

On phosphoric acid / by John C. Peters.

Contributors

Peters, John C. 1819-1893.
National Library of Medicine (U.S.)

Publication/Creation

[United States] : [publisher not identified], [1862?]

Persistent URL

<https://wellcomecollection.org/works/hhfug4tr>

License and attribution

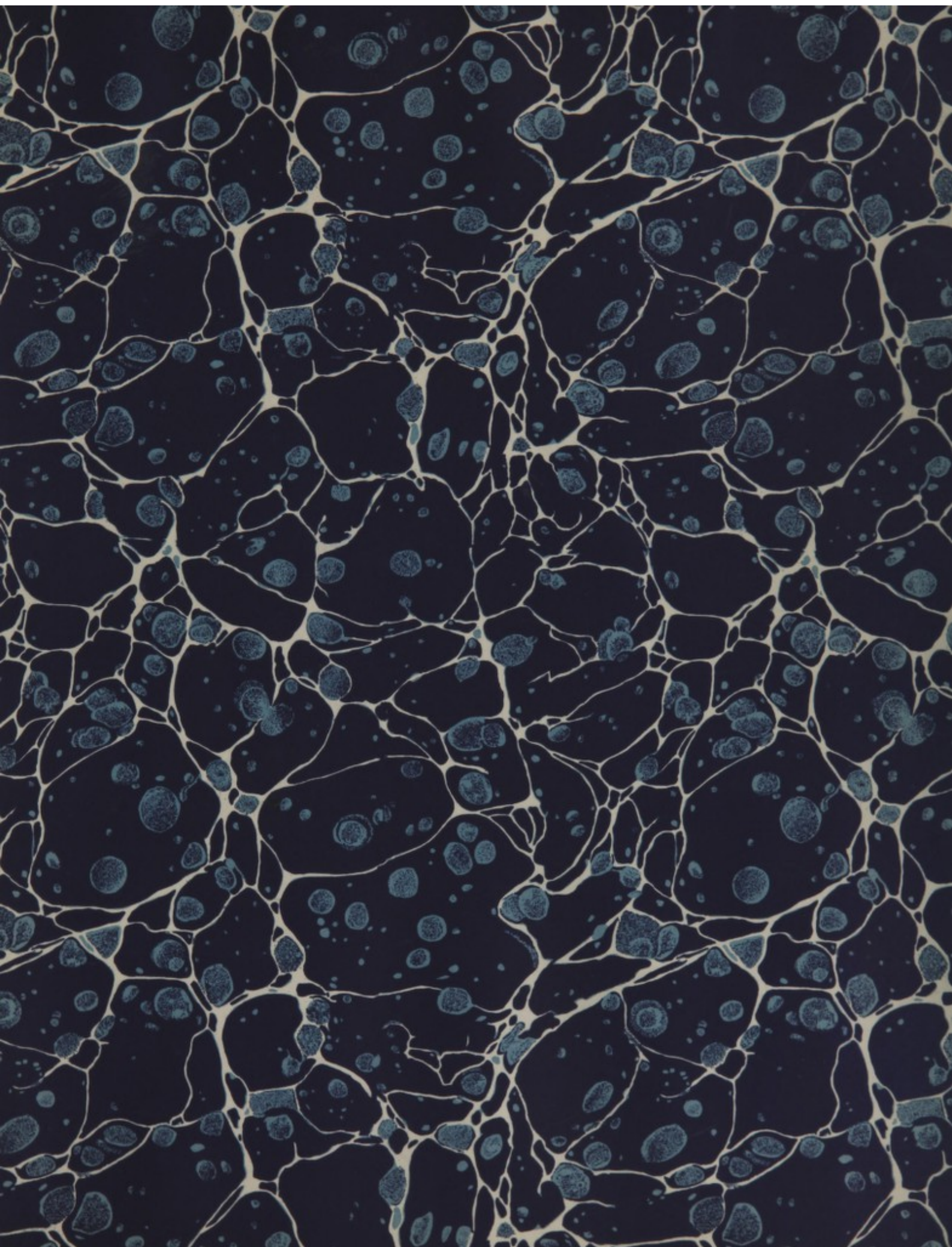
This material has been provided by This material has been provided by the National Library of Medicine (U.S.), through the Medical Heritage Library. The original may be consulted at the National Library of Medicine (U.S.) where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

**wellcome
collection**

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



In the present article I propose to give merely the experience of those who have used this remedy most frequently in the diseases against which it is regarded as very useful. No attempt will be made to describe either its specific use, or the results which have been supposed to follow its exhibition. In a former article its effects upon the healthy subject will be carefully elaborated, and a comparison instituted between its actions on the healthy and diseased states of the system.

