

penetrate the vital organs, to destroy nerve centres and cause unexpected death. Even in the apparently mild forms of the disease, it is necessary to exercise the greatest caution and to give attention to every possible complication.

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#### PURE WATER A POISON.

(The following is clipped from Foulon's *Clinical Reporter* and will be comforting to drinkers of Schuylkill, Croton, Ohio river and Ottawa river and other waters that are not chemically pure):

We doubt whether Germany has any 'Ralstonites,' who insist that only distilled water should be used as a beverage, but it has a Dr. Koppe, who, in the *Deutsche Medicinische Wochenschrift*, knocks the pins from under the Ralston doctrines. The *National Druggist* gives an abstract of the article, from which we quote: "By chemically pure water, we usually understand perfectly fresh, distilled water, whose behavior and properties are well understood. It withdraws the salts from the animal tissues and causes the latter to swell or inflate. Isolated living organic elements, cells, and all unicellular organisms are destroyed in distilled water—they die, since they become engorged therein. They lose the faculty, upon which life depends, of retaining their salts and other soluble cell constituents, consequently these are allowed to diffuse throughout the water.

"Distilled water is, therefore, a dangerous protoplasmic poison. The same poisonous effects must occur whenever distilled water is drunk. The sense of taste is the first to protest against the use of this substance. A mouthful of distilled water, taken by inadvertence, will be spit out regularly. \* \* \* The local poisonous effect of distilled water makes itself known by \* \* \* all the symptoms of a catarrh of the stomach on a small scale.

"The harmfulness of the process, so much resorted to to-day, of washing out the stomach with distilled water is acknowledged, and we find the physicians who formerly used that agent are now turning to the 'physiological solution of cooking salt,' or 'water with a little salt,' or the mineral waters recommended for the purpose. The poisonous nature of absolutely pure water would surely have been recognized and felt long since, were it not that its effects in their most marked form can seldom occur, for through a train of circumstances 'absolutely pure' water can rarely be found. The ordinary

distilled water, even when freshly distilled, is not really absolutely pure, while that used in the laboratories and clinics is generally stale, has been kept standing in open vessels, generally in rooms where chemicals of every sort abound and whose gases and effluvia are taken up by the water."

This poisonous action of pure water is, according to Dr. Koppe, responsible for some of the unexplained effects of administering ice to invalids. He says:

"Patients with hitherto perfectly healthy stomachs, who, after operations, are for any reason allowed to swallow 'ice pills,' \* \* \* not infrequently contract catarrh of the stomach. There are well known sequelæ of the use of ice, but up to the present no reasonable hypothesis has been offered as to the etiology of the same. It has been charged, it is true, to the 'bacteriological contents' of the ice, but examination of the latter has demonstrated it to be almost free from bacteria such as would account for the phenomena, though otherwise frequently containing bacteria. As a remedy our clinicians say we must use only artificial ice, made from distilled water. Well, it is possible that artificial ice may be better borne than the natural, but it is not because it is purer than the latter, but *exactly the contrary*. It is simply because the melted water thereof more closely approaches our ordinary drinking water.

"This point in the care of the sick, which is certainly worthy of investigation and explanation, finds its analogy in daily experience of the travellers in the high mountainous regions. The guide books warn him against quenching his thirst with snow and glacier water, and the waters of the mountain brooks as well, for, as is well known, these not only do not quench thirst, but give rise to much discomfort. \* \* \* \*"

"The harmfulness of glacier water, like that of the pure, cold mountain brooks, most of which, indeed, spring from glaciers, arises from the fact that they are exceedingly pure waters and produce identically the effect of the use of distilled water, they are poisonous. The supposition that the coldness of the water causes the sick, uneasy feelings, cannot stand for a moment, though this coldness is very probably the reason that its unfitness for use is not at once recognized and the liquid rejected.

"The last link in our chain of prolegomena is found in the case of one of the Gastein springs. The water of this spring has an electrical conductivity of