

**An account of the epidemical catarrhal fever, commonly called the influenza; : as it appeared in the city and environs of Durham, in the month of June, 1782. To which is prefixed, A discourse on the improvement of medical knowledge. / By P. Dugud Leslie, M.D. F.R.S. With a letter to the author, on the influenza; as it appeared at Newcastle upon Tyne. By John Clark, M.D.**

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*Thomas Sherwood, 1788.*  
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A N  
A C C O U N T  
O F T H E  
Epidemical Catarrhal Fever,  
COMMONLY CALLED THE  
I N F L U E N Z A;

As it appeared in the City and Environs of Durham, in the Month of June, 1782.

To which is prefixed, a DISCOURSE

On the Improvement of Medical Knowledge.

BY

P. DUGUD LESLIE, M. D. F. R. S.

With a LETTER to the AUTHOR,

On the I N F L U E N Z A;

As it appeared at NEWCASTLE UPON TYNE.

By JOHN CLARK, M. D.

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L O N D O N:

Printed for S. CROWDER, Paternoster Row, and J. ROBERTSON, New Bond-street; A. GORDON, and C. ELLIOT, Edinburgh.

1783.



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## ADVERTISEMENT.

**A**T the time that the following observations, on the Influenza, were written, it was the author's intentions to give them a place, in a collection of Physical and Medical Essays, which he was then preparing to lay before the public. But his health, for several months past, having been so bad, as to oblige him to abandon every literary, and philosophical pursuit, that required either thought or labour; he has now lost all hopes of being soon able to accomplish his original design. Desirous, however, of affording all the assistance, in his power, to those, who may wish to collect and transmit to posterity, a full and faithful history of the late Epidemical Catarrh, the author is determined to withhold no longer, from the public, an account of the appearances which it exhibited in the city and neighbourhood of Durham.

To



To the account of the Influenza, the author has prefixed a Discourse on the Improvement of Medicine, in which he has not only endeavoured to ascertain the chief causes that have conspired to obstruct its progress, but likewise to point out the most likely means of carrying it to as high a degree of perfection, as a science of so intricate a nature, can be expected to attain.

A  
DISCOURSE

On the IMPROVEMENT of

MEDICAL KNOWLEDGE.

“ Medicina adhuc taliter comparata est, ut fuerit  
“ magis ostentata, quam elaborata; etiam magis  
“ elaborata, quam amplificata; cum labores in  
“ eam infumpti, potius in circulo, quam in  
“ progressu, se exercuerint.”

BACON. De Augment. Scient.



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A  
D I S C O U R S E

On the IMPROVEMENT of  
MEDICAL KNOWLEDGE.

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**I**N an age, when the useful and liberal arts have attained a degree of perfection, unknown to former times; when the spirit of genuine Philosophy has pervaded the most secret recesses of nature, and dissipated the mists of ignorance and error, which so long darkened the face of science, we cannot but lament that Medicine, an art bestowed on man, for his comfort and preservation, should not have kept pace with the other branches of useful knowledge.

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As man, indeed, is by nature mortal, no power of art can render him immortal. But no just conclusion can thence be drawn, either against the utility of Medicine, or the possibility of its farther improvement. If we consider that near two-thirds of mankind fall victims to disease, before they even attain the meridian of life; and only cast an eye on the prodigious numbers of every age and sex, who either languish in slow lingering distempers, or suffer all the torture of unrelenting pain, we cannot certainly doubt that Physic, well understood, and judiciously applied, would prolong the lives of millions, and often afford at least a temporary relief, to those whose miseries it cannot entirely remove.

To

To what causes then shall we ascribe the slow progress of a science, which, if duly cultivated, promises such inestimable advantages to mankind? The obstacles which have concurred to retard the advancement of the healing art are many and various, but they may all be traced either to the difficulties attending the study, and practice of Medicine; or to the indolence, and often too mercenary disposition of those who, in every age and country, have practised it, as a lucrative profession.

The study of Medicine is of that intricate and extensive nature, that without a previous acquaintance with almost every branch of natural Philosophy, without a retentive memory, and a comprehensive genius, no considerable proficiency can be made in it; and he,



who possesses not a more than common share of sagacity, joined to great coolness of temper, solidity of judgment, and an habit of nice discernment, will never practise the healing art, with any signal degree of success.

There is likewise a train of disagreeable circumstances, inseparable from the practice of Physic, which will ever prevent its being so generally cultivated, as the other liberal arts. Though a desire of knowledge, implanted by nature in the human mind, leads man to the investigation of truth, yet he seldom applies to any science with ardour, which tends not both to his amusement and emolument. But, he indeed must have an uncommon thirst for knowledge, who, without any lucrative view, shall pass his life in hospitals, shall wantonly expose himself

self to the infection of contagious diseases, and voluntarily submit to behold the shocking scenes of anguish and distress, which daily occur to the Medical practitioner.

We are told that Pythagoras, and some other celebrated sages of antient Greece, not content with teaching Medicine, as a branch of Philosophy, and speculating upon it in the schools, travelled from city to city, instructing and curing without reward, all who came to them. Hippocrates must have had such exalted characters in view, when he, with enthusiasm, pronounces him, who is both a Physician and a Philosopher, to be little inferior to the Gods\*. But such instances of sub-

\* Ἰητὴρὸς γὰρ φιλόσοφος, ἰσόθεος.

Περὶ εὐχρημοσυνης.



sublime philanthropy, are not to be met with, among the Philosophers, or the Physicians of modern times. In this mercenary and selfish age, I am afraid, the craft is more studied than the art of Medicine.

The facility, with which worth and genius may be supplanted, by the specious arts of insinuation and ostentation, has ever proved, to Physicians of a mercenary disposition, a temptation too strong to be resisted. In no other liberal profession is it possible to impose so much on the judgment of mankind as to acquire fame and fortune, without some share of real merit. In vain would a painter by his address, and self-applause, attempt to convince the public of his superior excellence, if the specimens, which he exhibited of his skill and ingenuity, supported not his  
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pretensions to their attention and approbation. In vain would a lawyer expect to rise to any eminence at the bar, without giving indubitable proofs of his abilities, knowledge, and diligence.

But in Medicine it is widely different. The public have no certain test, no infallible criterion, by which they can estimate a Physician's professional merit. Those only are the competent judges of his skill, who follow the same profession, and it is rarely their interest to proclaim his fame. Hence, do we see Physicians, whose sole claim to the confidence of the public, is derived from their address, from the patronage of a great man, or a few lucky, but accidental cures, acquire riches and renown; whilst men of real abilities, skill, and experience, but modest, unassuming, and unprotected by the great,  
live



live in obscurity, neglected, and unrewarded for the pains which they have taken to render themselves useful to the community, and worthy of their favour and support.

It is true indeed, that, in the present age, Physicians seldom assume that air of solemnity, or affect that gravity of deportment and appearance of mystery, by which vain pretenders were formerly wont to conceal their ignorance, and impose on the credulity of mankind; but the uncertainty of the reward due to merit, leads many to content themselves with a superficial knowledge of their profession, and to think their time better employed in the acquisition of the arts of insinuation and address, which bring equal reputation and emolument, with infinitely less labour and fatigue. Thus is a science, which has  
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for its object, health, the choicest blessing that heaven bestows on mortal man, shamefully prostituted, degraded into a mere trade, and rendered in the hands of mercenary Physicians, and unlettered Quacks, the instrument of his destruction.

Various other causes have conspired to retard the advancement of the healing art, but none, I believe, hath so essentially hurt its interest, as the early division of practitioners into the opposite sects of Dogmatism and Empiricism. At a period when the visionary doctrines of Plato and Aristotle, under pretence of teaching Physicians to reason with clearness and precision, had withdrawn their attention, from experience and observation, and inspired them with the avowed presumption of undertaking the cure of all diseases, from a

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knowledge of their proximate cause, Serapion stood forth, and with matchless arrogance, maintained that reasoning is foreign to the art of Medicine. He insisted that experience is the sole guide to safe and successful practice, and pronounced their temerity fatal, who trust, in any instance, to the direction of their understanding.

