the fact of its supplanting such other acid in saline combination, in solution. The statement, however, is a convenient reminder, to the prescriber, of a set of reactions which are of common occurrence, and whose bearing upon prescribing is as important as it is obvious.

3. *Salts in solution tend to exchange radicals; or acids, or bases, to displace their respective brethren in saline combination, if thereby an insoluble compound will form.* If, as the cant phrase runs, nature "abhors a vacuum," she also *delights in precipitates;* for reactions, determined evidently by the fact that a precipitate will result, are among the commonest occurrences of chemistry. Concerning this reaction it is to be noted that while precipitation may affect potency profoundly in the case of some medicines, in other cases it may make no difference or may be of distinct advantage. Thus in the case of the so-called black and yellow washes of mercury, it is a precipitate which is wanted, and which therefore is intentionally the subject of prescription. Generally, however, the occurrence of a precipitate in a medicinal mixture is objectionable; for, even if medicinal virtue be not affected, the turbidity is unsightly, and, by the settling of the precipitate as the bottle stands, doses drawn, on the one hand, from the full or, on the other, from the nearly empty vial will vary enormously in strength of the precipitated ingredient, unless the bottle be thoroughly shaken at the taking of each dose. The table of *notable* mutually precipitant solutions, taken from the writer's "Manual of Medicinal Technology" (see at the foot of page 853), is convenient for reference. The reactions therein broadly stated as occurring with solutions of salts of the *alkaloids*, and of the *metals*, are true in the *generality* of instances only.

4. *Things in solution precipitate on addition of an excess of a fluid in which they are respectively insoluble.* Here, as in the former instance, precipitation may not affect medicinal potency, but yet is generally to be avoided because of the intrinsic objections to precipitates in medicinal mixtures, as set forth above. The two medicinal solvents most concerned in the present relation are *water* and *alcohol*, and the commonest instances of the reaction in question are as follows: *albuminous, gelatinous, gummy, saccharine*, and certain *saline* bodies dissolve in water but are insoluble in alcohol, and accordingly precipitate on addition of an excess of alcohol to their aqueous solution; while, *vice versa, alcoholic* solutions of *volatile oils, balsams, camphor*, and *resins* precipitate on treatment with excess of water.

5. *Powerfully oxidizing agents may determine explosions on concentrated admixture with readily oxidizable substances.* The exact conditions determining explosions with individual mixtures of this category will vary with the substances concerned, and must accordingly be learned with each medicine. All that is appropriate to state in this place is that the powerful oxidizers used in medicine are *chromic* and strong *nitric* or *nitrohydrochloric acids, potassium chlorate*, and *potassium permanganate;* while the medicinal substances of easy combustibility are *oils, alcohols*, and *ethers* (including in the latter categories *glycerin* and *sugars*, bodies chemically belonging to the alcohols), dry *organic* substances generally, and the elementary bodies, *sulphur* and *phosphorus*.

Physiological incompatibility, as already stated, is alleged between medicines whose respective so-called "physiological" effects are mutually antagonistic. Such antagonisms are individual and peculiar, and are best discussed in connection with the individual medicines concerned. Two points alone are proper subject for mention in this place. The first is that *exact* antagonism in *all directions* of physiological action of drugs is very rare, and the second, that in practical prescribing the fact of an antagonism need not preclude the proper conjunction of two antagonistic medicines in the same mixture. On the contrary, many of the happiest of medicinal combinations are of remedies more or less antagonistic in operation; this either because the antagonism is itself serviceable in mellowing a too intense action of the dominant antagonist, or because the drugs, though antagonistic in some lines, are synergic in others, and so together yield a resultant effect better for certain remedial purposes than the unmodified effect of either medicine used singly. An example of the former instance is the common combination of castor oil and laudanum; and of the latter, the association of atropine with morphine.

Edward Curtis.

INDIAN HEMP. See *Cannabis Indica*.

INDIAN MINERAL SPRINGS. — Kendall County, Texas.

Post-Office.—Boerne. Boarding-houses.

