	99·2	54	58	64	15	17	16	79	86	82
	15.	98·4	99	98·7	54	58	54	15	16	15	80	87	82
	16.	98·3	.....	98·8	54	.....	56	15	.....	16	80	.....	83
	17.	98·3	98·9	98·9	54	56	54	14	16	16	79	85	79
	18.	98	98·8	98·9	54	52	64	15	16	16	77	86	83
	19.	98·4	99·2	99	56	56	60	14	16	16	80	86	82
	20.	98·3	98·9	.....	54	52	.....	15	16	.....	79	86	82
	21.	98·4	99·3	99·1	62	60	62	16	17	16	80	88	83
	22.	98·2	99	99·3	54	54	60	14	16	16	79	86	81
	23.	98·2	98·8	98·8	54	54	60	14	17	16	79	87	78
	24.	98·2	99·1	99·2	54	54	54	14	16	16	79	87	82
	25.	98·2	99·4	98·8	52	54	60	14	16	16	78	82	80
	26.	98·3	98·9	99	54	54	62	14	15	15	78	84	83
	27.	98·2	98·7	98·8	54	58	60	14	16	16	78	82	78
	28.	98·3	99	98·5	54	54	54	15	16	16	78	86	82
	29.	98·3	98·9	98·9	54	56	60	14	15	15	79	84	81
	30.	98·2	.....	.....	56	.....	.....	15	.....	.....	79	84	81
	31.	98	99·1	99	58	58	64	15	16	16	79	86	82
		98·1	99	98·9	54·2	55·6	60·5	14·6	15·9	15·6	78·7	85·5	81·7
September 1846.	1.	98·2	99	98·8	56	58	56	14	17	16	79	86	79
	2.	98·2	98·8	99	54	56	56	14	16	16	79	85	83
	3.	98·2	99·1	.....	54	54	.....	15	16	.....	78	85	84
	4.	98	99·2	99·2	52	56	62	15	16	16	78	85	84
	5.	98·2	98·9	98·9	54	54	78	15	17	17	80	87	83
	6.	98·1	98·9	98·8	56	56	60	15	15	15	80	87	79
	7.	98·1	98·9	98·4	54	52	54	15	15	16	80	84	79
	8.	97·7	98·8	99·2	52	54	60	15	15	16	78	86	83
	9.	98·4	98·9	98·7	56	56	62	15	15	15	79	86	82
	10.	98	99	98·9	54	56	54	14	15	15	80	87	83
	11.	98·3	99·1	98·8	54	60	62	15	16	16	81	83	81
	12.	98·2	98·6	99·1	56	52	58	14	14	14	80	82	81
	13.	98·2	98·7	98·5	54	50	56	15	15	16	78	86	82
	14.	98·3	99·1	98·1	56	54	64	15	16	16	78	86	81
	15.	98·5	98·8	98·9	52	56	56	15	16	16	79	85	82
	16.	97·9	.....	98·5	56	.....	60	15	.....	16	78	.....	80
	17.	98·2	99·3	98·6	58	60	60	15	16	16	79	85	80
	18.	98·2	99·1	98·9	54	56	60	15	16	16	78	84	81
	19.	98·2	99	99·2	54	52	58	14	15	15	79	86	82
	20.	98·3	99·2	98·7	52	58	56	14	15	15	77	86	80
	21.	98·3	99·2	99	58	60	60	15	16	15	79	86	78
	22.	98·2	98·9	98·8	56	56	56	15	16	16	79	85	79
	23.	98·6	99	99	54	52	80	14	15	17	79	85	81
	24.	98·5	99·4	99·2	62	58	60	15	15	16	78	86	82
	25.	98·3	99·1	98·7	60	62	60	15	16	15	80	82	79
	26.	98·1	99·2	98·5	56	56	80	14	16	16	77	84	79
	27.	98·5	99·1	99	62	54	62	15	16	16	78	85	82
	28.	98·2	99	99·1	54	56	62	14	15	15	79	85	81
	29.	98	99·1	98·7	52	56	56	15	15	16	77	85	80
	30.	98·2	98·7	98·7	54	58	56	15	16	16	77	85	81
		98	99	98·8	55	54	60·8	14·3	15·9	16	78·7	85·1	81·3

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.				
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.		
October 1846.	1.	98·1	°	52	.....	.....	15	.....	.....	79°	°	°	
	2.	98·4	98·8	98·7	54	54	54	15	16	15	78	82	80	
	4.	97·9	98·5	58	52	54	15	15	15	77	83	79		
	5.	98·3	99·1	99	56	56	64	15	15	16	77	85	80	
	6.	98·1	98·7	.....	52	54	.....	14	15	.....	78	86	
	7.	98·5	99·1	98·9	62	58	60	15	16	16	79	84	80	
	8.	98·4	99·3	99	52	56	74	15	16	16	78	85	81	
	9.	98·3	99·2	99·3	52	56	62	15	16	15	78	86	82	
	10.	97·9	98·9	98·8	54	56	72	15	15	16	78	86	79	
	11.	98·2	.....	.....	56	.....	.....	15	.....	.....	78		
	13.	98·2	99	99·4	50	56	64	14	16	15	79	86	82	
	14.	98·3	98·7	.....	50	56	.....	14	15	.....	78	87	
	15.	98·4	98·9	98·9	60	54	62	14	16	16	80	86	81	
	16.	98·5	98·7	99	52	56	62	14	15	16	80	85	81	
	17.	98·1	99	98·7	50	52	56	14	16	15	78	86	81	
	18.	98·2	98·9	99	50	56	56	14	14	15	77	86	80	
	19.	98	98·9	99·1	52	54	60	14	15	15	76	86	80	
	20.	98·3	99·1	.....	52	56	.....	14	16	.....	78	86	
	21.	98·2	98·9	99·2	60	52	60	16	15	16	79	88	83	
	22.	98	98·8	98·8	52	50	60	14	16	15	80	87	82	
	23.	98·1	99	98·8	50	56	56	14	16	16	78	87	81	
	24.	98·3	99	98·4	54	60	64	15	15	17	79	83	80	
	25.	98·2	98·8	99	52	54	60	14	16	15	80	83	82	
	26.	98·2	98·9	.....	54	52	.....	14	15	.....	78	84	
	27.	98·2	98·7	99·2	54	54	62	14	15	17	78	85	81	
	28.	97·8	98·8	98·9	52	54	56	14	15	16	77	85	82	
	29.	98·2	.....	98·6	54	.....	70	14	.....	15	79	.....	81
	30.	98·3	98·6	.....	60	58	.....	14	16	.....	79	85	
	31.	98·1	99·4	98·7	60	62	56	15	16	16	76	82	78	
			98·2	99	99	52	55	61	14·4	15·4	15·3	78·2	85·1	81·2
	November 1846.	1.	98·2	99·2	98·6	56	58	58	15	16	16	75	84	79
2.		98·1	99·2	98·7	54	58	56	14	16	15	77	85	81	
3.		98	98·7	98·8	54	52	58	14	14	16	77	85	81	
4.		98·3	99·1	.....	54	54	.....	15	16	.....	78	85	
5.		98	99·3	99·1	54	56	60	15	16	15	79	85	80	
6.		98	98·7	.....	54	52	.....	14	15	.....	78	86	
7.		97·9	99·1	98·8	56	50	52	14	16	15	75	82	78	
8.		98	98·5	98·9	52	52	54	14	15	15	77	83	80	
9.		98·2	98·8	99·1	56	56	60	15	16	15	78	86	81	
10.		98	99·2	99·2	56	60	62	15	16	16	78	87	82	
11.		98·1	99·2	99	56	60	60	15	16	16	79	87	82	
12.		98	.....	.....	52	.....	.....	14	.....	.....	78		
13.		98·3	99·1	99·4	52	54	64	15	16	16	79	87	82	
14.		98·3	98·9	.....	56	56	.....	15	17	.....	78	87	
15.		98·5	99·1	98·9	66	58	60	15	15	16	78	86	82	
16.		98·3	99	98·8	56	56	60	14	16	16	79	87	80	
17.		98·2	98·2	98·6	56	52	56	15	15	15	79	78	79	
18.		98·4	.....	.....	56	.....	.....	.....	14	.....			