Such was the origin of the Empyric sect, and it is difficult to determine, whether the state, in which Serapion found, or that, in which he left Medicine, was the more unfavorable to its improvement. Be that as it may, it hath since continued a subject of serious debate in the schools of Physic, whether the Dogmatic, or the Empyric plan, leads to the more successful practice.

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Whoever shall coolly and impartially weigh the merits of the question, will hardly, I think, hesitate to pronounce both opinions, strictly understood, to be equally unphilosophical, and detrimental to the cause of Medicine. For whilst the Dogmatist, blinded with his fictions, and inattentive to the obvious phænomena of nature, grounds his practice on vague hypotheses, and visionary systems; the Empyric, trusting with implicit faith in the infallibility of certain remedies, but despising all anatomical and physiological knowledge; and regardless of the circumstances peculiar to his patient, undertakes the cure of diseases totally unacquainted with their causes, and fully satisfied with barely knowing the genus to which they belong. The confusion, the uncertainty, and the danger which



manifestly attend the practice of either sect, sufficiently point out the absurdity of both : and must convince every Physician, who is wedded to neither party, that theory, without experience, or experience without reasoning, is equally incapable of leading to a safe and successful treatment of diseases.

Experience is, beyond a doubt, the only solid basis of Medical skill, and the practice which is not founded on it, may justly be regarded as uncertain and hazardous. But, without reasoning, no useful experience can be acquired. What will the most extensive practice avail the Physician, who neglects to investigate the nature of diseases ; to mark their progress, and to compare the various success of the remedies, which, on different occasions, he has thought proper to employ ? It is



is therefore, though a common, yet a very mistaken notion, that skill is the necessary consequence of long and extensive practice. Unless a Physician be both a man of science and sagacity, he will derive little useful knowledge from his practice. Tumultuary and indigested observations serve only to confound and mislead the undistinguishing practitioner. All who wish to reap advantage from experience, must study nature with unremitting assiduity; but the attention, and the discernment necessary, in observing the course of nature, in diseases, fall not to the share of every Physician. If Medicine should ever attain any high degree of perfection, it can only be in consequence of the accurate and faithful observations of sagacious practitioners, and the close inductive reasonings of men of deep research, quick discernment, and solid judgment.



judgment. Hence were the Empyrics, and the Dogmatists equally to blame ; the former, because they were so afraid of reasoning, the latter, because they were so fond of it.

It is, by all Philosophers agreed, that our improvements in the arts and sciences, must in a great measure depend on the number of facts that we can collect concerning them : now the just theory of an art will lead to the discovery of many useful truths, that would have otherwise for ever escaped our observation : and though by accident we may sometimes stumble on important facts, without reasoning, what will they avail us ? It is only by the aid of reasoning that we discover analogies, that we connect corresponding facts, and reduce them to general principles.

of



Of all the arguments that have been urged in favour of the Empyric plan, one of the most specious is, that among those who stiled themselves rational Physicians, the idlest opinions have, in every age, had their abettors, and the most groundless fictions have been swallowed with credulity. But this objection to dogmatism, however justly it might formerly have been made, has now, it is hoped, lost much of its weight.

In an age, when men are, in all scientific pursuits, actuated by the true spirit of Philosophy, Medicine has little to apprehend from theory. Though fond of speculation, we have learned to appeal to facts, and to admit those doctrines only, as the foundation of practice, which are simple, obvious, and certain. Convinced of the  
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intimate relation, which the sciences bear to one another, we have ventured to extend our views beyond the contents of the *materia medica*, and are ambitious to be Philosophers, as well as Physicians, "*medicina enim in philosophia non fundata, res infirma est* \*." By thus contemplating universal nature, we have discovered the necessity of cultivating Anatomy, Physiology, Mathematics, Botany, Chemistry, and every branch of natural science. In short we have learned that the arts and sciences are all links of the same chain; and that like the various productions of nature, in the great scale of being, they all concur in forming one simple and general system.

It was, from a full conviction, that the study of the healing art should not  
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\* Baconus de augment. Scientiarum.



be separated from that of universal science, that the most celebrated philosophers of antiquity taught it merely as a branch of natural knowledge: and to them is due the honour of rescuing Medicine from the hands of quackery and superstition, and of raising it to the dignity of a liberal art. And in this enlightened age, no arguments are necessary to prove that every system of Medicine, which is not founded on the general principles of natural science, must be futile and fallacious.

No sooner did Physicians discover the advantage, or rather the necessity of making themselves acquainted with the different departments of natural knowledge, than they abandoned the smoother paths of speculation, convinced that without pursuing the more humble, patient, and laborious method of in-

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vestigation, without collecting facts, without comparing them with scrupulous attention, and reducing them to general principles, their theory must be imperfect, their practice fluctuating and dangerous. The study of Medicine on this plan is manifestly a great and arduous undertaking, and should therefore be attempted by those only who have both capacity and inclination to go through with it. Vague theory and undigested observation serve only to bewilder the superficial Dogmatist, and to endanger the lives of mankind.

Of the various causes which have proved detrimental to the advancement of Medical knowledge, few seem to have had so sure and permanent an effect as a blind and servile deference to authorities: But since the spirit of a more enlarged Philosophy arose,  
and



and that knowledge came to be more generally diffused, neither a superstitious veneration of antiquity, nor the sanction of great names, has any longer the power to warp our judgment or to withdraw our attention, from observation and experiment. We have now learned to condemn theories which lead to no useful consequences, or that have no foundation, but in the heated imagination of speculative men. We have likewise the satisfaction to see that the load of learned rubbish, with which science, for so many years, was encumbered and oppressed, is now, in a great measure, removed: and there seems, in every country, to prevail a general disposition to expose, to deserved ridicule, those quackish and unworthy arts, which so long disgraced literature.



It is now, by all Philosophers, allowed that the only true method of promoting science, is to communicate it with clearness and precision, and in a language, as much divested of technical terms, as the nature of the subject will admit. Of the happy effects of this plan, Chymistry furnishes a striking instance. That science laid, for many ages, involved in the deepest obscurity, concealed under a language intelligible to none, but a few adepts, and by a strange association, frequently interwoven with the wildest religious enthusiasm. The Chymists of the present age have the merit of rescuing their art from that obscurity, of divesting it of the absurd recondite jargon under which it had been studiously concealed; and encouraged by the astonishing progress they have already made,



made, they carefully avoid every appearance of mystery, and account their labours sufficiently rewarded, if they can extend the boundaries of science, and render their knowledge beneficial to the community.

All therefore who seriously wish to contribute to the improvement of Medicine, should deliver their opinions in a language that every man of science shall readily comprehend. The studied use of cramp words, and of technical terms, betrays a degree of pedantry inconsistent with true genius, and real knowledge. The more pleasing the channel through which useful information is conveyed, the deeper impression will it make, and the more cheerfully will it be attended to.

Instead of adducing many arguments  
to



to evince the superior advantages of a Dogmatic plan, I shall content myself with observing, that it was by adding theory to experience, and experience to theory, that Sydenham, the Hippocrates of later ages, gained immortal fame. His example and writings first awakened the attention of Physicians, and convinced them that without a careful contemplation of phænomena, without a profound investigation into the laws and operations of nature, in short, without painful observation, guided by a just ratiocination, it is impossible to contribute, in any essential manner, to the improvement of Medical knowledge.

The authority and example of Sydenham, soon produced a happy change in the state of Physic: Practitioners roused from their former lethargy,



gy, and encouraged by his success, began to investigate the nature of the diseases peculiar to the climate, and the situation in which they lived. They collated and ascertained facts, they detected the fallacy of the prevailing systems, and learned to reason with accuracy and precision. Their zealous desire to improve Medical science, led them, in every part of Europe, to form themselves into societies, with the laudable intention of collecting and transmitting to succeeding ages, such facts and observations as tend to throw light on the animal œconomy, and on the treatment and cure of diseases.