In Typhoid and Typhoid Fevers.—In the course of twelve years the celebrated Dr. Hunt, of Philadelphia, treated 3,146 cases of these fevers, in conjunction with Professor Richardson. As to well known, he relied mainly on the mineral acids, and of phosphoric acid he says: "It is the basis of all the mineral acids employed in medicine, and approaches in some respects the vegetable acids, its use may be considered largely that of other acids, without acting injuriously upon the digestive organs, and it never injures the bowels." A very extensive experience induced him to believe that the phosphoric acid, besides its effect on the system in general, possesses something peculiar to itself, a new basis, or modifying, or regulating influence on the central parts of the nervous system. This power he thinks is more evident from its base, phosphoric, in the same way that arsenic acid excites the

power of arsenic, or iron acid, that of iron. In the treatment of typhoid fever, phosphoric acid, taken by common use, purgative, or in acid, and partly from the containing phosphoric. His experience led him to place this acid in the first and most essential rank of all the remedies he had tried in treating these fevers, both on account of the general benefit arising from its use, and the few contra-indications against it. In Sweden it is the remedy most commonly employed in the first stage of typhoid, whatever effect in the abdominal, pulmonary, or in the nervous system, or symptoms from the gastric organs come into existence, the tongue may be found or clean, or bright red, or its epithelium peeled off, or its aspect natural; the abdomen and rigidity may be loose or not, tender or non-tender; there may be diarrhea or constipation; it will prove service in all these conditions. It is only in febrile cases from the intestinal fever that it may be said to be of little or no service, and in such cases, whether of typhoid or of typhoid, it is contraindicated when there is a marked affection of the larger arteries, but as soon as it becomes necessary either to moderate or to excite, the same may be said when pneumonia is present. Phosphoric acid appears to be less powerful and useful than the acetate, as long as the pulse continues quick, full, and more or less tense; but in cases in which the pulse has become weak and small, or was so from the beginning, it is thoroughly indicated. Copiousness of the tears and delirium facinoroso are more contra-indications for the use of this acid than its indicated indications, depression or stupor, but should the stupor be considered, he and the delirium very violent, other agents may have to be added or preferred. Nor does the state of the skin after any other state of its use, it may be dry and pink, or purplish, or blue and red, or white, or red, but when the perspiration is of a thick but not acrid nature, it is not to be produced. From what has been said, Hunt thinks it is evident how extensively phosphoric acid may be relied upon, even in which it may be given, being the rule, there is which it is indicated or injurious being the exception. Hence the value and phosphoric of the Swedish Pharmacopoeia, containing 1 part of glacial phosphoric acid to 4 of water; while the British and of the English contains about only 9 parts of phosphoric acid to 81 of water. Hunt gives 20 to 25 minims every second hour, while Wood recommends from 10 minims to a full drachm per dose, largely diluted with water; I often give from 1 to 1 full drachm per dose, and have never noticed any bad effects; Pottius recommends from 20 to 40 drops. Hunt considers acetate acid more useful when there is constipation of the bowels, with or without delirium, the pulse being not only hard and full, but also more or less tense; but after the run during the first four or five days of the fever, but under the use of the hydrochloric acid the pulse soon becomes lower and weaker, and with this change the phosphoric acid is indicated. In the second stage, marked by sinking of the strength and decreasing power of reaction, delirium subsides, or some degree of stupor, rigidity, very weak and small pulse, dry tongue, with or without diarrhea, dry and cracked lips, tendency to the prostrated condition, Ac., phosphoric acid is useful as in the first stage. Hunt treated a great many cases with or other remedy, but sometimes cuprous, ammonia, or nuxom was required in addition.