19.		98·1	99	99	58	60	66	15	16	16	79	79	80	
20.		97·9	.....	98·8	66	.....	62	16	.....	16	79	.....	81
21.		98	98·7	.....	56	54	.....	14	16	.....	78	85	
22.		98·4	98·7	99·1	58	58	58	14	16	15	78	85	81	
23.		98·2	98·7	98·9	56	56	62	15	16	16	77	84	81	
24.		98·2	98·9	98·8	56	56	58	15	16	16	78	85	80	
25.		98	98·8	99	56	54	60	15	15	15	76	83	78	
26.		97·9	99·1	98·4	56	60	70	15	17	16	76	83	79	
27.		98·3	98·8	98·7	56	56	58	15	17	16	78	84	81	
28.		98·1	98·6	99·2	54	54	62	14	15	16	75	84	80	
29.		98·1	98·9	98·8	54	54	64	15	16	16	77	83	80	
30.		98·3	.....	98·8	54	.....	62	15	.....	16	76	.....	80
		98·1	98·9	98·8	56·2	55·4	60·1	14·6	15·8	15·6	77·4	84·4	80	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
December 1846.	1.	98·3	98·9	98·6	54	54	62	15	16	16	78	79	78
	2.	98·3	99·2	.....	56	64	.....	15	16	.....	78	77	
	3.	98	98·8	98·9	54	54	68	15	15	16	75	79	79
	4.	97·9	98·5	.....	54	52	.....	15	15	.....	77	77	
	5.	98·3	98·7	98·8	64	56	74	16	16	17	77	81	78
	6.	98·2	98·4	99	60	54	64	15	16	15	78	80	78
	7.	98·1	98·8	98·8	54	50	76	15	15	16	76	79	78
	8.	97·9	98·8	98·9	50	50	60	15	15	16	76	80	75
	9.	97·9	99·3	98·7	52	56	60	14	16	16	75	82	78
	10.	98	99	98·9	50	56	56	15	15	15	75	82	78
	11.	97·9	98·7	98·5	56	52	60	15	15	16	75	82	77
	12.	97·9	98·7	98·8	54	56	60	15	16	15	75	82	78
	13.	98·1	98·7	99·2	56	56	64	15	16	16	75	82	77
	14.	97·9	98·8	99·1	54	56	58	15	16	16	75	82	79
	15.	98·1	98·5	98·5	56	54	60	15	16	15	75	77	76
	16.	98·1	99·2	99	54	60	64	15	16	16	76	82	78
	17.	98·3	.....	98·7	56	.....	56	15	.....	16	77	.....	78
	18.	98·1	.....	.....	56	.....	.....	15	.....	.....	76	.....
	19.	98·2	98·8	99·2	54	56	62	14	17	16	76	84	79
	20.	98·3	98·7	.....	56	62	.....	15	16	.....	78	83	
	21.	98·3	98·7	.....	56	62	.....	15	16	.....	78	83	
	22.	98·7	.....	.....	68	.....	.....	16	.....	.....	77	.....
	23.	97·9	98·9	98·9	62	54	62	15	17	16	76	82	78
	24.	97·9	98·8	99·1	52	54	62	14	15	16	76	82	78
	25.	98·3	98·7	.....	52	54	.....	14	15	.....	76	81	
	28.	98	99	99	52	56	70	15	17	16	75	75	77
	29.	98·1	.....	.....	52	.....	.....	14	.....	.....	77	.....
	30.	97·9	98·9	98·6	60	56	58	14	15	16	73	81	71
	31.	98·1	98·8	98·9	52	56	56	15	16	14	73	80	78
		98·1	98·9	98·9	55·3	55·3	63·5	14·5	15·8	15·8	76	80·5	77·4
	January 1847.	1.	98·4	98·8	98·7	56	54	66	14	16	16	73	82	78
2.		98·3	98·8	.....	64	56	.....	14	16	.....	76	82	
3.		98·5	.....	99	60	.....	60	15	.....	15	76	.....	78
4.		98·1	98·9	98·9	56	56	60	15	16	16	77	82	79
5.		98·1	99·3	98·7	54	54	56	14	16	14	76	82	78
6.		98·3	99·2	99·1	54	54	60	14	15	16	76	82	78
7.		98	99·1	98·9	50	60	60	14	16	15	76	82	77
8.		98·3	98·9	98·9	52	58	62	14	16	16	76	83	78
9.		98·5	99·5	98·9	58	62	62	15	16	16	75	83	77
10.		97·9	98·4	98·5	56	52	56	14	15	14	75	79	76
11.		98·4	98·8	98·5	60	54	54	15	16	15	75	79	77
12.		97·9	98·9	98·9	54	56	60	15	16	16	74	81	77
13.		98	99	98·9	54	56	62	15	16	15	74	81	78
14.		97·9	98·9	99·1	50	56	64	14	16	15	74	82	77
15.		98	98·8	98·9	52	52	58	14	15	15	74	81	77
16.		98·3	98·8	99	52	52	58	14	14	14	74	82	77
17.		98·5	99	98·8	60	54	66	15	15	14	74	81	77
18.		98	99	98·9	54	54	62	14	14	14	74	81	77
19.		98·3	.....	.....	56	.....	.....	15	.....	.....	75	.....
21.		98·3	99	98·7	56	54	62	15	16	15	73	79	77
22.		98·2	.....	.....	56	.....	.....	15	.....	.....	74	.....