Sensible that Medicine is one of those arts, whose progress can only be advanced by a multitude of concurring observations, Lord Bacon very justly ascribes its low and defective state, in  
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his time, to the indolence of practitioners, whom he accuses of neglecting to write, with care and accuracy, narratives of the more remarkable cases that occur to them in practice\*. Nor can we doubt that if this method, which is strongly recommended by the father and founder of the Dogmatic plan, had been faithfully pursued by succeeding Physicians, the art of healing would, ere now, have attained a degree of perfection, that a long series of years will hardly give to it.

It is therefore a duty incumbent on every Medical practitioner, who has at heart the improvement of Physic, and the preservation of the human species, diligently to observe, and carefully to record the leading symptoms, the progress,

\* De Augmentis Scientiarum.



gress, the treatment, and the event of such acute and chronic distempers, as happen to be accompanied with any unusual circumstances. But above all, he should watch the rise, mark the progress, ascertain the characters, and investigate the causes of the prevailing epidemics. He should diligently compare them with the epidemics of former years ; as also with those of other seasons and countries. He should examine how far they agree, or disagree, in their essential and leading symptoms, and judge from thence, whether a similar, or an entirely different method of treatment ought to be pursued : and in a fair and candid manner, lay before the public the principles on which he proceeded, and the result of his practice, whether successful, or unsuccessful.



The Physician, who trusts entirely to memory, the treatment of the various complicated diseases that come under his care, may indeed stand high in the estimation of an undiscerning public, but I hold it impossible that his practice should be really attended with any eminent degree of success. Indolence and neglect, in this particular, betray an indifference to the acquisition of skill and experience, that is highly culpable, and is the more dangerous in its consequences, that it may be long indulged, without either detection or suspicion.

To the foregoing general observations on the improvement of Medicine, I shall only add, that the rash and hasty attempts of Physicians, to reduce it into the form of a complete and perfect system,



tem, have contributed not a little to retard its progress. But however ill calculated to promote the true interests of Physic, this rage of systemizing may be, it is the rock on which men of genius are apt to split. Genius, naturally impatient of restraint, ardent and impetuous in its pursuits, delights in building with materials, that the mind contains within itself, or with such as the imagination can create at pleasure. But the materials requisite to the improvement of the useful arts must be chiefly collected from without, by slow and patient observations as little suits the vivacity of genius. And hence it happens, that men of a warm and lively imagination, often despise the painful method of experimental investigation, and wander heedless in the devious paths of fancy, and of speculation.



lation. To this cause, are owing the various contradictory systems, which at different periods have prevailed in the schools of Medicine. In each, we find that conjecture has been substituted for fact, and vague reasoning for proof and demonstration. The most obvious bad consequence that arises from the hasty reduction of the sciences into systems, is, that the attention is thereby withdrawn from particular researches, which alone can give rise to particular discoveries.

It is then manifest, that Philosophy, and the liberal arts, are much less indebted for their improvement, to men of a lively and creative imagination, than to persons of a clear understanding, and solid judgment, who curbing the luxuriance of fancy, are contented to proceed, in all scientific pursuits, by  
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a cautious and painful analysis. But though speculation, substituted for observation, and experiment, has ever proved the bane of true philosophy; yet when judiciously united to them, it not only tends to perfect the discoveries already made, and to extend them to a greater number of objects, but likewise furnishes hints, which may lead to many new and important truths that would escape those, whose views are confined to the obvious results of the experiments before them.

From what has been said in the foregoing pages, it is sufficiently manifest, that scientific reasoning can never clash with experience; that on the contrary, it not only serves to confirm our experience, and establish it on a secure basis, but likewise shews us how to extend it, by a just analogy, to  
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a greater number of cases. We may even venture to affirm, that unless reason and experience go hand in hand, the healing art will never arrive to that degree of perfection, to which we sincerely wish, and hope it may soon be carried.

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An Account of the  
Epidemical Catarrhal Fever.

As it appeared at  
DURHAM, in June, 1782.

OF Epidemics similar to the late Catarrhal Fever, various instances are recorded in the annals of Physic, of this kind three are accurately described by Huxham\*, and three also have occurred within our own memory†. But in no Medical writer do we read of any epidemical Catarrh, unless perhaps that which raged in 1732-3, that seems to have spread so widely, and prevailed so universally, as the Influenza of the present year.

It

\* De aere et morbis epidem.

† In 1762, 1767, and in 1775.



It is not, I believe, certainly known, in which quarter of the globe, this disease first arose. By some it is supposed of European, by others of Asiatic origin. Both opinions are supported by a variety of plausible arguments; but as the question appears to me of too little importance to deserve a serious discussion, I shall hazard no conjectures on the subject, but content myself with observing, that we have no authentic accounts of the Influenza, before it appeared at Peterburgh in the beginning of February last.

From Peterburgh it spread with astonishing rapidity over the whole Russian empire, and all the northern parts of the continent. It was imported to London about the middle of the month of May, but reached not Durham till  
8th



the 7th or 8th of June. It raged here with unusual violence, and prevailed so generally, that hardly one person in fifty escaped its attack. It began to abate about the 18th, and in a few days entirely disappeared in Durham, but continued for some time to afflict the neighbouring villages.

So many and various were the phenomena, which marked the invasion, the progress and termination of the Influenza, that, in order to describe them with accuracy and precision, all pretensions to brevity, and to systematic order, must be given up. But notwithstanding the apparent diversity of symptoms with which this epidemic made its attack, the constant and uniform concurrence of certain characteristic Catarrhus affections, sufficiently shew-



ed that there was no specific difference in the nature of the disease.

The difference in the degrees of violence and of danger, with which the Influenza attacked different people, was so very great, that those who were seized with it, may properly enough be divided into three distinct classes. In the first class, which very fortunately comprehended the greatest number of patients, the disease was attended with so few troublesome or painful symptoms, that no Medical assistance was found necessary, and after the first day most were able to follow their usual occupations. In the second class, the disease was ushered in with all the usual concomitants of fever, and the patient was not only confined to the house, but generally to bed.—But it was only in the  
the



the third and last class of patients that the symptoms ran so high, as to portend real danger.

I shall now proceed to describe these different states of the disease, but as the first came rarely under my observation, and more especially, as it seemed to differ in no essential circumstance from the simplest species of common Catarrh, I shall take no farther notice of it, but immediately go on to the second state.

Of this state of the Influenza, the first symptoms were such as usually attend all febrile attacks: languor, lassitude, disinclination to motion, frequent and alternate returns of hot and cold fits, attended with a dull pain and sense of weight in the forehead, and sometimes with vertigo. To these generally



succeeded an unusual heat and fulness of the eyes, a straitness and redness of the nostrils, sneezing, the defluxion of a fluid from the mucous membrane of the nose, so extremely sharp and acrid, as not only to excoriate the inside thereof, but even to produce not unfrequently some degree of inflammation of the uvula and tonsils, and to keep up a constant irritation about the Larynx. In some the cough was one of the first symptoms, but in general it began only to be troublesome at this stage of the disorder. The pulse from the beginning was, in most patients, much quicker and fuller than natural, the tongue white and furred, but seldom dry or parched, and the heat of the skin by no means so great as might have been expected, where the febrile symptoms ran so high. In most Patients I observed a very considerable exacerbation of the fever towards night, which



which in the weak and irritable, was sometimes accompanied with a slight delirium. After a few days, the cough, which at first was hard and dry, became gradually more free and loose ; and in less than a week, an easy and copious expectoration of thick concocted mucus took place. The Influenza, however, was not in all attended with cough. Many had every other pathognomic symptom of catarrhal fever, without being, at any period of the disease, affected with cough. But I generally observed that those people who escaped the cough, had of all others the greatest discharge from the nose and eyes.

Such was the general course of the second state of this epidemic, neither tedious, nor dangerous, where the constitution was sound, and the patient not far advanced in life. But in the third  
and



and last class of patients, the Influenza was attended with dangerous affections of the vital organs, which in several instances, proved fatal.