The town of Boerne is located about thirty miles northwest of the city of San Antonio, on the line of the San Antonio and Arransas Pass Railroad. The country has a general elevation of about 1,670 feet above the sea. The general aspect of the country is very pleasing, being quite hilly, even rugged in places. There are many beautiful drives and fine views. The town of Boerne has a population of about 800. It contains a telegraph and express office, very good hotels and boarding-houses. Four trains daily reach the place. From data furnished by the National Climatological Reports it is found that the average number of sunny days in each year is 277, and that invalids can enjoy more or less outdoor life 350 days yearly. The average summer temperature of the place is 85° F.; winter temperature, 62° F. It is said that a cooling southeast breeze from the gulf prevails all the year and greatly tempers the heat of the summer sun, making the evenings and nights cool and pleasant. The location is beginning to attract the attention of Northern visitors, who visit the place in constantly increasing numbers during the winter months. The Indian Mineral Spring is located three miles from Boerne, from which it is reached by stage and private conveyances. The water is said to be efficacious in a variety of debilitated states, besides being a valuable table water. A partial examination was made by Prof. Charles F. Chandler, of New York. It showed the presence of 138.38 grains of solids per United States gallon, consisting principally of calcium, magnesium, and sulphuric acid in the form of sulphates. A more detailed analysis will be required to classify the water properly.

James K. Crook.

INDIAN SPRINGS, BUTTS COUNTY, GEORGIA.—

Post-Office.—Indian Springs. Several hotels in village.

Access.—Viâ Macon and Western Railroad to Forsyth, thence by stage line to spring. This celebrated spring received its name on account of its great reputation as a medicine spring among the Indians. In the treaty of 1821, when all this portion of Georgia was ceded to the whites, a special reservation of one-thousand acres, including Indian Spring, was made by the Creek nation. This, however, was given up to the whites a few years later. In 1823 General McIntosh erected a small hotel, which is still used for its original purpose (Duggan). A village of three hundred or more inhabitants has sprung up in the neighborhood. The following analysis was made by Prof. A. A. Hayes a number of years ago:

One United States gallon contains 648.03 grains of solid matter consisting chiefly of the following ingredients.

Magnesium sulphate.		Calcium sulphate.
Magnesium carbonate.		Potassium sulphate.
Gases	Carbonic acid	2.61 cubic inches per gallon.
	Hydrogen sulphide.....	1.05 " "

The water contains an exceedingly large amount of sulphate of magnesia or Epsom salts. When to this is added the considerable quantity of other sulphates we have a very valuable mineral water. There is sufficient calcium sulphate to exert a useful influence in diseases of the urinary apparatus and also to modify the purgative effects of the sulphate of magnesia. Among the numerous affections in which the water has been found useful may be mentioned dropsical affections when not due to heart disease, rheumatism, and tertiary syphilis.

James K. Crook.

INDIAN SPRINGS, MARTIN COUNTY, INDIANA.—

Post-Office.—Indian Springs. Hotel for 500 guests. Hacks meet all trains during the season. The resort is located eight miles north of Shoals, the county seat of Martin County.

The therapeutic value of the waters of these springs has been known for years, and they were in great repute among the aborigines. The springs were first opened to the public as a health resort in 1814, and they have maintained their reputation ever since. They have their source along the course of Sulphur Creek, which wends its way through the surrounding valley and empties into the Indian Creek one mile distant from the hotel. The surrounding country is hilly and quite picturesque. The following analysis was made by Prof. E. T. Cox, State Geologist:

One United States Gallon Contains:

Solids.	Grains.
Sodium carbonate	3.65
Magnesium carbonate	18.95
Calcium carbonate	33.10
Potassium carbonate	2.40
Sodium sulphate	11.83
Potassium sulphate	2.40
Magnesium sulphate	30.40
Aluminum sulphate	.82
Iron sulphate	20.23
Sodium chloride	39.38
Magnesium chloride	.06
Bromides	Trace.
Iodides	Trace.
Iron oxide	Trace.
Silica	.45
Total	163.67
Gases.	**Cu. in.**
Carbonic acid	9.58
Sulphureted hydrogen	3.33
Oxygen	3.95
Nitrogen	6.45

This water is a powerful chalybeate, also a fairly strong alkaline-saline water.

James K. Crook.

INDIANA MINERAL SPRINGS AND MUD BATHS.—Warren County, Indiana.

Post-Office.—Indiana Mineral Springs. Hotel.