23.		98	98·6	99	54	48	64	14	14	16	74	81	78
24.		98	98·4	98·6	52	54	60	14	15	15	74	81	77
25.		98·5	99·2	99·1	54	56	68	14	15	15	75	82	77
26.		97·9	98·9	98·7	54	56	56	14	16	15	74	82	77
28.		98·1	.....	.....	56	.....	.....	14	.....	.....	74	.....
29.		97·9	99·1	.....	52	64	.....	14	16	.....	73	80	
30.		98·5	98·9	99·3	58	58	66	14	15	15	73	82	76
31.		97·9	98·4	98·5	54	52	58	15	15	15	74	81	77
		98·1	98·9	98·8	54·8	55·3	60·8	14·4	15·4	15	74·6	81·3	77·3

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
February 1847.	1.	97.9	99.2	98.7	52	60	60	14	16	15	73	82	75
	2.	97.9	99.2	98.3	56	60	60	14	16	15	72	82	74
	3.	98.1	.....	.....	56	.....	.....	14	.....	.....	71		
	4.	97.9	98.9	.....	56	62	.....	14	15	.....	71	81	
	5.	97.9	99	99.1	56	56	64	14	16	16	71	81	74
	6.	97.7	99	.....	58	56	.....	14	15	.....	70	79	
	7.	98.1	98.5	99.1	58	60	60	15	15	15	71	81	75
	8.	97.8	98.7	99	54	56	64	14	16	16	73	82	75
	9.	97.8	99.2	98.9	54	60	64	14	16	15	72	81	78
	10.	98.2	98.8	98.9	56	54	64	14	15	15	74	82	78
	11.	98.2	98.9	99.1	56	54	62	14	16	16	73	83	77
	12.	98.2	98.7	98.6	58	56	58	15	16	15	74	80	76
	13.	98.3	98.5	.....	56	50	.....	14	14	.....	72	80	
	14.	98.2	98.7	98.8	58	56	56	16	14	15	74	79	75
	15.	98.1	98.8	98.7	54	60	58	14	16	15	71	82	76
	16.	97.7	98.5	98.8	58	54	60	15	16	15	74	82	78
	17.	98	98.8	99.1	58	58	58	15	16	15	75	82	77
	18.	97.8	98.9	98.6	54	58	76	14	16	16	74	82	78
	19.	97.8	98.8	98.8	58	58	60	16	16	15	74	81	77
	20.	98.2	.....	.....	58	.....	.....	14	.....	.....	74		
	21.	98.2	.....	.....	54	.....	.....	15	.....	.....	75		
	23.	98	99	98.9	56	54	64	14	16	16	76	83	79
	24.	97.9	98.9	98.9	52	60	62	14	15	15	75	83	77
	25.	98.2	99.3	.....	54	64	.....	14	16	.....	74	82	
	26.	98.1	98.9	99.2	56	56	62	14	14	15	74	81	76
	27.	97.9	98.8	98.1	56	56	60	14	15	16	72	82	76
	28.	98	98.4	.....	54	54	.....	14	16	.....	74	83	
		98	98.8	98.8	55.5	57.6	61.7	14.2	15.5	15.3	73	81.5	76.3
March 1847.	1.	98	98.9	99.3	52	54	64	15	16	15	74	83	76
	2.	98.1	98.6	98.7	54	56	56	14	16	15	75	84	78
	3.	98.2	99	98.6	54	60	80	14	15	16	75	83	78
	4.	98.4	98.7	99	62	60	66	15	16	16	76	83	78
	5.	98.1	98.8	99.2	52	54	68	14	16	16	75	84	77
	6.	97.9	98.8	98.5	54	56	62	14	15	15	75	84	77
	7.	98.2	98.5	98.9	54	54	64	14	15	15	74	84	77
	8.	98.1	98.8	98.9	54	54	62	14	15	16	74	84	76
	9.	97.9	98.7	98.9	54	52	56	14	16	15	74	83	78
	10.	98.4	98.8	98.9	56	56	66	15	16	16	75	84	78
	11.	98.1	98.8	98.9	56	50	64	15	16	16	74	83	76
	12.	98.1	.....	.....	54	.....	.....	15	.....	.....	74		
	13.	98.2	99.2	99.3	56	58	60	15	15	15	74	83	78
	14.	98.2	98.9	98.5	56	60	60	15	15	15	75	84	79
	15.	98	99.1	99.2	56	62	60	15	16	16	76	85	78
	16.	98.3	98.8	98.4	54	54	60	15	16	15	75	83	76
	17.	98.4	99.2	98.8	56	54	62	15	15	16	73	75	76
	18.	98	98.8	99.1	52	56	70	14	16	16	75	84	78
	19.	98.2	98.7	98.8	52	54	60	15	16	16	75	83	78
	20.	98.2	98.8	98.9	56	52	62	15	15	16	76	83	77
	21.	98.2	98.7	98.9	52	52	60	14	15	15	74	83	77
	23.	98.1	99.1	98.7	58	60	60	14	16	15	75	83	76
	24.	98.1	99.2	.....	60	64	.....	14	16	.....	75	82	
		98.1	98.8	98.9	54.8	59.2	62.7	14.5	15.6	15	74.6	83.5	77.1

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
April 1847.	1.	98·3	99°	99·1	52	70	66	14	17	15	72°	78°	75°
	2.	98·2	98·7	98·1	54	56	66	14	16	16	76	81	74
	3.	98·2	98·7	99·2	54	68	70	14	16	16	73	79	75
	4.	98·2	98·6	98·3	54	52	66	15	14	16	72	86	72
	5.	98	.....	.....	54	.....	.....	14	.....	.....	70		
	8.	98·1	98·3	98·6	54	54	60	14	15	15	74	83	77
	9.	97·9	98·7	98·8	54	54	60	14	15	15	75	83	78
	10.	98·2	98·2	99	52	52	66	14	15	16	74	78	76
	11.	98·3	98·6	98·8	50	54	56	14	15	16	74	81	78
	12.	98	98·7	98·4	56	54	56	15	16	15	75	83	77
	13.	97·8	98·7	98·7	54	54	64	14	15	16	73	77	78
	14.	97·9	98·7	98·7	56	56	64	14	15	15	76	82	77
	15.	97·9	99·2	99	54	64	70	15	15	15	75	82	78
	16.	98·3	98·5	98·8	54	54	60	15	15	16	75	82	78
	17.	97·7	99	.....	58	56	.....	14	15	.....	75	83	
	18.	98·2	98·4	99·1	60	56	60	15	15	15	75	83	79
	19.	98·3	98·7	99	56	56	62	15	16	16	75	84	78
	20.	98·2	98·9	99·1	56	58	54	13	16	15	75	81	77
	21.	97·5	99	98·8	54	60	58	14	17	16	76	83	78
	22.	98·2	98·7	98·5	56	54	62	14	16	16	75	83	78
	23.	98·1	98·7	99·1	58	54	70	14	16	16	76	84	79