The beginning of the third was not very different from that of the second state of the Influenza, but in a day or two after the first attack, every symptom was greatly aggravated. The head ach became more violent, the cough more troublesome, the thirst more intolerable, and the pain, occasioned by the cough, under the sternum, either increased and shot through between the shoulders, or shifted to one side, where it became fixed, produced difficult respiration, and other symptoms of pneumonic inflammation.

Of five patients, whom I attended labouring under the catarrhal fever, complicated with Pleurisy, two died;



died ; and of four whom I found afflicted with peripneumonic symptoms, one only recovered, two of them indeed were in the agonies of death when I first saw them ; but of the third, a young man aged 18, I entertained very sanguine hopes. His cough had abated much of its violence, the pain at his breast was almost entirely gone, his respiration became considerably freer, his strength and appetite began to return, in short he found himself so much better in every respect, that he ventured to take an airing in a carriage ; he complained of no inconvenience from the motion, and returned in better spirits than he went out. But the following night he was suddenly seized with a violent oppression at his breast, attended with great anxiety, and very laborious respiration, and in a few hours he expired. This happened about three weeks from the first attack, as he  
had



had had no cold shiverings, or any of the other symptoms, which usually precede suppuration of the vital organs, it is probable this young man's death was occasioned by an effusion of serum into the bronchia, and cellular texture of the lungs.

The third state of the Influenza was particularly severe on people in the decline of life, on those especially who were of a relaxed phlegmatic constitution, and subject either to the humid asthma, or to an habitual cough. In the course of my practice, I had an opportunity of visiting several persons of both sexes, who came under the above description, and in six of them the disorder was attended with every symptom of spurious peripneumony, all copious evacuations in such patients were productive of the utmost danger. But such was the acuteness of the pains in different



rent parts of the chest, and so great the difficulty of breathing, that it was by no means easy to determine whether true pneumonic inflammation was really present or not. Misled by these ambiguous appearances, some unwary practitioners had recourse to the lancet: of the six elderly people, whom I attended in the influenza, complicated with spurious peripneumony, three had been bled; but instead of receiving any relief, they from that moment began to sink under the disease, and every attempt to support the *vis vitæ* by warm cordials, and external stimuli, proved ineffectual.

The death of these patients was manifestly occasioned by such an effusion of serum into the bronchia, and cellular texture of the lungs, as entirely overcame the powers of expectoration: whence suffocation necessarily ensued. To the other three persons I was called

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pretty early in the disease, and by the use of expectorants, opiates, and tonicks, they had all the good fortune to recover.

The loss of strength which attended every stage of the influenza, was much more considerable than is usual in fevers of apparently equal violence and duration. Many who had not the disorder in a very severe manner, complained of such a weakness of the lower extremities, several days after every symptom of fever had left them, that they could hardly without assistance walk from one room to another; this, however, was seldom the case, unless where the disorder had been carried off by very profuse perspiration\*.

Though

\* Huxham observes that this was the case in the catarrhal fever of 33, when the lancet had been imprudently used.



Though it was extremely common for people, who had almost got the better of the influenza, to have either one or two relapses, if they were not particularly careful to guard against the evening damps ; yet I met with no instance of a second attack of the disease, after a perfect recovery had taken place. But I had frequently occasion to observe that a relapse was more severe and of longer duration than the first attack.

No instance fell under my observation in which the influenza laid the foundation of pulmonary consumption, unless where the lungs were already in a diseased state\*. In three cases where I

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had

\* Three months ago, when this account of the Influenza was written, the author little apprehended that he himself was to prove an exception to the above observation. But his case is now too evident to be mistaken, he was seized with the Influenza soon after it appeared in Durham, but took nothing for it, till the febrile exacerbations



had for some time suspected the formation of tubercles, suppuration now seems to have taken place:

From the above account of the Influenza, it appears that it prevailed more generally, and was attended with more dangerous and fatal effects in the city of Durham, than in most places of the same size in Britain. To what particular cause this should be attributed is difficult to determine. Durham has been always supposed, and I believe very justly, one of the most heal-

bations in the night began to run very high. He then found it necessary to have recourse to diaphoretic medicines, and when under the operation of these, he was unfortunately called up to the sick several nights successively; in consequence of this, all his complaints were considerably aggravated, and a pain fixed in his side, which has baffled every remedy. As the cough, and hectic fever have been daily increasing since the cold weather set in, he is advised by Dr Cullen, and several other medical Gentlemen of eminence, to pass this winter in a warmer climate; and, in compliance with their advice, he proposes setting out immediately for Lisbon.



healthy places in the kingdom. During the space of six years, that I have resided in it, the Influenza is the only disease that appeared deserving the name of Epidemic. Nor is this more than what might reasonably be expected from the dry and airy situation of the place, as well as from the small number of inhabitants, in proportion to the ground it covers. How then shall we account for the Influenza having raged with much more severity in Durham, than in places infinitely more populous, and more unhealthy?

The cause of the peculiar malignancy of the Influenza here, must, in my opinion, be sought for in the state of the air. The uncommon severity of the weather had rendered the spring in this, as well as in every other part of the island, unusually backward. From the beginning of March till the last week



week in May, few days passed without snow, frost, or rain, and the wind, during that period, blew almost incessantly from the north or north-east quarters. But for a week before the late Epidemic appeared in Durham, the weather was remarkably serene, the air dry and sultry. Two accurate thermometers (Fahrenheit's scale) hanging in the shade vibrated, for several days before the Influenza broke out, and the whole time it prevailed, from  $68^{\circ}$  to  $64^{\circ}$ . This observation was taken at eleven in the morning, and three in the afternoon. It must however be observed, that the nights were frequently thick, hazy, and chilly.

Is it not therefore highly probable that such a sudden transition from very cold to very hot weather must have been attended with very deleterious effects to the human body? It will readily,



readily, I presume, be granted that the sudden relaxation produced by the continued application of a degree of heat to which the body had been so long unaccustomed, must not only have rendered it more susceptible of the contagion, but likewise more incapable of throwing it soon off. Nor is it unreasonable to suppose that the heat of the air would render the contagion more active, increase the septic tendency of the fluids, and make all copious evacuations more dangerous. I am the more inclined to this opinion because the blood taken from patients who had no evident marks of topical inflammation, instead of exhibiting a firm crassamentum and buffy coat, as is usual in catarrhal affections, was generally found to be in a dissolved state. The putrescent tendency of the fluids was so manifest in several instances, that I found it necessary to recommend the peruvian bark and antiseptics.

But



But whilst I maintain that the temperature of the air contributed not a little to render the Influenza more severe and more fatal at Durham than elsewhere, I am by no means of their opinion, who ascribe the production and propagation of this Epidemic to a particular disposition of the atmosphere. Various facts and arguments may be adduced to prove that the late catarrhal fever depended not on any such constitution of the air, but was disseminated by contagious effluvia, and was as certainly a specific contagion as the measles or the small pox. The astonishing rapidity with which the Influenza spread over the greatest part of Europe, is alone sufficient not only to evince its contagious nature, but to shew that the contagion of Catarrh is, of all others, the most diffusible.

But



But in order more fully to ascertain the remote causes, and the specific nature of the late Epidemic, it will be necessary to offer some general observations on the etiology of catarrhal fever in general.

The Catarrh is a disease, to which, as far as we know, the inhabitants of every climate are more or less subject, but it appears from observation that it prevails most in those countries where great and sudden changes in the temperature of the atmosphere most frequently occur. Pathologists distinguish it into sporadical, epidemical, and contagious. When Catarrh is produced by cold, it seldom affects many people at one time, and in this case, it is said, to be sporadical: But when it can be traced either to a particular constitution of the atmosphere, or to a contagious



effluvia, it has always been observed to prevail epidemically.