Convulsive Fever of Children.—Dr. Deydile gave it in one case when there were stupor, difficult speech, diarrhea, and slow pulse; in another case there was some swelling of the head, full and rapid pulse, some rigidity, semi-stupor, contracted pupils, tongue furred and moist, delirium, and yellow diarrhea; in a third case there were convulsions which subsided, vomiting almost every hour, white tongue, quick pulse, pale face, swollen eyes, and watery skin; in a fourth case, on the 4th and 5th day of the convulsive fever, there was great restlessness, semi-stupor, swollen countenance, petechial diarrhea, &c.

It will be seen from the following experience that this remedy is not as inefficient in hemorrhages as Hunt would lead us to suppose.

Hemorrhages.—A child, but aged 8 was left with rapid and irregular paroxysms of fever, after suffering with measles and scarlet fever in quick succession. He improved during the summer, but in the fall of the year commenced to have frequent and profuse bleedings from the nose; in the course of the winter all the signs of morbid morbidness were developed, marked by petechiae upon the skin and mucous membranes, and hemorrhages from the bowels, nose, mouth, eyes and skin; the patient, however, became gradually debilitated, his countenance became sallow, green dull, and voice weak. All kinds of tonic, anodyne, and rubefacient had been used without avail, when phosphoric acid was tried. Ten, fifteen or twenty drops were given every one-half hour, of a solution of one part of the acid in seven parts of water. The recovery was rapid. Profuse hemorrhages from the nose and great debility were removed in another case, in a woman aged 68.

Hemorrhages.—A delicate woman was attacked with hemorrhage after an easy delivery; she was relaxed with difficulty, and a violent flight brought back the bleeding on the sixth day; the wound remained almost unhealed until the patient was utterly prostrated, with a scarcely perceptible, crawling pulse; difficulty of speech and hearing; cold sweats; the skin was very cold, and blanched. Phosphoric acid, one part to six parts of water, was then given in ten-drop doses every quarter hour, followed by speedy arrest of warmth of the body, cessation of the cold sweats, and a satisfactory restoration. The physician who reports the case had often found it useful in uterine bleedings from the mouth, nose, and rectum. Hunter thought it very useful in passive and exhausting cases of hemorrhage, and in uterine hemorrhages.

Hemiplegia.—In several cases of profuse bleeding from the lungs, Dr. Schreiber found this remedy useful, he gave sub-epinephal doses of a solution of one drachm of glacial phosphoric acid in six ounces of distilled red wine, and two ounces of syrup of raspberry. The patient was obliged to use two ounces of the acid, but this remained perfectly well, although previously he had scarcely escaped an attack longer than two weeks at a time.

Meningitis.—Anastasia related upon it frequently in eleven instances of the acute and protracted stages.

In Pains.—Lentin thought it useful in consumption, and believed that it lessened the quantity of the expectoration, removed it from its adhesive character, and dissipated the night sweats. In a very advanced case of phthisis it dissipated the sweat, expectoration, and fever. The doses used were fifteen, thirty, and forty drops of the dilute acid every three hours. Gouba thought it more useful against the acute fever than the other symptoms of phthisis. I have used it frequently and successfully in the latter stages of various tubercular and without except, it restores the strength of the patient rapidly.

In Cholera.—Belmont states that he has seen phosphoric acid exert a very beneficial effect in a large number of cases, and he does not believe to assert that it is in no degree inferior to cold-water, oil, and barytes. Its effects are sometimes very marked in obstructed cases of stricture originating; it not only removes the stricture, but prevents their recurrence. He gives from five to twenty drops per dose. Thinks it acts not only as a tonic, but exerts some specific influence upon the blood and system generally.

Diphtheria.—In two cases, in children, aged about four years, an other remedy was used than dilute phosphoric acid, one drachm in a tumbler one-half full of sweetened water, and used as a common drink from two to four such portions were used in twenty-four hours; the diphtheritic patches removed both locally, and more than one-half of the system. The patients were progressively well in four days.

Croup Diphtheria.—A child aged twelve and a half years was attacked, in consequence of a severe cerebral injury, with croup of the lungs, which, in the course of four months, attacked a large part of the larynx, the upper portion of the trachea, the bronchi, and lower portion of the lungs. There was a proportioned destruction of the soft parts; the patient was much emaciated, had frequent paroxysms of hectic fever, pale skin, night sweats and irritative cough. Phosphoric acid was given, commencing with a solution of ten drachms of the glacial acid in two ounces of water, in half-ounce doses, every

hour, gradually increased to one half ounce in the same quantity of water, and injections of the remedy were also used. This treatment was continued for eight months with few and no important modifications, and a cure resulted, the improvement commenced very slowly.