	24.	98·3	99	98·8	54	56	70	14	15	15	76	84	78
	25.	98·2	.....	.....	56	.....	.....	14	.....	.....	75		
	26.	98·6	98·7	99	56	56	62	14	16	16	76	83	79
	27.	98	99	98·9	54	54	60	14	16	15	76	84	78
	28.	97·9	99	.....	56	56	.....	14	15	.....	75	84	
	29.	98·4	98·9	98·9	58	54	56	15	16	15	76	85	78
	30.	98·2	98·8	99·2	58	54	58	14	16	15	76	83	78
		98·1	98·7	98·8	55	56·4	62·3	14·2	15·5	15·6	74·7	82·2	77·1
	May 1847.	1.	97·8	99·2	98·5	56	58	58	14	16	16	76	84	79
2.		98·3	98·7	98·7	56	52	62	14	15	15	77	84	79
3.		98·4	98·8	99·2	54	58	60	14	16	16	76	85	79
4.		98·1	98·7	98·3	56	60	52	14	16	15	75	83	77
5.		98·4	98·9	98·9	58	56	60	14	16	16	75	84	79
6.		98·4	98·7	.....	56	58	.....	15	17	.....	76	84	
7.		98·4	98·9	99·2	56	58	58	15	17	15	77	85	79
8.		98·2	99·2	99·2	54	60	72	15	16	16	77	85	79
9.		98	99·2	99	54	60	66	15	16	16	77	84	78
10.		98·1	98·9	98·7	60	58	58	15	15	16	75	83	78
11.		98	98·7	.....	56	58	.....	15	16	.....	75	84	
12.		98·2	98·8	98·9	58	56	66	14	16	15	76	84	79
13.		97·9	99·1	98·9	56	56	64	15	15	16	77	84	79
14.		98·1	98·9	98·6	54	64	58	15	16	15	78	87	80
15.		98·1	99·1	98·7	56	62	58	15	16	15	78	86	79
16.		98·2	98·8	99·2	54	58	62	15	15	16	78	86	80
17.		98·1	99·1	99·2	56	58	64	15	16	16	77	87	80
18.		98·3	98·6	98·7	56	54	58	14	16	15	77	84	79
19.		98·4	99	.....	56	62	.....	14	16	.....	77	87	
20.		98·1	98·7	99·2	60	56	64	15	16	16	78	86	81
21.		98·1	98·9	.....	58	60	.....	14	15	.....	78	86	
22.		98·3	98·8	98·6	62	56	66	14	16	16	78	87	82
23.		98·2	98·8	99·1	60	54	60	15	15	15	79	85	80
24.		98·4	.....	.....	58	.....	.....	14	.....	.....	77	.....
	98·1	98·9	98·8	56·6	57·8	61·3	14·5	15·8	15·6	76·7	85	79·2	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
October 1847.	1.	98·2	99	99·2	56	56	60	15	16	17	77	85	81
	2.	98·2	99	99·1	56	58	60	15	15	17	78	86	83
	3.	98	98·9	98·6	56	56	56	14	15	16	78	85	81
	4.	98·3	98·9	99·2	58	58	60	15	15	16	78	87	81
	5.	98·5	98·8	98·8	56	56	56	15	15	16	78	83	78
	6.	98	98·7	99	56	52	64	14	16	17	77	85	79
	7.	98	99	98·5	54	56	54	15	15	16	78	86	78
	8.	98·2	99·6	98·9	56	62	58	15	16	16	77	85	81
	9.	98	99·1	98·8	56	54	54	15	16	15	78	86	82
	10.	98·3	99	98·7	54	56	58	15	15	16	79	87	81
	11.	98·5	98·8	99·1	56	58	56	15	16	16	80	83	81
	12.	98·4	98·8	98·7	56	58	54	15	14	16	78	86	79
	13.	98	99·2	98·8	52	60	60	14	15	16	78	85	80
	14.	98·2	99	98·8	58	58	15	16	16	16	77	85	80
	15.	98	98·8	98	54	56	58	15	15	16	77	84	80
	16.	98·1	99·1	98·6	56	54	56	15	17	16	78	86	80
	17.	98	98·9	99·1	54	56	60	15	15	16	78	86	80
	18.	97·9	98·7	98·6	54	52	56	15	15	16	78	86	80
	19.	98·1	99	98·7	54	52	54	14	15	16	78	87	81
	20.	98	99·2	98·6	52	58	54	14	15	15	78	86	82
	21.	98	99	99·1	52	56	60	14	15	16	78	85	80
	22.	98·1	99	98·4	58	54	56	14	15	15	78	84	79
	23.	97·9	99·6	98·9	52	58	60	14	15	15	77	86	80
	24.	98·1	98·9	98·5	56	56	54	15	15	15	77	85	80
	25.	97·7	98·5	98·3	54	50	54	15	15	15	79	79	78
	26.	97·9	98·2	98·6	52	54	54	14	15	15	77	80	79
	27.	97·9	99·2	98·4	56	56	54	15	14	15	77	85	77
	28.	98·1	98·7	98·7	54	52	56	14	15	15	77	83	79
	29.	98	98·8	98·8	54	58	58	14	14	15	77	82	80
	30.	98·1	98·8	99	56	58	60	14	15	16	76	85	80
	31.	98	98·9	98·8	52	60	58	14	14	15	77	85	81
		98	99	99	54·7	56	55·7	14·5	15·1	15·7	77·7	84·8	80
November 1847.	1.	98·2	99·7	99·1	56	66	60	15	15	16	77	84	79
	2.	98·3	99	98·9	54	62	58	14	15	15	77	83	82
	3.	98·1	98·7	98·9	56	50	58	15	15	16	78	86	82
	4.	98	98·9	99·1	54	52	58	14	14	15	78	86	82
	5.	98	98·8	98·9	50	56	56	15	15	15	78	86	80
	6.	98·2	99·4	98·8	56	54	62	14	15	16	78	86	82
	7.	98·3	99·3	.....	56	62	.....	14	16	.....	79	87	
	8.	98	98·8	98·9	56	56	60	14	14	15	78	84	79
	9.	98	98·5	98·9	56	52	54	14	16	16	78	86	81
	10.	98·2	99	98·9	56	56	56	14	15	16	79	86	81
	11.	98·4	98·8	98·8	58	58	56	14	15	16	79	85	81
	12.	98·2	99·3	99	56	56	62	14	15	15	79	84	81
	13.	98·4	99·5	99	58	60	58	15	16	16	79	86	81
	14.	98·6	99·1	98·6	60	58	56	15	16	15	78	83	78
	15.	98	98·7	97·7	56	50	58	15	15	16	75	76	76
	16.	98·4	98·5	97·8	54	50	58	15	16	16	76	78	76
	17.	98·3	98·5	98·8	54	52	54	14	15	16	75	79	77
	18.	98·2	99·4	.....	54	62	.....	15	16	.....	77	83	
	19.	98·2	98·5	98·6	58	52	58	15	15	15	75	82	76
	20.	98·1	98·9	99	52	56	58	15	15	15	74	83	78