The frequency of catarrhal affections, in the spring and autumn, evidently proceed from the great vicissitudes, which, at those seasons, the temperature of the air daily undergoes in this variable climate. The immediate effect of any considerable degree of cold applied to the human body, is to check the cutaneous perspiration, and in consequence of this, there generally ensues a sudden determination of the circulating fluids to the mucous membrane, which lines the nose, the fauces, the trachea, and the bronchia. In this unusual afflux of fluids to these parts, and in the inflammation, which in a greater or less degree always attends it, consists the proximate cause of catarrhal fever.

But



But though the application of cold to the surface of the body when heated; or even the sedative power of grief, fear, and of such other depressing passions, as, by diminishing the nervous energy, induce an atony of the extreme vessels, and lay the foundation of febrile spasm, may sufficiently account for sporadical catarrh, it would be highly absurd to ascribe the late Influenza to any cause, which was not as general as the disease itself. Every circumstance in the history of this epidemic tends to prove that it never could have been so widely diffused by local or partial causes. It arose in a distant corner of Europe, it rapidly extended its baneful influence over countries, where we have every reason to believe both the sensible and insensible qualities of the air, to be extremely different wherever it came: it attacked indiscriminately the young and the old, the

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healthy,



healthy, and the infirm, the chearful, and the melancholic.

But that no doubts may remain, whether the epidemical catarrh of the present year, was propagated by a particular disposition of the air, or by contagious effluvia ; let us compare the different seasons in which it appeared in different countries : at Petersburg this disease began to prevail in the month of February, and at Durham about the 8th of June ; that is, it raged at Petersburg during the coldest part of the winter, and at Durham during the hottest summer weather. Can there be any thing more improbable than that the same constitution of the atmosphere should be compatible with such extremes in its temperature ? It is much more consonant to reason and analogy to suppose, that between the months of February and June there had occurred every



every possible vicissitude in the state of the air.

Did it appear in the least necessary, I could adduce several incontestable facts respecting the manner in which the Influenza was propagated over this part of the kingdom, all tending to shew that it reached different places sooner or later, according as they had more or less intercourse with the metropolis: an irrefragable argument that it depended not on the state of the air, but was disseminated by the contagion of human effluvia. But whether the contagion was communicable by means of cloaths or other *fomes*, or whether it was inhaled with air contaminated by passing through the lungs of the infected, or received only by touching persons afflicted with the disease, are questions which admit not of a demonstrative solution; but from the singular diffusibility of the contagion, it is reasonable



nable to infer, that it was capable of being propagated in all these different ways.

We are equally puzzled when we attempt to account for the *modus operandi* of the contagion of catarrhal fever, as the febrile symptoms appeared not unfrequently before the catarrhal. I am, however, inclined to believe, that this species of contagion acts primarily as a sedative, by diminishing the energy of the brain, and inducing a spasm of the extreme vessels; but by what particular law of the animal œconomy, the fluids are immediately and invariably determined to the mucous membrane of the nose, fauces, and bronchia, I shall leave those to explain who are less afraid to tread in the slippery paths of speculation and conjecture.

I should not have taken so much pains to ascertain the contagious nature



ture of the late epidemical catarrh, did not the prevention of diseases chiefly depend on a knowledge of their remote causes. How many thousand Christians at Constantinople and Aleppo have escaped the plague, the most dreadful of all epidemics, since they happily discovered that it is not disseminated by noxious *miasmata* floating in the atmosphere, but by the contagion of human effluvia only? They have found out that by shutting themselves up, on the approach of the disease, and carefully avoiding all communication with the infected, however long and fatally the plague may rage around them, they run no risk of catching the infection\*. By pursuing a plan somewhat similar, several families in this county entirely escaped the Influenza.

On comparing the late epidemical catarrh with that of 1732-3, as described

\* Lobb on the plague. Russel's history of Aleppo.



bed by Dr Huxham, we find that there are several essential circumstances in which they differ\*.

The blood in the Influenza of the present year, did not exhibit that inflammatory appearance which it seems to have done in the catarrh of 1732-3. The late epidemic was rarely attended with any considerable degree of vertigo or delirium; and never to my knowledge with abscesses in the ears, or imposthumes of the throat; symptoms, which, according to Huxham, were extremely common in the above mentioned Influenza. The same author informs us that the disease proved chiefly fatal to infants, and elderly people. How fatal the late epidemic was to people advanced in years of a relaxed phlegmatic constitution, has been already

\* Nux. de Aëre Mens. Feb.



ready shewn at sufficient length. But with respect to children, the case was here directly contrary to Huxham's observations. Very few children in this place or neighbourhood had any attack of the disease, and, of those who had it, I saw none in whom it was attended with danger\*.

Dr Huxham in endeavouring to account for the cause of the catarrhal fever which prevailed in the year 1737, positively asserts that catarrh is always preceded and accompanied by a very thick and hazy state of the atmosphere, and never prevails epidemically but in the winter months. But how egregiously he was mistaken in both these points, sufficiently appears from the season of the year, and the state of the air, when

\* Huxham de aere et morb. epid. 1733.



the Influenza prevailed in Durham.\* That such a state of the atmosphere, as Huxham describes, is by no means necessary to the rise or propagation of an epidemical Catarrh, appears from some observations of Dr Whytt's, on a distemper similar to the Influenza of the present year. In the months of September, 1758, an epidemical catarrh appeared in Edinburgh, which by the end of November had reached the most northern parts of Scotland; yet so remarkably mild and dry was the season, that, according to Dr Whytt, the rise of the distemper could not be ascribed to any of the known qualities of the air†. The only material circumstances in which the epidemic described by Dr

Whytt

\* Nam et præcedit hunc morbum semper, ac comitatur, crassa admodum, humidaque atmosphæræ temperies: nec grassatur, unquam nisi mensibus hibernis. Observ. de aere, &c. 1737.

† London, Med. Observ. &c. vol. 2.



Whytt seems to have differed from the late Influenza, are, that the former was frequently attended with Diarrhœa and bleedings at the nose, and the latter seldom, if ever with these symptoms. As to the method of cure, the same treatment seems to have answered in both epidemics.

The most favourable and most general termination of the late catarrhal fever was by perspiration. This discharge was, in many instances, extremely copious. Several patients whom I attended, continued in a profuse sweat for 48 hours, without intermission. About ten or twelve hours after the sweat broke out, the defluxion from the nose began to diminish, and soon became thicker and less acrid: the cough too abated of its violence, and an easy and copious expectoration took place in the course of a day or two. Such in gene-



ral was the termination of the Influenza when not attended with local inflammation, or spurious peripneumony.

It seems to be the general opinion of authors that catarrhal fever, whether produced by cold, or contagious miasmata, is always attended with more or less of the phlogistic diathesis. Hence Sydenham, Huxham, and most modern practitioners, recommend blood-letting, as the first and chief indication of cure. But though catarrhs from cold be generally accompanied with some degree of inflammatory diathesis, this circumstance ought rather to be ascribed to the season of the year, at which they commonly prevail, than to the essential nature of the disease. This observation will appear sufficiently just to those who have seen catarrhal fever complicated with evident symptoms



toms of putrefaction : of this several instances are recorded in authors, and two fell under my own observation in the late Influenza. Bleeding was so far from being a general indication of cure in the late epidemic, that unless acute pains in the chest, difficulty of breathing, and other marks of topical inflammation were present, it was seldom employed without aggravating all the symptoms, and protracting the disease beyond its usual course.

But though blood-letting was in general prejudicial, as well as all copious evacuations by stool, yet a strict observance of the antiphlogistic regimen, that is, a total abstinence from animal food from all spirituous and fermented liquors, and from everything of a heating and inflammatory nature, was absolutely necessary : a strict attention to these



these circumstances joined to a plentiful use of thin diluting liquors, drank moderately warm, and laying in bed to encourage perspiration, was generally found sufficient for the cure of the first and mildest state of the Influenza.

But in the second state of the disease where the febrile symptoms ran high, where the skin was hot and parched, the cough hard and frequent, and the discharge from the nose, and fauces sharp and copious, the indications of cure were, 1st. To take off the spasmodic constriction of the extreme vessels and to restore the determination of the blood to the vessels on the surface. 2d, to obviate the effects of the irritation produced by the acrimony of the defluxion from the nose and bronchia, and to promote expectoration.