This new resort is located four miles from Attica, at the junction of the Wabash and the Chicago and Eastern Illinois railroads. Stages from the springs meet all trains. Although but recently improved, this resort is rapidly coming into popular favor. A first-class hotel, with all modern improvements, has been constructed, and an elegant and commodious bath-house is ready for the requirements of visitors. The naturally picturesque location has already been much beautified by the landscape gardener and architect. The water of the springs is said to be pure and sparkling and pleasant to the palate. A recent qualitative analysis (May, 1893) under the direction of the manufacturing chemists, Messrs. Parke, Davis & Co., Detroit, showed the following ingredients: Total solid residue from one gallon, 20.21 grains, made up of the salts of magnesium, sodium, lithium, calcium, potassium, and silicon. The chemist also reports the presence of sulphuric and hydrochloric acids (probably in combination). There was no organic matter, and the water was highly carbonated. A special feature of the place is a deposit of inky black mud surrounding the springs, and said to be strongly impregnated with the mineral ingredients of the water. This mud is warmed to the proper degree and applied by an attendant to the affected parts —the whole body, if required—in the form of a poultice. About one hour is required for a mud bath, when the patient passes under a shower bath and remains until all traces of the mud are removed. He is then placed in a porcelain-lined tub filled with lithia water for a soaking; then comes a refreshing rubbing by the attendant, and the bath for the day is ended. These baths are said to be very beneficial in cases of obstinate rheumatism, in hemiplegia, and in eczema and gout. The internal use of the water is indicated in renal and bladder affections.

James K. Crook.

INDIANAPOLIS, INDIANA.—The largest city and capital of Indiana is situated near the centre of the State, 195 miles southeast of Chicago. An index of its climate is here given for the sake of reference and comparison.

Climate of Indianapolis, Ind.—Latitude, 39° 46′; Longitude, 86° 10′. Period of Observation, Eleven Years Nine Months.

	January.	March.	May.	August.	November.	Year.
Temperature—						
Average or normal	20.9°	40.3°	64.3°	74.3°	40.7°	53.2°
Average range	15.1	16.3	18.9	18.4	14.0	
Mean of warmest	36.5	49.9	73.8	82.9	49.1	
Mean of coldest	21.4	33.6	54.9	64.5	35.1	
Highest or maximum	69.0	77.6	89.0	101.0	75.0	
Lowest or minimum	−22.0	9.0	31.0	48.0	− 5.0	
Humidity—						
Average relative	73.6%	67.0%	60.3%	68.5%	69.9%	67.7%
Wind—						
Prevailing direction	W.	N. W.	S. E.	S.	N. W.	N. W.
Average hourly velocity in miles	6.4	7.3	5.7	4.5	5.8	5.7
Weather—						
Average number clear days	5.3	6.5	9.5	11.0	6.1	94.8
Average number fair days	10.5	10.6	12.5	14.1	10.2	142.4
Average number clear and fair days	15.8	17.1	22.0	25.1	16.3	237.2

As will be seen, it is a temperate climate, with considerable seasonal extremes and diurnal fluctuations of temperature. The humidity is not high, and the rainfall is moderate. More than a quarter of the days in the year are clear, more than a third fair, and about two-thirds clear and fair.

Such a climate is well-situated for a residence for those in ordinary health. For the delicate or sick, a change might be advised to escape the cold of the winter and the heat of the summer, and in order to obtain purer air than a city affords. As the elevation is low, a change also to a high altitude might be beneficial for various morbid conditions.

Edward O. Otis.

INDIGO, WILD.—Baptisia. *Dyers' Green Weed.* Under these names, the herb, and more particularly the root, of *Baptisia tinctoria* (L.) R. Br. (fam. *Leguminosæ*) has been more or less used in domestic, and to a slight extent in professional medicine. Its common names come from the fact that it has been used as a poor substitute for indigo.

The plant is a large, much-branched perennial herb, very abundant in sandy soil, especially in the borders of woods, throughout the Eastern United States. It is said to contain two glucosides, *baptin* and *baptisin*, and the poisonous alkaloid *baptitoxine*, which is believed to be identical with *cytisine*. According to the dose, the properties vary from stimulant, increasing peristalsis and acting as a laxative, to irritant, producing purging and vomiting. Upon the nerve centres, it is primarily stimulant, secondarily depressant or paralyzant, and causing death by paralysis of respiration. Its use has been chiefly, both systemically and locally, in diphtheria, scarlet fever, and sore throat. The dose of the fluid extract is 1 to 4 c.c. (♏ xv. to lx.).

Henry H. Rusby.

