our extreme cold. We have observed, further, that should the months of March and April be unusually cold the death rate is increased.

In our series of 546 cases thirty-one developed during the months of June, July, August and September, and of these but one case was fatal (3.2 per cent.), which is an extremely low mortality rate and shows pre-eminently the significance of season as a prognostic factor in this disease (Table 1).

AGE.

Age is of great clinical importance both as a predisposing and prognostic factor in erysipelas. Most striking in this connection is the fact that in our series all cases developing in children during the first year of life were followed by a fatal termination, while between the first and tenth years the disease was not fatal. At the other extreme of life the mortality rate in erysipelas is exceedingly high, 83 per cent. of cases terminating fatally in those after the age of 80, and 38 per cent. in those between the seventieth and eightieth years.

The duration of the disease in fatal cases is shorter during early adult and middle life than is it in the aged or in infants. It has been difficult to explain satisfactorily why this condition exists, and the best explanation we have to offer is that between the ages of 20 and 60 erysipelas is apt to represent a highly virulent type of infection and complications develop early and are severe in character. In the senile the erysipelatous process is liable to be of a low grade of infection and to spread extensively.

TABLE 2.—DEATH RATE FROM ERYSIPELAS BY DECADES (ALSO SHOWING AVERAGE DAY OF DISEASE DEATH OCCURRED.)

Different Decades.	Number of Cases.	Number of Deaths.	Mortality Rate, %.	Average Day of Death.
Under 10.....	5	5	100	12
10 to 19.....	6	0	0	
20 to 29.....	33	2	6	12
30 to 39.....	124	5	4	8
40 to 49.....	101	11	10.8	6
50 to 59.....	96	10	10.4	8
60 to 69.....	75	12	16	8
70 to 79.....	44	9	20.4	9
80 to 89.....	21	8	38	12
90 to 99.....	6	5	83	12
Total.....	511	67		

SEX.

Of the 539 cases analyzed with reference to sex there were 342 males and 197 females, while of the 69 deaths 56 of them were males and 15 females.

COMPLICATIONS.

Acute Nephritis as a Complication in Sixty-nine Fatal Cases.—A single urinary examination was supposed to have been made, although in 12 of the cases we found no such records. Of 57 cases where a chemical and microscopical analysis was conducted, 32 of these showed both albumin and renal casts, 14 others displayed albuminuria, in 1 the urine contained casts but no albumin was found, and in 10 the examination was negative. Judging from our experience in the wards, we are inclined to believe that both albumin and casts would have been found in a much larger percentage of cases had the urine been examined daily during the height of the disease.

Among the 159 cases in Table 3 that showed nephritis during the active stage of the erysipelas process, only 24 (15 per cent.) terminated in death. Nephritis complicating erysipelas, according to our statistics, gives a death rate practically the same as that obtained for Americans. Again, in our analysis of the 548 cases nephritis was found as a complication in 29 per cent., although the different nationalities in which nephritis

was found most common did not always show an unusually high death rate, which suggests strongly that nephritis is not of necessity a serious complication.

TABLE 3.—RELATION OF ERYSIPELAS TO RACE¹ AND NATIONALITY, ALSO TO CO-EXISTENT NEPHRITIS.

Nationality.	Number of Cases.	Percentage of Cases with Nephritis.	Total Mortality Rate, %.
Scandinavian.....	4	0	100
English.....	20	40	30
African Negro.....	31	38.7	25.8
Scotch.....	4	50	25
Italian.....	49	34.6	18.3
American.....	229	24.2	15.2
Irish.....	109	35.7	9.1
German.....	22	13.6	9
Russian.....	45	42.2	6.6
Austrian.....	32	12.5	0
Total.....	545		

An analysis of the records for examinations of the urine in 483 cases of erysipelas gave the following: Albumin and renal casts were present in 134 cases; albumin alone was found 148 times; casts without albumin 40 times; albumin and sugar 5 times, and a negative result was obtained in 156 of the cases.

The foregoing statistics show conclusively that renal complications are to be expected in erysipelas, since of the 483 patients studied 327 (67.7 per cent.) were voiding pathologic urine.

GLYCOSURIA.

In our examination of the literature we found only mere mention of glycosuria as a complication or as a pre-existing condition in erysipelas, and the fact that in our study of 483 cases glycosuria was present five times (1.03 per cent.) seems worthy of special mention.

SITE OF DEVELOPMENT AND SPREAD.

An analysis of 552 cases with reference to the site of development, degree of extension, etc., gave the following results: In 66 instances the spread of the disease was limited; in 486 of the cases it was extensive, while in 435 instances (78.8 per cent.) the process extended from one side of the body to the other (crossed the median line), and 117 of the cases spread of the erysipelas process was arrested when it reached the median line of the body.

In 485 cases the initial site of infection was the face, 29 left leg, 11 right leg, 3 both legs, 15 the body (trunk and chest), 12 scalp, 4 left arm, and 3 right arm. Of the 485 cases originating at the face only 7 (0.14 per cent.) of them spread to the scalp, while in the remainder the inflammatory process was limited to the margin of the hair.

THE NEW ERA IN PEDIATRICS; ITS CAUSES AND SCIENTIFIC FOUNDATIONS.*

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A revolution has been and is still taking place in pediatrics. It is progressing slowly, but nevertheless surely. Those who have not watched its development closely may not have appreciated its trend or its significance. This department of medicine, formerly disorganized and chaotic, is now clearing up rapidly, and is bound to be greatly simplified and more easily grasped by the general practitioner.