1st. The



1st. The remedies best calculated to relax the spasm affecting the extreme vessels are those which tend to restore the tone and activity of the sanguiferous system, and to determine the force of the circulation to the surface of the body: viz. *Diluents*, *Diaphoretics*, *Antispasmodics*, and *Emetics*: but of these, the two first were the only remedies I had occasion to employ in the cure of the late epidemic.

The salutary effects of a plentiful use of *Diluents*, in most febrile disorders, have been long known to the Physicians of every country. In health, the fluidity of the mass of blood depends upon the quantity of water which it contains; and in fever, though the cutaneous discharge be often considerably diminished, yet there continues to exhale from the pores of the skin, from the surface of the

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the lungs, and the other excretories, such a quantity of the more fluid part of the blood, that the balance of circulation between the larger and smaller vessels is often entirely destroyed. It is therefore manifest, that in order to prevent the balance of circulation from being destroyed, or to restore it when lost, the most effectual means we can employ in either case, is to throw in such a quantity of watery fluid, as shall supply the constant waste. But though what has been just now said, accounts in some measure for the beneficial effects of Diluents in febrile disorders, yet it by no means explains the whole of their operation. Diluents have manifestly a power of producing a determination to the surface of the body, and of relaxing the spasmodic constriction of the extreme vessels, the *modus operandi* of which, Physicians have not yet



yet been able to explain on any certain principles.

But in this feverer state of the Influenza, I seldom found that Diluents alone were sufficient to take off the spasm, and restore the cutaneous discharge. In most instances, I was obliged to have recourse to *Diaphoretics*, more active and certain in their operation: what seemed to answer best, was a plentiful use of the volatile or fixed alkali, saturated with the native acid of vegetables; when this did not produce the desired effect, in the course of six or eight hours, some more powerful Diaphoretic was added. But, aware of the pernicious effects of all sudorifics of a hot and stimulating nature, in every case of fever, Antimonial medicines were the only Diaphoretics I employed. I generally found that a drachm of An-

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timonial



timonial wine added to a pint of the Saline mixture, when taken at short intervals in small quantities, rarely failed to induce, in the space of five or six hours, a very copious flow of sweat, which was easily kept up by frequently sipping of thin tepid Diluents.

To some patients I gave small dozes of James's Powder, to others a weak solution of the Emetic Tartar ; and where the constriction on the surface did not readily give way, I frequently added Laudanum to the above Diaphoretics, which seldom failed to allay the violence of the fever, and to induce a profuse perspiration. I had likewise the satisfaction to find that an Opiate joined to an Antimonial was always attended with the best effects, in all cases of great irritability of system.

Whether



Whether the sudorific method ought to be pursued in the cure of all fevers, is a question involved in too many doubts and difficulties to be discussed here. It is sufficient for my purpose to observe, that the most speedy and most favourable termination of Catarrhal Fever, has always been obtained by perspiration. This appears from the concurring observations of all the best authors on the subject: for though Physicians are not agreed whether obstructed perspiration be the cause, or the effect of catarrhal fever; or whether it be not sometimes the one, and sometimes the other, according as the disease is produced by cold, or by contagious effluvia, yet they all allow that till the cutaneous excretion be restored, no abatement of the catarrhal symptoms ever takes place.



Hence we perceive that in the cure of Catarrh, the first indication is to restore the cutaneous discharge, and, that till this be effected, all attempts to allay the cough, and remove particular symptoms, must prove vain and fruitless. The medicines most proper for this purpose I have already mentioned, but in order to assist their operation, and render their effects more certain and speedy, I generally directed warm fomentations to be applied to the lower extremities, and to be continued for a considerable time. This method of promoting perspiration appears to me preferable to the Pediluvium and Semicupium, both on account of the facility with which it may be repeated as often as necessary, and because it is performed with less fatigue to the patient, and less danger of his catching cold.

The



2d. The medicines which I employed to obviate the effects produced by the acrimony of the defluxion from the Nose and Bronchia, and to promote expectoration were few and simple. Many patients received considerable benefit from frequently sipping of a weak infusion of Liquorice root, of Tussilago, Althæa, &c. in which was dissolved a considerable quantity of Gum Arabic. But when the defluxion was so copious and acrid as to render the cough almost incessant, I generally found that fifteen or twenty grains of Volatile Alkali, and thirty or forty drops of Laudanum, mixed with four or five ounces of a thin solution of Gum Arabic, not only mitigated the violence of the cough, but had likewise a very sensible effect in promoting expectoration. A table spoonful of this julep was directed to be taken every half hour, as long as the urgency of  
the



the symptoms required it ; and as the cough was, in general, much more troublesome in the night than the day, this medicine was seldom had recourse to before the return of the evening exacerbation. In some cases, I gave small doses of the Oxymel of Squills joined to an opiate : and when opiates, in every other form, disagreed with the patient, I sometimes found the syrup of Poppies produce every effect I wished for.

The third and last state of the Influenza, was attended with such various and anomalous appearances that it was impossible to lay down any general indications of cure. There were however two cases, in this state of the disease of so opposite a nature, that their method of treatment could not be confounded, without the most imminent danger of the patient's life. The two cases



cases I allude to, were those of pneumonic inflammation, and of spurious peripneumony.

When the catarrhal affections were accompanied with a hard and dry cough, pains in the side, or at the breast, difficulty of breathing, and the usual symptoms of pleurisy, the same method of cure was pursued as in other cases of pneumonic inflammation, with this difference only, that some attention was paid to the nature of the epidemic, that the lancet was not so freely used as in the case of simple pleurisy, but that blisters were more so, and almost always with manifest advantage.

The second case was that of spurious peripneumony. The subjects of this state of the Influenza, it has been already mentioned, were persons in the de-



decline of life, and especially those of relaxed phlegmatic habits: the indications of cure, therefore, were to allay the cough, to promote expectoration, and support the powers of life by bracing and gently stimulating medicines. To answer the first indication I generally had recourse to the methods already mentioned, I mean to the use of the Volatile Alkali, and the Tinctura Thebaica, which, when properly and judiciously exhibited, seldom failed to abate the violence of the cough, and promote a free and copious discharge of mucus from the Lungs and Bronchia. Sometimes squills were employed, and seemingly with a good effect, and when the patient complained of any fixed pain, a blister applied near the part affected generally afforded relief. Bleeding, and all copious evacuations either by stool or sweat were cautiously avoided; a  
gentle



gentle perspiration, however, was always kept up, and glisters or cooling laxatives were used, as often as was judged proper.

The last indication of cure was to support the strength of the patient. The medicine I depended on chiefly for this purpose, was wine, which I directed to be added to the water gruel, the panado, or whatever else the patient was wont to take by way of nourishment. The wines, which were most frequently used, were red and white port, sherry, and Lisbon, and the quantity was carefully proportioned to the degree of debility; the former habits of the patient, and the other circumstances of the case. All medicines of a hot stimulating inflammatory nature were entirely rejected, and none employed, but such as tended to support the sink-

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ing powers of nature, without hurrying the circulation. For this reason, the Volatile Alkali, in small dozes, was the only internal, and blistering the only external stimulus I had recourse to. But though, by pursuing the above method of cure, with care and attention, many persons recovered whom I had found to all appearance in the agonies of death, yet several, in spite of every means I employed to relieve them, sunk under the violence of the disorder.

*I am happy to have it in my power to lay before the Public, a short, but accurate account of the late Epidemical Catarrh, as it appeared in the town and neighbourhood of Newcastle upon Tyne. For this I am indebted to my Friend Dr Clark, whose singular genius for observation, has been long known to the medical world.*



A  
L E T T E R  
TO  
Dr LESLIE, F. R. S.  
ON THE  
I N F L U E N Z A;

As it appeared at  
NEWCASTLE UPON TYNE.