Croup.—A woman aged 40 was attacked with phlegmonous epistaxis of the right nostril, followed by suppuration along the course of the nostril; the fingers were stiff and contracted; two small openings discharging offensive pus were found on the back of the hand and one near the elbow joint on the other hand. These openings were enlarged, each was examined, and the base of the wrist found inflamed. Thirty drops three times a day were given of a solution of six drachms of dilute phosphoric acid in one half ounce of water, and one ounce of syrup of raspberry, and a weak solution was injected into the nostrils. Another solution formed on the back of the hand, in ten days it was opened, and the phosphoric acid increased to ten drops daily. In the course of three weeks the openings on the back of the hand closed, but pus continued to be made in the end of the forearm, from which much pus, coming from the neighborhood of the elbow-joint, was discharged. Injections of one part of dilute phosphoric acid in two parts of water were frequently thrown into the nostrils, and the nostrils were removed in one or two instances. The patient's general health improved, and all her functions were well performed; at the end of six or eight weeks she was progressively recovered. The military surgeon, Mead, used it successfully in a case of croup of the larynx, both as an anodyne, and laterally, in doses of ten, fifteen, or twenty drops of the dilute acid, also in a case of croup of the elbow-joint, inserting also small pots, and in a third case of croup of the larynx, the remedy was used in conjunction, and laterally. It was also found exceedingly useful in cases occurring near the elbow-joint. It should be used in conjunction with the croup of the elbow-joint, and in one of the feet, occurring after a frost bite. Against croup of the teeth it has been used several with success. Wood says, as a local application, it has been especially recommended in cases in which it restores the better, dissolves and aids in the separation of the dead portions of bone, and otherwise favors the healing process. I have used it very successfully in several cases of this kind in conjunction with mercury, the relief was rapid, and very permanent.

Disruptive Eruptions.—Dr. Sympson, aged 24 had great coldness of the fingers, with a scurfiness, and, at times, mild appearance of the skin, with pain, especially when water is laid; his appearance was sallow, without excessive emaciation; he perspired profusely and rarely, so that he often had to change his clothes twice a day. His fingers were always cold, and felt disagreeable and heavy; they were sensitive to touch, and great in pressure; the roots of the nails were raised and healthy. The bowels were constipated, but were slightly affected. The cuticle of the skin which remained was brittle, hard, and as if dried or unattached. The patient could have scarcely kept down his spirits, appetite, Perspiration back and tongue, with little or no general effect. Among the remedies used, phosphoric acid proved to be the most useful, and finally was given in very large doses, the dead and unattached ends of the fingers were gradually cast off, and a new layer formed; he used also ounces of phosphoric acid in the course of six weeks. The toes also recovered.

In Cancer.—In cancer of the breast it removed the inflammation of the discharge, and the supplicative process. Hales, of Montreal, corroborates the above experience of Lentin but was practice. Wood reports that it is said to have proved beneficial in effluvia cancerous ulcers.

Nervous Affection.—Anastasia reported it with favor in spinal irritation and hysterical affection, especially if there was more or less muscular excitement. Richter used it with confidence against spasmodic muscular affection, and in spasmodic affections and convulsions occurring after suppression of the menses, or during change of life. Wood says it has been employed in cases of delirium tremens, reducing vital irritability, and has been employed more or less extensively in hysterical and nervous diseases.

Facial Paralysis.—In the case of small-pox, which had occurred 20 years before, followed glandular abscess in the neck and behind the ear; when they healed a complete paralysis of the right side of the face was left. Finally phosphoric acid was prescribed for some other troubles, which resulted with a scorbatic state; the patient, a lady, was now 20 years old. Soon after commencing the acid she experienced an increase of the paralysis of the face, which had previously been somewhat better for several years, was replaced by a cessation of natural warmth for the first time, coupled with some tenderness and redness of the parts; difficulty of swallowing was removed, and the patient regained some control of the subclavicular artery muscle. The doses were 20 drops, four times a day, given in water. The same effects were produced in three similar experiments, continued for four weeks at a time, until there seemed a rational hope that the paralysis would be entirely removed; but the continuous derangement of the stomach led to a cessation in the use of the remedy.