	21.	98	98·2	98·5	56	54	64	14	15	16	74	77	77
	22.	98·2	99·2	98·6	56	62	60	14	16	16	75	78	77
	23.	98·2	99·2	98·7	60	70	60	15	15	16	75	83	78
	24.	98·2	98·8	99·3	54	54	64	14	15	16	75	75	79
	25.	98·2	99·2	99	54	56	66	15	15	17	77	83	79
	26.	98·2	98·9	98·5	54	56	56	14	15	15	77	82	78
	27.	98	98·6	98·7	54	56	62	15	15	16	74	81	78
	28.	98	98·6	98·3	54	54	56	14	15	15	75	82	76
	29.	98·1	98·9	99	52	54	68	15	15	15	77	77	78
	30.	98·4	99·3	98·6	58	58	54	15	14	15	76	81	78
		98·1	98·8	98·8	53·3	54·8	59·2	14·5	15·1	15·2	76·7	82·3	79

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
December 1847.	1.	98·1	98·7	98·9	52	56	62	14	15	15	77°	83°	77°
	2.	97·9	98·6	98·6	52	52	58	14	15	16	74	81	68
	3.	97·9	99·2	99·2	52	58	68	14	14	16	75	73	77
	4.	97·9	98·7	98·7	52	54	60	15	15	16	74	82	73
	5.	97·7	99·1	97·8	54	60	56	14	15	14	68	82	73
	6.	98·2	98·4	98·5	56	58	56	14	15	16	72	83	78
	7.	97·9	98·6	98·2	56	54	56	14	15	16	77	83	78
	8.	98·1	99·1	98·8	54	58	58	14	15	15	77	84	78
	9.	98	99·2	98·5	54	62	58	15	16	15	76	83	77
	10.	98·2	98·7	98·5	54	54	60	15	15	16	76	83	78
	11.	98·3	98·8	98·6	54	54	60	15	15	16	77	81	78
	12.	98·3	98·9	98·7	54	50	58	14	14	16	77	81	77
	13.	98·2	99·1	98·8	56	56	60	14	15	15	79	80	78
	14.	98	98·9	98·4	52	52	64	14	14	16	73	77	77
	15.	97·9	99·2	98	52	58	64	14	15	16	76	80	77
	16.	97·9	98·8	98·6	52	56	60	14	15	16	75	80	76
	17.	98·1	98·7	98·7	52	54	60	15	15	15	76	81	77
	18.	97·9	98·2	98·5	54	50	56	14	15	15	76	81	77
	19.	98·1	98·9	98·5	52	60	58	14	15	15	75	82	77
	20.	98·2	98·7	98·6	56	56	60	14	14	16	76	82	78
	21.	98	98·8	98·7	52	56	58	14	15	15	75	82	78
	22.	98·1	.....	98·9	52	.....	66	13	.....	15	75	.....	77
	23.	97·9	98·8	98·1	54	56	62	14	14	15	75	82	76
	24.	98·1	99·1	.....	52	58	.....	14	16	.....	74	80	.....
	27.	98·1	98·5	98·7	54	52	56	14	14	15	73	81	76
	28.	97·9	98·4	98·3	52	56	58	14	15	15	74	82	76
	29.	98	98·4	98·9	50	52	62	14	14	15	73	81	75
	30.	97·7	99·2	99·4	50	60	58	14	15	15	73	81	78
	31.	98·1	98·5	98·4	52	50	58	14	15	15	75	79	78
		98	98·8	98·3	52·9	53·5	58	14·1	14·6	15·3	74·5	81·1	76·9
	January 1848.	1.	98	99	98·8	56	60	66	14	15	14	76	80	77
2.		98·1	99·2	98·9	54	56	60	15	15	15	75	81	78
3.		98	99·1	99	54	60	66	14	15	15	76	82	78
4.		98·2	99	98·8	52	56	58	14	15	15	75	80	76
5.		98·1	99·1	99	52	58	58	14	14	16	75	80	76
6.		97·9	99·1	98·5	54	58	58	14	15	15	75	80	78
7.		98·2	98·7	98·8	56	54	58	14	15	15	74	81	78
8.		98·3	99·1	98·8	56	62	64	14	16	16	75	83	78
9.		98·3	98·8	99·1	52	56	60	15	15	16	74	82	78
10.		98·4	98·3	98·8	54	58	60	14	15	16	73	81	71
11.		97·9	98·4	98·5	52	54	60	14	16	15	73	81	75
12.		98·1	98·3	98·7	58	54	66	14	15	16	73	82	77
13.		97·9	98·6	98·5	54	58	64	14	16	15	74	80	77
14.		98	99·1	98·9	56	60	56	14	16	14	73	81	77
15.		98	98·9	99	56	62	60	14	16	15	73	81	78
16.		98·3	99	98·7	56	52	58	14	15	16	75	80	78
17.		98·1	98·8	98·8	54	56	60	15	15	15	75	75	75
18.		97·9	98·6	98·9	56	56	56	14	15	16	73	77	77
19.		98·3	98·8	98·8	54	54	58	14	15	15	74	80	77
20.		98·3	99	98·5	56	58	56	14	15	16	74	81	77
21.		97·9	98·6	98·8	54	58	58	14	16	16	74	80	78
22.		98·1	98·7	98·7	56	56	58	14	15	15	74	82	78
23.		98·1	99·1	98·7	56	58	54	14	14	14	73	81	76
24.		98·3	99	98·8	52	54	60	14	14	15	73	79	76
25.		97·8	98·9	98·4	52	54	60	14	15	15	73	80	76
26.		98·2	98·9	99	53	56	56	14	15	16	73	81	77
27.		97·9	98·8	98·8	56	54	56	14	15	15	69	80	74
28.		98	98·8	98·9	54	56	62	14	15	15	68	80	76
29.		98	99·3	99·1	54	60	62	14	16	15	72	80	74
30.		98·3	99·3	98·8	56	56	56	14	14	15	71	82	77
31.		98·1	98·9	99	54	56	54	15	15	15	74	82	78
	98·1	98·9	98·8	54·5	56·8	59·3	14·1	14·9	15·2	74·1	80·5	76·6	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
February 1848.	1.	98.4	99	98.8	56	56	56	14	15	15	73	81	78
	2.	98.2	99	98.8	54	58	56	15	15	15	73	83	75
	3.	97.9	99.2	98.9	56	60	58	15	15	15	75	82	78
	4.	98	98.8	98.6	54	62	56	14	16	15	74	81	78
	5.	98.1	98.8	98.9	56	60	62	14	16	15	73	83	77
	6.	98	98.8	98.8	56	56	60	14	15	16	72	82	77
	7.	98	98.9	99.3	56	54	62	14	14	16	73	81	78
	8.	98	99.2	98.8	57	58	56	14	16	15	73	83	77
	9.	98.1	98.7	99.2	56	58	64	15	15	16	74	83	78
	10.	97.9	99.6	99	54	54	56	14	15	16	74	81	77
	11.	98	98.5	98.9	55	56	62	15	15	16	74	80	78