BY  
JOHN CLARK, M. D.  
*Fellow of the Royal College of Physicians of Edinburgh,  
and  
One of the Physicians to the Newcastle Infirmary,  
and Dispensary.*



L E T T E R

I N F U N A

J O H N C L A R K M D



T O

DOCTOR LESLIE, F. R. S.

*Newcastle, Dec. 23, 1782.*

Dear Sir,

I N compliance with your request, I shall endeavour to give you as accurate an account of the late Influenza, as it appeared at Newcastle upon Tyne, and its vicinity, as the limits which I have prescribed to myself will admit. But, before I proceed, it will not be improper to make some observations on the state of the air previous to the appearance, and during the progress of the epidemic.

November and December, 1781, were exceedingly temperate ; little or no rain fell, and, except on the last day of the former month, there were neither frost nor snow. The winds were, in general,



ral, from west to south west. The mercury in the Thermometer varied exceedingly little, generally vibrating from 40 to 46 degrees on Farenheit's scale, at ten a. m. and in the last ten days of December the weather was so mild, that the mercury in the Thermometer, at the same hour, vibrated from 49° to 52°.—The greatest height of the Barometer, during these two months, was 30: the least height 29.2.

On the first day of January, 1782, some snow fell. On the 11, 12, 13, 14, 18, and 31st, the frost was moderate: during the rest of the month the air was unusually temperate, and dry for the season. The winds blowed in general from the west. The Thermometer, at 9 a. m. commonly vibrated from 40° to 46°: its greatest height was 51°: the least height 33°.—The greatest height of the Barometer 30.7: the least height 29.

The



The first week of February was mild. On the 7th day the wind shifted to the North, and continued in that quarter to the 21st, during which time there were frost and snow, but to no great degree. The remainder of the month was very mild, the winds being westerly, accompanied with slight showers. The greatest height of the Thermometer was  $47^{\circ}$ : the least height  $30^{\circ}$ .—The greatest height of the Barometer 30.8: the least height 29.3.

The weather in the beginning of March was mild. On the 13th, the wind shifted to the north, and the weather was intensely cold, with frost and snow till the 18th. From this to the end of the month, the weather was wet, cold, and variable. The greatest height of the Thermometer was  $47^{\circ}$ : the least height  $30^{\circ}$ .—The greatest height



height of the Barometer 30.6—The least height 29.

The month of April was cold, wet, and hazy, with very few days free from rain or fleet. The winds were generally from the North or East quarters. The greatest height of the Thermometer was  $46^{\circ}$ : the least height  $37^{\circ}$ .—The greatest height of the Barometer 30.6: the least height  $29^{\circ}$ .

In the beginning of May a very considerable quantity of snow fell in the counties of Northumberland, Durham, and Westmoreland; and during the rest of the month the air continued uncommonly cold, with rain, and sometimes fleet. The winds in the beginning of the month were from the N. E. towards the middle to the end they generally blowed from south to south west.



west. The Thermometer, at seven o'clock in the morning, through the whole month, commonly vibrated from  $38^{\circ}$  to  $45^{\circ}$ : and, at the same hour, its greatest height was  $52^{\circ}$ .—The greatest height of the Barometer was 30.3: its least height 29.2.

The beginning of June had scarcely the appearance of Summer; slight showers fell in the day-time, and the nights were foggy, damp, and cold. From the 8th to the 21st the winds were generally from the south west; the weather was temperate in the day-time, but still continued chilly, hazy, and cold in the nights. From the 22d to the 26th the air was clear, dry, and sultry: the Thermometer, during these days, at seven o'clock in the morning, vibrated from  $60^{\circ}$  to  $64^{\circ}$ , and, at mid-day, from  $70^{\circ}$  to  $72^{\circ}$ . This was all

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the summer we had, for on the 27th a very remarkable change in the state of the air took place: the wind shifted to N. W. the Thermometer at seven o'clock in the morning sunk to  $54^{\circ}$ , and for 23 successive days, it was never observed, at the same hour, to be higher than  $58^{\circ}$ . The greatest height of the Barometer this month was 30.5: the least height 29.6.

The above remarkable constitution of the air in the winter months, was productive of few diseases; but the long series of cold, damp, and wet weather, which continued throughout the whole spring, and beginning of summer, introduced colds, coughs, inflammation of the lungs, and intermittents; and these distempers, especially intermittents, were unusually prevalent in April, May, and the beginning of June. From former accounts of epidemical



mical Catarrhs, it appears, that previous to the distemper amongst the human species, the horses and dogs have been affected with defluxions of rheum from the nose, and severe coughs, attended with fever. But in this part of the country, at least, no such complaints prevailed among these animals.

In this part of the kingdom, from the best information I have been able to obtain, the disease first made its appearance at Shields, the port of Newcastle, on or about the 26th of May; and, what is remarkable, before it seized any person in the town, some ships had arrived from *London*, where the disease was epidemic, whose crews had laboured under the distemper on their passage. And on the 27th and 28th of the same month, a very considerable number of vessels came into



the harbour from the river *Thames*, after a sail of little more than forty-eight hours. A great many of the sailors were still ill of the disease, which soon afterwards spread itself amongst the rest of the ships ; and also was communicated to several families on shore. By the third and fourth of June, it was almost universal both in North and South Shields ; and by the 14th it totally disappeared.

Newcastle being only distant from Shields about eight miles, and the communication, both by the River and Flys, expeditious, the distemper soon made its appearance in town. The first family, as far as can be ascertained, was seized on the 28th of May, and as the persons who were attacked kept a public shop, it is more than probable, that they received the infection from some  
sailors



failors who had arrived from the ships at Shields \*. On the first of June, another family in a house adjoining was attacked: and on the same day two patients had every symptom of the complaint, who were afterwards admitted to the benefit of the Newcastle Dispensary.

But although I have fixed the first appearance of the Influenza in Newcastle to the 28th of May, yet no patient labouring under the distemper, came under my personal observation till the first of June. On the second and third

\* This opinion of the disease being introduced into Newcastle by infection, is farther confirmed by the following fact, for which I am indebted to Alexander Adams, Esq. The master of a vessel who arrived at Shields, in forty-eight hours after he left the river Thames, came to his office on the 28th of May, labouring under the distemper. On the 29th, one of the clerks in the office was seized, and as far as I can learn, was the second person who was attacked with the disease in town.



third of the month many were slightly affected with heaviness of the head, and defluxion from the nose. On the 4th some were more violently seized, and obliged to confine themselves to the house. On the 5th I visited a great number of patients, who were feverely and suddenly attacked; and in two or three days more it prevailed universally throughout the town. By the 16th it had almost spent its force, and in a week more totally disappeared. In about six or eight days after the epidemic appeared in Newcastle, the villages and cottages in the neighbourhood were attacked; and it gradually, but rapidly spread itself to the most northern parts of the island.

From whatever cause the present Influenza may have originally generated on the continent, where it was first observed;



ved; from the account which has been given of its introduction into this part of the country, there cannot remain a doubt of its being of an *infectious* nature. It is probable, however, that the manner in which it is communicated, differs widely from that of other contagions. The small pox, and plague, for example, when they appear in any town or city, are gradually communicated from person to person: at first houses, then streets, and at last large portions of the town are infected. The effluvia arising from the bodies of the sick, in these diseases, not being capable of tainting the air to any considerable distance, the contagion remains for a long time in a place. But the infection of the Influenza being of an exceedingly diffusible nature, it is reasonable to suppose, that the contagious effluvia float in the air to a considerable distance



distance, and, by being applied to the mucous glands in inspiration, infect numbers of persons at the very same instant of time. Hence the disease in a few days spreads like an universal conflagration in every place where it is introduced, and soon totally disappears.

The propagation of Epidemical Catarrhs, which, at former periods, have so often infested Europe, and sometimes extended themselves to the continent of America, must depend upon some general cause ; and none can be more universal than *contagion*, except *miasmata*\*.