Dependent Paralysis.—The acid cured a case of paraplegia apparently caused by the excessive use of sugar of lead. In another case of paraplegia, 12 days' doses of the dilute acid, three times a day, speedily showed a cure, debilitating night sweats were also removed. Wood related upon it with great confidence in cases of delirium tremens after severe gastro-intestinal irritation and tenderness of the bowels, in various and excessive relaxation of the system; he supposed that it exerted great and specific curative powers over some diseases of the prostate, vesical vesicles, testicles, bladder, kidneys, and spinal nerves. He intended to give more and remove irritability, he used from 12 to 18 drop doses four times a day.

Cure in a young man.—Alluded to mention from his youth, he had several palpitations every day and more at night, became very much debilitated in body and mind, and exceedingly dejected in spirits; he was ordered a nourishing diet and active exercise to the point of fatigue in the open air daily, and 1 teaspoonful three times a day of a solution of 1 ounce of phosphoric acid in 1 ounce of syrup of raspberry, and 8 ounces of sugar of lead. In the course of four weeks the palpitations had lessened considerably, the patient became more cheerful, his complexion more fresh, and his muscular power much increased. The doses were increased to 1½ teaspoonful and a cure was effected, at least the discharge occurred only about every four weeks. Believes had much confidence in its removal of paraplegia.

In Blood Affection.—It has been used with a view of restoring alkalinity of the urine. Bergstein used it against phlogistic diuretics, in doses large enough to produce purgation, after which the urine rapidly became acid, and deposited lithic acid sediments. Belmont found it more useful in cases of phlogistic disease than nitric, tartaric, or acetic acid; it gave tone to the stomach, and diminished the quantity of uric matter. Wood says its property of dissolving phosphate of lime out of the body has led to its employment in cases of phlogistic deposits in the urine, and in modification of the nature of the heart and blood vessels, in the lungs that it might dissolve the abnormal white matter and calculeous formations within the body; in the urinary affections he thinks it may operate beneficially. Dr. Richardson gave it successfully in the case of a boy aged 8, with frequent inclination to pass water, some pain in the back, could not retain his urine well even in the daytime, while the tenderness during sleep was complete. He was well in less than three months. Dr. Chapman has given it with prompt effect in cases of nitric phosphoric urine in children.

In Diarrhea.—Paine thought it adapted the most in children, and remarks in this disease more effectively than any other acid drink.

In Dropsy.—Waring says it has been employed as a tonic in purely chronic and asthenic cases.

In Jaundice and Bilious Affection.—It has been recommended in these diseases by Caleb Miller; he prescribed one drachm in a pint of water, and allowed the patient to use it as a common drink; he says it more profuse increased discharge of urine, and the bilious deposit passed more. I have used it repeatedly, and with great success in chronic bilious affections, marked by more or less pain or tenderness in the region of the liver, nausea, often very obstinate, yellowness of the skin and eyes, coupled with dyspepsia and nervous symptoms. In one case, a lady, with sallow complexion, almost permanently heavily coated tongue, pain and sore of swelling in the region of the liver, with great distention about stomach and along back of ribs, with constant constipation, was more perfectly relieved in the course of a few days from taking dilute phosphoric acid, than she had been for three months. A gentleman with very morbid symptoms was very much better of his dyspepsia and bilious symptoms while using phosphoric acid, he would be particularly because quite regular, his kidneys acted better, he was stronger and lighter, his complexion brighter, and he was much less irritable. I have administered of two other similar cases, and obtained similar results of no small effect.

In Catarrhs.—Dr. Todd states that he has used it with excellent effect.

Hæmorrhoidal Pains.—A man, aged 40, suffered with the most tedious pains in the rectum for years after each passage from the bowels, even if it was soft or fluid, these pains proved obstinate in all treatment until phosphoric acid was given for an epidemic condition of the rectum; the pains in the rectum were relieved long before any improvement in the state of the bowels was produced. This experiment was repeated frequently with the best results.

Phosphoric Acid