	12.	98.1	98.5	99	56	54	64	15	16	17	73	81	77
	13.	98	98.4	98.5	52	56	56	14	15	16	73	81	77
	14.	98	99.4	98.9	56	58	60	14	15	16	74	83	78
	15.	98	98.6	99.3	52	56	64	15	15	15	74	83	77
	16.	98	98.7	98.9	57	56	62	15	15	16	73	82	78
	17.	98.3	99	99.2	58	58	58	16	16	16	75	81	78
	18.	98.1	98.3	98.8	54	52	58	15	15	15	73	77	77
	19.	97.9	99.2	98.7	52	56	56	14	15	16	73	81	77
	20.	98	99	98.7	56	54	56	14	15	15	74	81	78
	21.	97.7	98.9	98.9	52	56	58	15	16	16	73	81	77
	22.	97.8	99.2	99.1	52	58	62	15	14	15	73	83	78
	23.	98.2	99	98.9	56	56	64	15	15	16	75	82	79
	24.	97.9	99.1	99	54	64	64	14	16	16	74	83	79
	25.	97.9	98.7	99	58	56	58	15	15	15	74	82	78
	26.	97.9	98.7	.....	54	56	.....	15	16	.....	74	81	
	27.	97.8	99.2	99	56	56	60	14	15	15	74	82	78
	28.	98.1	98.8	98.8	54	54	62	14	15	15	75	77	77
	29.	97.8	98.6	98.9	52	56	62	15	15	15	74	81	78
		98	98.8	98.8	54.9	57	59.7	14.5	15.1	15.5	73.6	82.1	77.5
March 1848.	1.	98	98.8	99.3	54	56	62	15	16	16	75	83	79
	2.	98.1	99.6	99.2	56	58	66	15	16	16	76	84	80
	3.	98.2	98.8	99	56	56	64	15	15	17	76	83	80
	4.	97.8	98.9	.....	52	56	.....	14	15	.....	73	81	
	5.	98.1	98.5	99	60	56	60	14	15	16	74	82	78
	6.	97.9	98.7	98.6	56	56	56	14	15	15	74	82	79
	7.	97.8	98.3	98.9	52	56	56	14	15	15	74	82	77
	8.	97.9	99.5	99	52	74	58	14	16	15	74	83	79
	9.	98.1	99.4	.....	54	60	.....	14	14	.....	76	82	
	10.	98.4	99.1	99	58	56	62	15	14	15	75	83	78
	11.	98.1	99	98.7	54	60	62	14	16	16	74	81	78
	12.	98.1	98.9	98.9	54	62	60	15	15	16	74	83	78
	13.	98	98.9	99.1	56	56	60	14	15	16	73	82	78
	14.	98.1	98.9	99	58	60	62	15	16	15	75	82	79
	15.	98	98.8	98.7	56	56	56	14	15	15	76	83	78
	16.	98.3	98.7	99.2	56	58	62	15	16	16	76	80	77
	17.	98.1	98.7	98.9	54	54	62	14	14	15	75	83	79
	18.	98.1	.....	.....	56	.....	.....	14	.....	.....	76		
	19.	98.2	99.2	99	56	60	54	15	15	15	75	83	82.
	20.	98.2	98.7	98.6	54	54	54	14	16	15	75	76	77
	21.	98	98.7	99.1	52	56	56	15	16	15	73	82	78
	22.	98	99	99	56	56	58	15	15	16	75	82	79
	23.	98.1	98.8	98.9	54	58	60	14	15	15	77	83	79
	24.	98.3	98.9	99	54	56	62	14	15	16	75	82	78
	25.	98	98.6	98.9	56	56	56	14	15	15	76	79	78
	26.	98.2	98.9	98.5	54	58	60	14	15	14	75	81	79
	27.	97.9	98.7	99.1	52	52	56	14	15	15	75	83	78
	28.	97.9	99.1	98.8	52	54	60	14	15	15	76	84	80
	29.	98	99.2	99.2	54	64	66	14	16	16	77	85	77
	30.	98.2	99.1	99.1	54	56	60	14	15	14	77	83	78
	31.	98	99.4	99	58	58	62	14	15	15	78	79	75
		98	98.9	98.9	54.9	57.6	59.7	14.3	15.5	15.4	75.1	81.9	78.2

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
April 1848.	1.	98.2	99	98.6	56	58	58	15	15	14	75	79	78
	2.	98.1	99.2	99	60	56	58	14	16	15	73	81	77
	3.	97.9	98.8	98.9	54	56	60	15	15	16	71	81	77
	4.	98	98.7	.....	54	58	.....	14	15	.....	71	81	
	5.	98.2	98.8	98.9	60	60	64	15	16	15	72	83	78
	6.	98.1	99.3	98.7	56	58	64	14	15	16	73	85	79
	7.	98.2	99.2	99.2	56	58	64	15	15	16	76	85	79
	8.	97.8	99.3	99.3	54	58	58	15	15	15	77	83	81
	9.	98.4	.....	.....	58	.....	.....	15	.....	.....	75		
	25.	98.1	98.9	98.9	54	54	62	14	15	15	75	80	77
	26.	98	98.7	98.9	52	56	60	15	16	16	77	85	81
	27.	98	98	99	54	58	60	15	15	15	78	84	79
	28.	97.9	99	98.9	52	58	60	14	15	15	77	85	79
29.	97.7	98.5	98.8	52	56	62	14	16	15	76	84	79	
30.	97.9	99	99.1	52	64	62	15	16	16	77	85	82	
	98	98.9	98.9	54.9	57.7	60.9	14.7	15.2	15.3	74.8	82.9	78.1	
May 1848.	1.	98.3	99.1	98.7	52	58	60	14	15	15	78	86	81
	2.	97.9	98.7	98.6	52	56	58	15	15	16	79	85	79
	3.	98.1	98.7	99	56	54	60	14	15	16	77	85	80
	4.	97.9	98.8	99	52	56	54	14	16	16	78	87	82
	5.	98	99.2	99	56	54	60	15	16	15	79	85	81
	6.	98.2	99	99.1	54	56	70	15	14	16	79	86	81
	7.	98	99.1	99	58	56	60	14	15	16	78	86	82
	8.	98.1	98.8	99.1	54	56	60	14	15	15	78	86	82
	9.	98.3	99.3	98.4	56	58	58	15	15	15	79	85	78
	10.	98.4	99.2	99	58	58	66	15	14	16	78	84	80
	11.	98.2	.....	.....	58	.....	.....	14	.....	.....	78		
	98.1	99	98.9	55.1	56.2	60.6	14.3	15	15.6	78.2	85.6	80.6	
June 1848.	7.	98	98.6	.....	56	60	.....	15	16	.....	78	81	
	8.	98	98.9	98.6	52	58	62	14	15	15	78	84	81
	9.	97.9	98.6	98.8	54	58	64	14	16	14	77	85	82
	10.	98.8	98.9	99	54	58	60	15	15	16	78	85	80
	11.	97.8	99	98.9	52	56	56	14	14	14	77	86	81
	12.	97.9	98.9	98.9	52	54	58	14	15	14	78	83	80
	13.	98.1	99	98.7	54	62	58	14	15	15	78	86	81
