day, will often produce diarrhœal diseases. A temperature of 80° and above, whether combined with much dryness or moisture of the air, will, in a few hours, give rise to genuine cholera infantum, characterized by "projectile" vomiting and purging and intense prostration.

High temperatures weaken the nervous system, convert milk and "artificial" foods into irritants, by acidification and putrefaction. Cold and damp as well as heat and *moisture*, seem to act principally on the large intestine, producing a dysentery, or they convert a simple diarrhœa into a bloody discharge.

Bad air and bad water, whether through "germs" or gases," are capable of producing severe diarrhœa. A quite frequent result of malaria in this city, in children under two years of age, is a dyspeptic diarrhœa, due to weakened nerve power. Quinine promptly cures it.

Simon* contends that "the mucous membrane of the intestinal canal seems peculiarly to bear the stress of all accidental putridities which enter the blood," while Dr. George Johnson, in a series of interesting articles† claims that during hot weather diarrhœa *is* mainly produced by bacteria, infusoria and fungi. There are certainly enough opportunities for bacteria to develop in the midst of imperfect sewerage and drainage of large cities. In an institution under the care of Dr. Moreau Morris, an epidemic of cholera infantum was "stamped out" by attention to the plumbers' bad work.

Intestinal worms sometimes act as irritative causes of diarrhœa.

Nursing children are liable to diarrhœal disorders if the nurses are intemperate, overheated, are easily excited, have tuberculosis, or have not had proper food and air. I have met with a few cases where constipation in the nurse gave rise to diarrhœa in the child. The constipation of the one and the diarrhœa of the other patient were relieved by an aperient given to the nurse.

If the above arrangement of the causes of diarrhœa is correct, the indications for treatment of the majority of the cases of children's diarrhœa are, to prevent and relieve indigestion, and to maintain the health and power of the nervous systems. These indications are met by hygienic measures, and a very moderate use of medicine. The sensitive stomach of the sick child is liable to revolt against large doses, strong odors and unpleasant tastes.

### HYGIENIC TREATMENT.

A severe diarrhœa in a nursing child will sometimes be relieved by *seeing* to it that the nurse has sufficient and varied food; is free from worry and disease; is cleanly, especially as to her nipples, has an abundance of fresh air, is not overheated; that she has no dyspepsia or constipation.

As an artificial food for babies, cow's milk is still the best, provided it is pure, fresh and can be easily digested. Whole milk, warm from the cow, milk with one-fifth to one-third cocoa added, or prepared according to Drs. Chapman, Dawson and Jacobi's formula, is better, as a rule than any of the patented foods, though Jewell's, Ridge's, Neaves', Nestle's, Liebig's, or the Imperial Granum, will be occasionally useful, given with the milk. Beef juices, and not beef teas, are serviceable in diarrhœas. Ice is demanded where there is much thirst and large watery stools. Water may be given often, but in small quantities. Hypodermic and intravenous injections of cows' and human milk will yet afford, in my belief, a valuable method of nourishing and keeping alive children who have, up to this time, been considered hopeless.

Air is an important adjunct in the treatment. Country air, unpolluted by factory gases or the germs from overcrowding of cities; salt air, the air obtained by the change of a sick child from one part of the city to another; the *being* for eight, ten, twelve, or fifteen hours even, in the *open* air, will assist in the relief of many so-called incurable cases, and, of itself, will cure some severe diarrhœas. Good air, and plenty of it, is a wonderful nerve-strengthening agent. While a free circulation of air is necessary by night as well as day, it is important to protect the body from damp by flannel under-clothing or bands; from currents of heated air by moistening the air of the room by suspending in it cloths dampened with water, or by the evaporation of moisture from a large piece of ice placed in the room. Straw ticks, wire woven mattresses and "hammocks" are the best beds for summer use.

Bathing, properly used, is at times a necessary element of treatment. Baths are to be given rapidly to and followed or accompanied by brisk, firm friction with the hands. They are to be given cold or hot, and made stimulating by mustard or salt, if desired; or they are ordinarily best given tepid, and followed by cold spongings. Prompt reaction is of course the test of their usefulness.

Great prostration and severe diarrhœas are best controlled, according to my experience, by cold baths frequently repeated, according to the method explained by Dr. Holmes, of Ontario, * and by Dr. Comegys, of Cincinnati. The temperature of the body should be kept at 100° F. The dangers of cerebral congestion and irritation are lessened by cold spongings or cold compresses with friction, as advised by Dr. Winter nitz.†

For the reduction of high temperatures, and the induction of a free action of the skin, kidneys and liver, inunction is valuable. No better

* "Filth Diseases."

† London *Lancet*, Sept. and Oct., '78.

* Trans. of International Med. Cong., 1876.

† London Pract., August, 1878.