INEBRIETY. See *Insanity: Alcoholic and Drug Intoxication and Habituation.*

INFANCY.—Under the term *infancy* (inability to speak) we include that early period of life which extends from birth to the close of the first dentition. Its first few weeks represent a period of great feebleness during which there exists a liability to special forms of disease consequent upon the great change which takes place in the circulation at birth, and upon the assumption by the several organs of their special work in the economy. To the infant at this period the name of "the new-born" (neonatus) is frequently applied. From the end of the

first month to the close of lactation between the ninth and twelfth months is sometimes referred to as the period of early infancy and corresponds to the term "Säuglingsalter" of German writers.

Compared with childhood and adult life, infancy is characterized by rapid growth and development. It is a period specially liable to disease, some of the manifestations of which are peculiar to it; others, though similar to what we meet with in adult life, are more or less modified by the peculiarities of the infant constitution. Its mortality is much greater than that of adult life.

Anatomical and Physiological Characteristics.—The first act of the new-born is to inspire. With the separation of the placenta from the maternal connection and the tying of the cord, the whole circulation of the infant is profoundly altered; for the first time a full current of blood distends the pulmonary arteries to meet air in the newly opened vesicles of the expanding lungs. The thorax is enlarged and the diaphragm and abdominal viscera are depressed, all conspiring to favor the associated changes which take place in the heart. With the sudden deflection of blood to the pulmonary circulation and the greatly increased intrathoracic pressure, the flow of blood through the foramen ovale and the ductus arteriosus comes almost to a standstill, and both these passages become gradually obliterated. Within thirty-six hours Vogel found the ductus arteriosus scarcely large enough to admit a probe; the foramen ovale closes more slowly, the border of the valve usually remaining free for some months, but the foramen is so completely covered that no detriment to the circulation ensues. The left ventricle now takes on the burden of the systemic circulation, rapidly increasing in muscular power so that at the end of the second year its walls are double the thickness of those of the right side.

With the establishment of respiration the livid hue of the skin, due to the interference by parturition with the fœtal circulation, is rapidly exchanged for the deep red of the new-born infant. This hue fades in a few days and the skin not infrequently then assumes a more or less yellow tinge unaccompanied by any symptoms of systemic disorder. This condition is known as *icterus neonatorum;* its true cause is still uncertain, but it is supposed to be associated with the disturbance of the hepatic circulation due to the alteration in its blood supply. This yellow tinge gradually disappears of itself, and by the third week of life the skin assumes the rosy tint of healthy infancy. The fine soft hairs which at birth frequently cover almost the whole body generally fall out by this time and are not renewed, though feeble infants may retain them for some time. The long strong hairs on the scalp with which many infants are born fall out at a later period and are generally replaced by finer and, as a rule, lighter-colored hair. At birth the lachrymal and sudoriferous glands are inactive. It is almost impossible to produce sensible perspiration in an infant a few weeks old; not until after the third month does the activity of the sweat glands commence, but after this age in rachitic infants, perspiration is often very profuse. The sebaceous glands, on the other hand, are very active in the new-born. In the third month the secretion of those in the scalp frequently gives the vertex the appearance of having been smeared with wax, and later on forms a distinct crust of a yellowish-brown color (seborrhœa capillitii) portions of which can be easily removed by the finger nail, when the subjacent skin will be found in a healthy state, not even congested. This excessive secretion ceases spontaneously about the end of the first year, and the scabs, if still remaining, dry and crumble away.

Fat is abundant in the subcutaneous tissues of the healthy infant but is generally absent from the interior of the body. The muscles in the first months are small and soft; not till after the sixth month can they be felt firm and resisting. The bones are still in great part cartilaginous and possess, therefore, much greater flexibility than in the adult.

With the introduction of air the compact tissue of the fœtal lung is converted into a spongy alveolar structure of a rose-pink color and expands so as to cover in great part the pericardium and to come into contact with almost the whole extent of the thoracic wall. The approximation anteriorly of the two pleural cavities, however, is not so close as it becomes in later life, the anterior aspect of the heart and thymus gland remaining comparatively uncovered. The thymus gland, situated partly in the thorax and partly in the lower region of the neck, is in the new-born of large size and increases till about the close of the second year when it ceases to develop; it presents much variation, however, in size and shape. After the eighth year it rapidly decreases in size. Its functions have not yet been ascertained, but it would appear to be connected with the formation of the blood cells. The thyroid gland in the infant is relatively larger than in the adult.

The liver at birth is large and its lower margin is easily felt from 1 to 2 cm. below the ribs. The stomach occupies a more vertical position than in the adult owing to the slight development of its fundus. Its capacity at birth is somewhat less than one ounce.