	14.	98.1	98.9	.....	54	58	.....	14	14	.....	78	86	
	15.	98	98.5	99.3	50	52	56	14	14	15	79	85	78
	16.	97.9	98.7	99.1	52	54	62	14	15	15	77	86	80
	17.	97.9	98.8	99	54	60	76	14	15	15	77	86	81
	18.	98	98.9	98.9	56	58	56	14	14	16	77	85	81
	19.	98	98.7	99	52	54	58	14	15	15	78	79	80
	20.	98	99.1	98.7	50	56	62	14	15	15	77	85	81
	21.	97.9	98.8	99	50	56	60	14	15	15	78	85	80
	22.	98	98.7	99.2	50	56	60	14	15	15	77	85	82
	23.	98	98.9	99	54	54	56	14	14	14	78	86	82
	24.	98.1	.....	98.9	54	.....	62	14	.....	15	79	.....	79
	25.	97.8	98.6	98.8	52	56	56	14	16	15	78	83	81
	26.	97.9	98.9	99.2	52	52	60	14	15	14	78	84	81
27.	98.2	98.9	98.8	54	54	58	14	15	14	77	86	80	
28.	97.9	98.9	98.8	50	54	58	14	15	15	77	85	79	
29.	97.9	98.8	99.2	52	56	60	14	14	16	75	86	89	
30.	97.8	99	99.3	54	54	62	14	14	15	77	86	80	
	98	98.8	99	51	56.1	56.8	14.1	14.8	14.9	77.5	84.7	80.4	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
July 1848.	1.	97.9	99.1	98.9	48	54	58	14	15	15	79	86	82
	2.	98.1	98.3	98.9	58	52	56	14	15	14	78	87	82
	3.	98.2	99	99.1	52	56	64	13	13	15	78	84	81
	4.	98.1	98.6	98.5	52	54	78	13	15	15	76	79	79
	5.	98.3	98.9	98.5	60	54	58	14	15	15	75	84	79
	6.	98.1	99	99.1	52	52	58	14	14	14	78	85	81
	7.	97.9	98.9	99.1	52	56	58	14	14	15	78	83	81
	8.	98.1	99	98.5	51	54	72	14	15	14	78	84	81
	9.	98.2	.....	99.3	56	.....	58	14	.....	15	78	.....	82
	10.	98.2	98.9	99.1	52	54	58	14	16	15	77	85	80
	11.	97.8	98.7	99	50	56	54	14	14	14	77	85	80
	12.	98	.....	.....	50	.....	.....	14	.....	.....	77	.....	.....
	26.	97.9	99	99.4	54	56	58	14	15	15	77	85	80
	27.	98	98.9	98.7	54	56	58	14	15	15	77	85	80
28.	98.2	99	98.9	54	56	56	15	15	15	79	85	82	
29.	98.2	98.4	98.9	54	50	52	14	15	15	79	85	81	
30.	98.1	98.9	98.5	54	50	54	14	13	15	78	83	81	
31.	98.1	99.2	99	52	58	58	14	14	15	78	85	80	
	98	98.3	98.9	53	54.2	59.5	14	14.7	14.8	77.7	84.3	79.4	
August 1848.	1.	97.8	99	98.7	52	54	56	14	15	15	78	85	80
	2.	97.8	.....	98.5	52	.....	76	13	.....	15	78	.....	79
	3.	98.3	98.7	98.7	54	54	54	14	15	14	78	86	80
	4.	98.1	98.7	98.6	54	52	54	15	15	14	79	82	81
	5.	98.1	99	98.9	56	52	56	14	15	15	78	85	80
	6.	97.8	99	99	52	54	58	13	14	15	76	85	81
	7.	98.2	99	99.6	56	58	66	14	15	15	78	86	81
	8.	98.1	99.1	99	56	54	60	14	16	15	79	85	80
	9.	98.2	.....	.....	54	.....	.....	15	.....	.....	79	.....	.....
	19.	98.3	98.9	98.7	66	54	58	15	15	15	77	83	80
	11.	97.9	99.1	99.2	54	54	58	14	15	16	77	86	81
	12.	98.1	99.3	99.1	54	56	58	14	15	15	79	86	82
	13.	98.2	98.9	98.9	56	54	60	14	14	15	79	86	83
	14.	98.2	99	99.6	56	58	62	14	15	15	80	85	82
	15.	98	99.2	98.8	56	58	62	14	15	16	79	86	80
	16.	98.2	.....	.....	56	.....	.....	14	.....	.....	79	.....	.....
	17.	98.2	99.7	99.7	58	60	58	14	14	14	79	84	81
18.	98.1	99.2	99.1	54	58	58	15	14	15	79	86	79	
19.	98.1	99.3	99.2	54	56	56	14	15	15	79	86	81	
20.	98.2	99	.....	54	54	.....	14	15	.....	78	81	.....
22.	98.2	99.1	99.5	54	56	66	14	16	15	80	87	82	
23.	98.1	.....	.....	56	.....	.....	14	.....	.....	78	.....	.....
24.	98.1	99.4	99.4	60	60	60	14	16	15	77	86	82	
25.	98.1	99.4	98.8	56	56	54	14	15	15	79	86	82	
26.	98.2	99.3	99.2	54	66	60	14	16	15	79	87	82	
27.	98.1	99.1	99.2	52	60	56	13	15	15	78	86	79	
28.	98.1	99.4	99.6	56	60	66	14	15	15	78	86	82	
29.	98.2	.....	98.9	56	.....	70	14	.....	14	79	.....	80	
30.	98.2	.....	99.4	56	.....	66	14	.....	14	79	.....	82	
31.	98.2	99.1	99.4	58	60	66	14	15	14	80	87	82	
	98.1	99.1	99.1	55.4	56.3	59.5	13.9	15	14.7	78.4	85.3	80.9	

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
September 1848.	1.	98	99·2	99	52	56	64	14	15	16	78	87	81
	2.	98·1	99	99·2	54	52	60	14	15	16	78	88	81
	3.	98	99·3	99	52	54	60	14	14	14	79	88	84
	4.	98·1	99·6	99·4	52	62	60	14	14	15	80	87	82
	5.	98·2	99·4	99·4	56	66	64	14	15	16	79	87	80
	6.	98	.....	99·2	54	.....	64	14	.....	15	79	.....	81
	7.	98·2	99·6	99·6	54	60	62	14	16	15	78	88	82
	8.	98·5	99·5	99·2	56	60	58	14	15	15	79	88	86
	9.	98·3	99·5	99·6	56	60	66	15	15	15	83	89	84
	10.	98·3	99	99·3	56	56	66	15	16	15	80	89	82
	11.	98·3	97·9	99·2	56	60	66	14	15	15	80	89	82
	12.	97·9	99·2	99·3	52	58	60	14	15	14	80	88	83
	13.	98·1	.....	.....	54	.....	.....	14	.....	.....	79	.....	.....