1. One case each developed in emigrants from Turkey, Holland, and France. No deaths.

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

CAUSES.

In pediatrics, as in every new field of investigation, there have been a few brilliant workers to whom great honor is due; they have gone ahead and worked out some general rules that have been attended with a considerable degree of success when correctly applied, and naturally the tendency has been to incorporate these rules into the teachings of the medical student, whose training up to within a few years has been mainly didactic.

But there are now coming to the front a new set of physicians, men who enter the colleges with good preliminary training, and who have been laboratory trained. Many of them have studied physics, general and physiologic chemistry, biology, bacteriology, zoology, animal nutrition and pathology, and their application to general medicine. These men have been able to view the subject of pediatrics from an entirely different standpoint, and have been able to interpret correctly the general rules laid down by the older pediatricians. They began to scrutinize the theories that had been put forth, and found that many were based on erroneous foundations, or that incorrect conclusions were drawn from imperfectly understood observations. The result has been the downfall of many supposed principles that were thought to be established beyond peradventure, thereby causing an apparent confusion.

To understand the condition of pediatrics to-day thoroughly it should be remembered that the medical profession is made up of three distinct classes: (1) Those who left the medical schools before any attempt was made to teach pediatrics as a separate branch; (2) those who were taught to follow the teaching of authorities, and who did not have a preliminary training in the natural sciences which would enable them to think and act for themselves; (3) those who are well grounded in general scientific work and can weigh scientific evidence and draw their own conclusions.

When this third class began to assert their disbelief in some of the older teachings, it was looked on as almost heresy, and much controversial writing and discussion was indulged in. The result was that a great deal of scientific research was thus instigated to get at the truth, and so much information was obtained that a general recasting of the teaching and practice became necessary.

A new era in pediatrics has thus been ushered in, and dogmatic teaching has given way to demonstration. To quote Huxley: "The man of science has learned to believe in justification, not by faith, but by verification." Fundamentals acquired on faith have been brushed aside, erroneous beliefs are being disposed of and not allowed to retard progress.

SCIENTIFIC FOUNDATIONS.

The infant is an animal and is, therefore, subject to all the laws of growth, development, nutrition, adaptation to environment and resistance to enemies that apply to other animals. Among these general laws it will be found that all animals require the same nutritional elements, but in different forms and quantities to suit the peculiarities of the different animals; that all animals that succeed in living are provided with, or develop, as occasion demands, means of protection against injury, whether by means of flight, skeletal changes, production of callous, or, as in the child, vomiting, diarrhea, sweating, the production of antitoxin bodies or of opsonins. Further, the life history of an animal is divided into two great divisions: first, that from conception to weaning, when a sudden rapid evolution of organs and func-

tions is taking place, and during which period the mother supplies special forms of food which change as development progresses; second, the period after weaning, when growth is mostly a process of enlargement.

DIETETICS SUPERIOR TO THERAPEUTICS.

It is during the period when the infant should be naturally supplied with mother's milk that the greatest difficulty in feeding is experienced, and mostly so because the peculiarities of the infant's digestive organs, and the behavior of milk during digestion are not sufficiently understood. The newer chemistry of milk has completely upset the older theories concerning milk for infant feeding. New compounds or combinations of the proteids of cow's milk with different salts have been discovered, which have diversified physical, chemical and digestive properties, and it is also important to know which of these compounds is being employed to make our clinical reports of value.

This has necessitated the introduction of a new set of terms and definitions with which the profession at large must familiarize itself, if it is to understand the new literature.

Pediatrics will never be an exact science, because infants are constantly adapting themselves to their surroundings, and what may be successful management under one set of conditions may result in total failure at another time or even in another place. But the same scientific laws apply to all infants, no matter where they may be situated or what is the season of the year. When these laws are well understood, and they are not difficult to grasp, there will no longer be any necessity for treating children by rules and formulas. The textbooks may be reduced in size and made much clearer.

The attitude of a great majority of the general practitioners to-day in treating children is in line with the title of a popular song. "I Don't Know Where I'm Going, but I'm on the Way." One thing after another is tried, hoping that if the children keep going they will get some where. Instead of this work, unsatisfactory to both physician and patient, the physician who appreciates the scientific laws involving the young life will seek out the one which is being violated and will set about to correct the conditions. The infant, if it has sufficient vitality, will then be able to recover its equilibrium. For example, he may find that bacteria are producing poisons faster than the infant can manufacture antitoxin or protective bodies; or that heat is not being properly excreted, causing depression and malassimilation; that lack of resistance is due to a deficiency in one or more of the nutritional elements of the food, or that the form of the food is not suitable.

The aim of the physician will be more than to make a diagnosis of a particular disease; he will study the factors that have caused the condition, and then will assist Nature in repairing the damage resulting from the infringement of natural laws.

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Prevention of Tuberculosis.—Favill, in the *Chicago Medical Recorder*, states that the child who prefers to sit in a corner reading a book is an abnormal product of civilization, and has as distinct a vice to overcome as any child with any degree of moral obliquity. The family whose physical discomforts lead it to crave the immediate comforts of warm air, no matter how polluted, and whose economic necessities make it necessary to exclude the external air, is inexpressibly more the proper object of state intervention than if it were being poisoned by food, drug or alcohol.