In the infant the shape of the duodenum is not unlike its form in adult life; its folds are less developed, and more than in the adult does it act as a digestive reservoir where the food from the stomach is mingled with the secretions of the liver and the pancreas. Below the duodenum the several portions of the intestines show considerable difference in their relative lengths as compared with those which they attain in the adult. Both small and large intestines are relatively long; Treves states that the average length of the small intestine at birth is nine feet five inches and of the large, one foot ten inches, and says there is remarkably little deviation from these figures. He estimates that the small intestine grows about two feet per month for the first few months, but after this period development proceeds irregularly, depending upon the nature of the food, the vigor of the digestive process, and the activity of the abdominal nervous centres; it bears no relation to the general growth of the body nor to the weight of the child. The position of both small and large bowel is much less fixed than in the adult; the upper part of the small bowel may frequently be found occupying the lower part of the right iliac fossa, and the caput coli may be found near the umbilicus from which position the colon ascends toward the left hypochondrium. Both ascending and transverse colons are generally very short, while the descending colon and sigmoid flexure are of great comparative length. For the first four months the growth of the large bowel is relatively slight, but a certain amount of readjustment of its position appears to take place by which the ascending and transverse portions increase at the expense of the sigmoid flexure. After the age of four months, however, growth generally goes on steadily. Occasionally this undue length of the sigmoid flexure persists during infancy, seriously impeding the passage of the fæces and leading to constipation.

At birth the kidneys are of comparatively large size and distinctly lobulated. This peculiarity in form gradually passes away, and by the close of infancy they have the same shape as in adult life, though still relatively large. Anomalies are occasionally found. The suprarenals at birth are as large as in the adult. The bladder in the new-born has a capacity of from two to four drachms and lies partly in the pelvis, and partly above it in the abdominal cavity. Renal secretion commences early, and at birth urine is normally present in the bladder and should be voided during the first twelve hours of life. During the first few weeks of life crystals of uric acid and urates, occasionally hyaline casts and epithelial cells with a minute amount of albumin, may be found in the urine, a result of the prenatal condition known as uric-acid infarction. During infancy the urine is of a light color, low specific gravity (1.004–1.010), faintly acid in reaction, and contains a low percentage of urea and of the inorganic salts. The amount of urine passed for the first few days is very variable and has been estimated at from two to three ounces, increasing in the second week to five or ten ounces. Throughout infancy the amount of urine passed is relatively larger than in adult life, but is dependent partly upon the amount of liquid taken by the infant; micturition is very frequent.

The urethra in the male is 6 cm. long, delicate and distensible and generally presents a marked constriction at the meatus. The glans penis is closely invested by the prepuce; cohesion is frequently very firm between the membrane covering the glans and that covering the prepuce. Congenital deformities due to arrested development are not infrequent. In the female infant the urethra and vagina are relatively large and distensible; the uterus is from an inch to an inch and a quarter long, but its fundus is quite undeveloped. Deformities occasionally arise from the non-absorption of the septum formed by the infolding of the cloaca. The mammary gland is well developed, possessing secreting structure in both sexes.

Although the brain of the new-born is of relatively large size, the anterior lobes and the cerebellum are comparatively small, and the fissure of Rolando is much less vertical than in later life. The brain tissue is of a nearly uniform whitish color and of soft pulpy consistence, and contains a large percentage of water. Not till after the close of the first month does gray matter make its appearance on the convolutions. The centres in the medulla and in the spinal cord are in a much more forward state of development than those in the cerebrum, and throughout infancy maintain their functional superiority; of those in the spinal cord the motor centres in the anterior cornua are more developed than those of sensation in the posterior; to this forward state of development of the spinal centres is due the great reflex excitability of the nervous system in infants. So much is this the case that the infant at birth has been termed "a spinal system man."

Circulation.—The blood of the new-born contains a large amount of hæmoglobin, twenty-two per cent. of its solid constituents, but the amount of fibrin is small and the total amount of blood in the body is less than it is in the adult; for this reason infants bear loss of blood badly. The blood cells also for the first few weeks show much variation in size and shape. These conditions, however, soon change; the amount of hæmoglobin at once begins to decrease, reaching its minimum about the sixth month when it remains stationary until after the first year and then begins to increase again; the fibrin rapidly increases in amount. After the first few months the infant has more blood in proportion to its weight than the adult, but the blood is of low specific gravity, has less fibrin, less salts, less hæmoglobin, less soluble albumin and more white blood corpuscles than that of more adult life.