	14.	98	99·3	99	56	60	62	14	15	15	78	86	81
	15.	98·5	99·2	98·9	54	56	72	14	15	16	79	85	81
	17.	98	99	98·9	54	54	66	14	15	15	76	85	82
	18.	98·3	99·4	99·9	54	58	74	14	15	16	79	84	82
	19.	98·5	98·8	99·3	58	56	70	14	15	14	79	80	81
	20.	98·3	98·9	98·7	58	54	66	14	15	16	80	84	82
	21.	98·3	99	98·8	58	52	56	14	15	16	81	86	82
	22.	98·1	98·7	99·2	52	52	60	14	15	16	81	86	82
	23.	98	98·9	.....	52	56	.....	14	16	.....	78	86	.....
	24.	98·5	98·7	99·1	62	56	62	14	15	15	80	86	80
	25.	98	99·3	99·1	52	56	56	14	16	15	78	85	82
	26.	98·2	99·2	98·8	54	52	56	14	15	15	78	85	80
	27.	98·1	.....	.....	52	.....	.....	14	.....	.....	77	.....	.....
	28.	98·3	98·8	99·3	54	56	58	14	16	15	75	85	80
	29.	98·5	99·2	99·3	54	58	60	14	15	15	78	86	82
	30.	98·2	98·8	99	52	58	66	14	16	15	79	85	82
			98·1	99·1	99·1	54·4	57·3	60·4	14	15	15·2	78·9	86·2	81·7
October 1848.	1.	98·3	98·8	98·8	56	56	66	14	15	16	79	86	83
	2.	98·2	99	98·7	52	56	60	14	14	15	79	82	80
	3.	98·2	99	.....	52	56	.....	14	15	.....	78	86	.....
	4.	98·4	99·3	99·2	60	56	60	15	15	15	79	87	84
	5.	98·5	.....	99·3	54	.....	72	14	.....	15	82	.....	83
	6.	98·1	99·3	99·1	50	56	58	14	16	15	80	87	82
	7.	98·3	99·2	99·4	54	54	60	15	15	15	80	87	80
	8.	97·9	99·1	98·8	52	58	58	14	16	15	78	84	80
	9.	98·1	99·4	99·4	54	56	60	14	15	15	76	87	81
	10.	97·9	99·2	98·7	54	52	58	15	15	15	80	84	81
	11.	98·3	99·5	99·9	54	58	60	14	16	15	79	87	81
	12.	98·1	99·4	99·3	54	58	64	15	15	16	79	86	80
	13.	98·1	99	99·1	56	58	62	14	16	15	79	87	78
	14.	98·3	99·3	.....	54	58	.....	14	16	.....	78	88	.....
	15.	98·2	98·9	99·3	56	58	66	14	14	16	78	86	82
	16.	97·9	98·8	98·6	54	52	58	14	14	15	80	80	78
	17.	98	99·1	99	52	54	60	14	16	15	77	86	80
	18.	98·5	.....	98·6	58	.....	58	15	.....	16	78	.....	80
	19.	98·1	98·9	99·2	56	58	62	15	15	16	78	85	82
	20.	98·1	98·9	98·7	58	58	64	14	15	16	79	80	79
	21.	98·4	98·6	98·9	54	52	62	15	15	16	77	86	82
	22.	98·3	.....	99·1	56	.....	58	14	.....	16	79	.....	80
	23.	98·2	98·8	98·9	52	52	56	14	15	15	79	82	80
	24.	98·4	99·1	98·4	56	54	60	14	15	15	77	83	79
	25.	98·5	.....	.....	52	.....	.....	14	.....	.....	77	.....	.....
	26.	98·2	99·3	99·3	58	56	66	14	15	15	76	86	82
	27.	98	99·1	98·8	54	56	58	14	14	15	77	86	81
	28.	98·1	99·1	99·1	52	56	62	14	15	16	78	87	83
	29.	98·4	99·5	.....	54	58	.....	14	15	.....	80	83	.....
	31.	98·3	98·8	98·8	52	52	60	14	15	15	78	77	79
			98·2	99·1	99	54·3	55·8	61	14·2	15	15·3	78·9	84·8

	Temp. under the tongue.			Pulse.			Respirations.			Temperature of room.			
	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	6-7 A.M.	12-2 P.M.	9-11 P.M.	
November 1848.	1.	98·2	99·3	99	50	58	60	14	16	15	77	85	81
	2.	98·1	99	.....	52	56	.....	14	15	.....	78	82	
	3.	98·5	98·8	98·5	58	56	58	15	15	15	77	82	78
	4.	98·2	99·1	.....	50	58	.....	14	15	.....	77	84	
	5.	98·1	99·4	98·5	62	58	58	15	16	16	78	86	79
	6.	98·1	99·2	98·4	56	58	58	14	15	15	77	83	78
	7.	98	98·9	.....	58	56	.....	14	15	.....	77	83	
	8.	98·2	99·3	98·9	54	62	62	14	16	16	76	83	79
	9.	98·1	.....	.....	58	.....	.....	14	.....	.....	78		
	98·1	99·1	98·6	55·3	57·7	59·2	14·2	15·4	15·4	77	83·5	79	

Postscript to Dr. DAVY's Paper on the Temperature of Man.

Received May 8,—Read May 16, 1850.

The thermometer with which the preceding observations were made was broken immediately after my return to England, when travelling by railway, no special precaution having been taken in the packing of it, as by inclosing it in elastic horse-hair; and in consequence I had not the means at once of making further trials on temperature for the purpose of comparison. Recently, having had another thermometer constructed as delicate as that before used and divided with the same minuteness—each degree of FAHRENHEIT into ten parts—I have been enabled to continue the trials; as yet, however, only for one month, that of April, without interruption. They have been made thrice daily, at about the same hours as those recorded in my former paper. The results, under ordinary circumstances of health, exercise, &c., have accorded with those then obtained, the highest temperature having been found to be immediately on rising in the morning after the night's rest, and the lowest at night, just before retiring to rest. This accordance will probably be received in proof that the difference of results in the West Indies and in England has been mainly owing to difference of climate and the habits of life connected therewith; and apart from these, to no change in the individual, the subject of the trials.

May 4, 1850.