But

\* It has already been remarked that epidemical catarrhs have often been found to prevail amongst brutes before the human species have been infected, which shews the causes of these distempers to be general, and probably to proceed from infectious *miasmata* floating in the air. The epidemical Influenza of the year 1733, the most widely spreading epidemic of which we have any account, first appeared universally amongst the horses, before it attacked the human species ; and from the collected memoirs



But whilst I suppose that the late Influenza did not become epidemical from any change of the sensible qualities of the air, with respect to heat, cold, moisture, or dryness; yet such a constitution of the atmosphere, as has been described to have taken place in this country, before the appearance, and

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moirs of different countries, its progress has been accurately ascertained. It invaded Saxony, and the neighbouring countries in Germany, about the 15th of November, 1732, and lasted in its vigour till the 29th of the month. It appeared at Edinburgh about the 17th of December; and raged at the same time at Basil, in Switzerland. It appeared in London and Flanders after the first week in January, 1733; towards the middle of the month it reached Paris; and in the end of it Ireland. In the middle of February Leghorn was attacked; and near the end of it Naples and Madrid. It began in America before it attacked Britain, appearing in New England about the middle of October, and travelled southwards to Barbadoes, Jamaica, Peru, and Mexico much at the same rate as it did in Europe. The disease in spreading from place to place, did not observe the direction, but went often contrary to the course of the winds. These facts are strong presumptive proofs that the distemper must have been disseminated by infectious miasmata, probably conjoined with the contagion of human effluvia.



during the prevalence of the epidemic, could not fail to render it more general and rapid in its progress.

But as the prosecution of a subject of so intricate a nature, as the investigation of the cause of any epidemic, would make me go beyond the limits which I have proposed, I shall return to the description of the disease.

Amongst adults, no epidemical distemper was ever more universal than the Influenza of the present year. The healthy and the strong, the weakly and tender, those confined to the house, and those who were employed abroad, were equally liable. But the disease was particularly severe to the old and asthmatic, and to women in pregnancy. Infants on the breast, however, were totally exempted ; and, as far as came under



under my observation, it was neither prevalent amongst, nor dangerous to children under ten years of age.

But although the Influenza was so universal amongst adults, two families of my acquaintance, who used no means of prevention, did not take the distemper; and in other two families, although the males laboured under the disease, the females escaped. Another circumstance worthy of remark is, if any persons kept free from the disease for a few days after it appeared in the family in which they lived, they were not afterwards liable to be seized. The following was the only exception to this remark, which occurred to me during the epidemic: a young lady who was particularly active in attending her relations, who had the distemper in a severe manner in the first week of June,

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did



did not take the disease till about the 24th of the same month. She laboured under the fever and catarrhal symptoms to a great degree; and, as far as I know, was the last person in the town who was seized with the distemper.

The symptoms which accompanied this epidemic were extremely various; but it was easily distinguished by the following characteristic marks: “ The  
 “ patients were seized with lassitude, or  
 “ general forenests over the body, a dull  
 “ heavy pain in the forehead, particu-  
 “ larly across the eye-brows, and betwixt  
 “ the eyes themselves. A cough soon  
 “ succeeded, with defluxions from the  
 “ nose and eyes, attended with some  
 “ degree of febrile heat, and quickness  
 “ of pulse.”

With these symptoms many continued at their occupations. But in most  
 patients



patients the fever ran so high, as to make confinement to the house, and very frequently to the bed, indispensably requisite. In those who were thus violently seized, the disease came on with coldness and shivering, and sometimes with a giddiness, and was soon succeeded with heat, thirst, and inquietude. The pulse often beat from 100 to 120 pulsations in a minute; the catarrhal symptoms, already mentioned, were aggravated, and, especially after a fit of coughing or sneezing, the patients often complained of soreness and pains in the breast. In some the febrile symptoms ran so high, as to threaten some degree of delirium. After the first twenty-four hours, however, the fever generally abated, but a nocturnal exacerbation with sweating took place for some nights longer.

Some



Some patients were seized with every symptom of the disease, except the cough. Some had the cough and fever without any discharge from the nose; and in others the defluxion from the mucous membrane of the nose, *fauces* and *trachea* was so great, as to occasion excoriation of the nostrils, foreness in the throat, and an incessant troublesome cough. A few also, whom I attended, complained of a total privation of their taste, which continued for several days, and sometimes for a week or two, after every symptom of the complaint had disappeared.

The duration of the fever, in those who were confined, was various. In some it only lasted for a day; in others it continued for a week; and in a few patients, from neglect, or improper treat-



treatment, it ran out from fourteen to twenty days, attended with many anomalous alarming symptoms. But the period of the fever was in general from three to four days, and its crisis was effected either by a kindly moisture on the skin, or by profuse perspiration, which, in some patients, continued for forty-eight hours and longer, without intermission. When the sweat began to flow, the catarrhal affection was mitigated, and every symptom soon disappeared, except a remarkable degree of debility. Relapses, however, were very frequent, and, especially after exposure to cold, every symptom recurred with greater violence ; but after a perfect recovery, no instance occurred where the same patient had the disease a second time.

The Influenza, in its simple state, though sometimes attended with alarming

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ing symptoms, as far as came under my observation, proved fatal to none. But it frequently happened, especially towards the end of the epidemic, that it was complicated with pleurisy and inflammation of the lungs, and, in old persons, with the *peripneumonia notha*; and, in this way, it carried off several persons in this town. It was likewise, several months after the epidemic had disappeared, attended with fatal consequences to persons who had a tendency to consumption; and to those who had the humid asthma.

With respect to the cure: As the disease in its simple state was, in most cases which occurred, free from danger, nothing more was requisite than avoiding catching additional cold; and encouraging sweating, especially when the nocturnal exacerbation came on, by  
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drinking weak wine whey, or any other tepid diluting drink. But when the fever ran high, besides tepid Diluents, I found it in many cases indispensably necessary to prescribe Antimonials, at first, in such doses as to produce gentle vomiting, and, afterwards, in such a manner, as to keep up a free perspiration. These remedies, together with the *pediluvium*, and sometimes an opiate at bed-time, in general soon removed every symptom of the disease; neither did I ever prescribe bleeding, except the lungs were evidently inflamed: for the slighter pains of the breast were carried off as soon as the sweat began to flow; the fever also was mitigated, and soon totally disappeared.

In the anomalous cases, which have been already mentioned, where the fever ran out for some weeks, the treat-

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ment



ment was more difficult. But what answered best were Emetics, Antimonials, and Opiates ; and when the violence of the fever was reduced, or when remissions happened, *the Bark* sometimes proved of singular advantage.

In the complicated state of the Influenza, attended with symptoms of active inflammation of the *Pleura*, or Lungs, I prescribed V. S. freely, and sometimes had occasion to repeat it for three or four times. But when the symptoms of inflammation did not run high, this evacuation was more sparingly used. Antimonials, Pectoral Decoctions, and Infusions were given ; as also mixtures with Gum Ammoniacum, and Oxymel of Squills, when expectoration began to flag. Blisters were early applied, and repeated as often as occasion required. These medicines, together with an opiate occasionally at bedtime,



time, seldom failed to conduct the patient through this dangerous state of the disease.

When the Influenza was complicated with *peripneumonia notha*, known by a pain over the whole breast; quick, wheezing, and rattling respiration; lividity of countenance, with little or no quickness of pulse; the only chance of recovery was to support the strength of the patient by wine, and cordials; and to relieve the lungs, from the accumulation of serum, by Antimonial Emetics, Blisters, and expectorating mixtures, with Oxy-mel of Squills, or Antimonial Wine.

Having thus, though very imperfectly, given you an account of the rise and progress of the Influenza, as it appeared at Newcastle, and its vicinity, permit



mit me, my dear friend, before I conclude, to express my most ardent wishes for your recovery from your present complaints, which have made a voyage to a more temperate climate so indispensable. May you soon return in perfect health ; and may your life be long preserved for the benefit of the medical profession.

I am,

*With the utmost esteem and friendship,*

*Dear Sir,*

*Your most obedient Servant,*

JOHN CLARK.