Although at birth the heart as a whole is relatively larger than in the adult, it has to be remembered that in intra-uterine life the auricular half is unduly developed, and that after birth the walls of the left ventricle only slowly acquire that increase of power demanded by their newly assumed burden of the systemic circulation. The arterial system of the infant has also a large relative capacity as compared with the size of the heart, which, associated with a comparatively weak ventricle, renders arterial tension low. This condition persists in some degree till puberty, when it ceases owing to the rapid development of the heart at that age. It would appear that in the young growth and physiologically low blood pressure go hand-in-hand (Jacobi). It is also to be noted that the growth of the large arterial trunks in the infant is not uniform: the subclavian and carotid at birth are relatively large, corresponding with the greater development of the head and upper extremities; after birth the descending aorta and the femoral and renal arteries increase more rapidly in size, corresponding with the rapid growth of the lower extremities.

The pulse rate during infancy is much more rapid than during childhood or adult age, and is easily disturbed and quickened by slight causes; irregularity of rhythm may not infrequently be noted. A girl's pulse is almost always a few beats more rapid than that of a boy. The following table furnishes approximately the pulse rate at various periods:

Table Showing Pulse Rate at Different Periods of Infancy.

At birth	From 120–140
At six months	" 110–120
At twelve months	" 105–115
At two years	" 90–105
At five years	" 80–90

Muscular exercise or excitement will increase this rate by from twenty to fifty beats.

The lymphatic system in the infant is well developed; its glands are numerous and large in size, and the intercommunication between them and the general system is more marked than at any other period of life.

Respiration in the infant, as a consequence of the circular shape of the chest, is chiefly carried on by the diaphragm. Owing to the compressibility of the chest wall, to the lack of development in the respiratory muscles, and the yielding character of their points of origin and insertion, and also to the narrowness of the upper air passages, respiration is easily disturbed and in young infants may not infrequently be observed to be irregular. The rate and rhythm of the respiratory movement are very variable; Eustace Smith gives 40 or perhaps more as the number of respirations in the new-born, but adds that they soon become less rapid. Rotch places them at about 45 for the first weeks of life, and in infants under two years at between 20 and 40 per minute. The ratio between the rapidity of the respiration and that of the pulse for the first few months of life is inconstant and easily disturbed. During infancy more oxygen is inhaled and more carbonic dioxide exhaled than in adult life, as the result of the more rapid tissue change. Infants, however, stand complete deprivation of air for a longer period than will adults. Attention is drawn by Jacobi to the greater labor required by the organs of both circulation and respiration in the infant as compared with those of the adult, while at the same time their own development must go on. Hence fatigue is more easily experienced and rest and sleep are much more urgently demanded.

The Digestive Tract.—The mouth is early moistened by secretion from the buccal and labial glands, though in the first days of life often imperfectly so. Saliva is secreted at this date only by the parotid glands; its amount for the first two or three weeks is but one-tenth of what it becomes after the sixth month; not until after the fourth month do the submaxillary glands assume activity. Even in the first days of life, pepsin is secreted by the gastric follicles in small amount. For the first few weeks the stomach is small in size, somewhat tubular in shape, and plays a comparatively unimportant part in the process of digestion, acting chiefly as a receptacle in which the milk is coagulated by the rennet ferment, and from which it passes in a comparatively undigested state into the duodenum where digestion is completed by the pancreatic ferments. While in a breast-fed infant two months old the stomach empties itself in an hour and a half, in an infant four months old the average time is about two hours. Infants fed on cow's milk require half an hour longer. At birth the average capacity of the stomach is under an ounce; the organ, however, increases rapidly in size, and by the end of the fourth week its capacity in an infant of average size is about two and a half ounces, at three months four and a half ounces, at six months six ounces, and at twelve months nine ounces. In estimating the size of the stomach of an infant, not only is its age to be considered, but also its weight; the greater the weight of the infant the greater will be its gastric capacity. After the first six months of life the secretion of gastric juice becomes distinctly more abundant, but during the entire period of infancy free hydrochloric acid is either absent altogether or exists in only very small amounts in the contents of an infant's stomach. In the intestines the villi are numerous and large, even surpassing in size the corresponding structures in the adult, and contain large capillaries. The glands of Lieberkühn are present, but only in small