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NEW YORK LANCET.

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Dr. Walter B. Chase, 263 Hancock Street,
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In addition to the publication of original articles, this journal contains all articles giving new methods in medical and surgical treatment appearing in the *London Lancet*, *British Medical Journal*, and *La Semaine Médicale*—the three most important journals of Europe.

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The Menace to Public Health from the Use of Contaminated Drinking Water.

Though the subject is large and its thorough treatment can hardly be included in the columns of a medical journal, a few points that will scarcely fail to be of general interest may nevertheless be brought forward for consideration. It is not many years since, when a specimen of a water supply was taken to a chemist and if no extraordinary amount of sulphates or of albuminoids could be readily found, the managing board congratulated itself that the purity and excellence of such water was beyond question. Within the last decade or so other deleterious factors have been brought to the attention of public authorities. The surroundings of the lakes or ponds from which the water is taken, and the sources of the brooks, streams, or rivulets leading to the storage basins, have been subjects of special consideration and of legislative action.

Notwithstanding such careful study, the sewage of a country town or village, as too often happens, may gain admission into some of the branches of the supply, and thus become the source of grave consequences. The progress of trade and the marts of commerce, while affording an increase of comforts and conveniences, have been productive of danger. The erection of factories for the manufacture of cloth, the establishing of tanneries, and sometimes of a slaughter-house along the watercourse, and in the vicinity of the furnishing supply, have added materially to the contamination. It is only quite recently that some of the Massachusetts towns have been relieved from the defiling influences of ice companies, that claimed control of that commodity, and so had employed large numbers of men and teams in cutting, taking, and hauling the yearly stores of ice from some of the best storage basins for domestic water.

The difficulty in tracing the contaminating influences of drinking water in the production of typhoid fever, intestinal disorders, and of other preventable diseases is often very great, especially when the cases are sporadic or are not of general interest. That different forms of bacteria may be conveyed in water is well proven by experimental tests made in Massachusetts on the Lawrence city water taken from the Merrimac River for determining the presence and absence of the bacillus coli communis. The object of entering upon the work was to ascertain whether sand filters would remove the same percentage of the bacillus coli communis that they do of the total number of bacteria present in badly polluted water. According to the State report of 1898-99 the typhoid germ is never found unaccompanied by the colon bacillus, although the reverse was found far from being true. It was assumed that for every typhoid bacillus in a polluted water that there may be many thousands of the variety of bacillus coli. The experiment tended to show further that a sand filter removes a much larger percentage of typhoid germs from water than of the bacillus coli. The experiments at Lawrence and elsewhere along such a line of investigation are most important, and thus establish the fact that the purification of drinking water can, by the use of sand and other filters, be largely effected.

All experiences of the careful observer become most convincing that the individual water consumer should not rely wholly upon the management of a water board for the purity of the supply. Every household should recognize that strict measures for sterilizing water for domestic

use should be employed. No uncultivated taste and no unaccustomed methods should stand in the way; these should be overcome that one's life and health, as well as those of others, may not be lost through neglect.

Another source of danger to the water-takers will soon have to be met, on account of an effort being made on the part of some water boards to introduce the meter system. While the use of meters supplied by gas and electric-light companies may be highly proper, any devices for measuring and limiting the proper amount of drinking water should be condemned, for such expedients would be a menace to the public health. A free and frequent flow of water out of the supply pipes and into the sewers should already be encouraged as a measure of great sanitary importance. The shutting off of the water supply at night and at other intervals, as has been done in some of the English and other towns, has not unfrequently been followed by an increase of typhoid fever and of other preventable diseases. It is only of late that in Massachusetts, and in some of the other more advanced commonwealths, the larger municipal water supply has been protected from the contaminating influences resulting from boating, swimming, and skating. Fishing in all such sources of water should also be interdicted. It is true that the health and sanitary boards have to act second to the operations of great financial projects; perhaps such subordination as a general procedure is not improper. But when the lives and health of a whole community are to be put in jeopardy, the officers of the public health should be active in sounding the proper note of warning and of seeing that their advice is listened to and respected.

Overheard.

Success in medicine, as in some other profession, means survivorship, and survivorship usually means a good physique. A man with feeble health may be a great preacher, a great lawyer (though I can hardly imagine him to be a great pleader), a great writer, or a great scientist, but he cannot be a great medical practitioner, for disease and suffering recognize no office time or any day of eight hours. The medical man must be ever ready and ever active and must know no fatigue.—Sir John Williams, M. D.

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The littering of the doorsteps of the city and suburbs with suggestive and vile "medical" advertising pamphlets is a nuisance that should be abolished by the authorities.

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Dr. Knopf (Berlin) referring to the pneumatic cabinet, which has been extensively used in America, expresses the opinion that the use of the cabinet is of considerable value in the treatment of phthisis, especially at places of low altitude. A patient placed in this cabinet, when the pressure is reduced, experiences after some temporary embarrassment a greater freedom of respiration, and Dr. Knopf believes that the air penetrates more freely into the lungs. A course of this treatment diminishes anæmia and the tendency towards pulmonary congestion while increasing the development of the pectoral muscles. He believes also that if care is taken to make the patient breathe through the nose—a point to which in all cases he attaches much importance—the treatment is of value in laryngeal tuberculosis.

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The influence of syphilis in the production of alarming disorders of the nervous system is a subject dealt with by Dr. J. L. Steven in a recent lecture. The first case was one of syphilitic hemiplegia with Jacksonian epilepsy in a man, aged forty-six years, probably due to a gummatous affection involving the motor cortex. There were also present gummatous tumors of the scalp. Rapid recovery took place under mercury and iodide of potassium. This case reminds the reviewer of a similar case under his care which pursued a very varying course under anti-syphilitic treatment. Trephining was eventually had recourse to, but unfortunately this patient succumbed and a localized gummatous affection of the meninges and cortex of one Rolandic area was found. The second case was one in which several of the eye muscles were involved and there was severe hemicrania. Complete recovery ensued under treatment with iodide of potassium and mercury. In the third case, of a man, aged forty years, there were motor aphasia and marked paresis and rigidity of the right arm and hand, preceded by severe headache. There was reason to believe the disease to be of syphilitic origin, but no improvement followed anti-syphilitic treatment. The last case occurred in a man, aged thirty-seven years, who had severe and protracted headache with alarming convulsions and mental derangement of undoubted syphilitic origin. The headache and fits were relieved by prolonged mercurial treatment.

*Intra-Pelvic Operations for Relief of Posterior Uterine Displacements.**

WALTER B. CHASE, M. D.,

Brooklyn, N. Y.,

Consulting Gynecologist and Obstetrician to the Long Island College Hospital of Brooklyn and Consulting Gynecologist to the Hospital of Hempstead.

The number of cases of uterine retroversion and retroflexion which cannot be relieved by pelvic massage or mechanical support is numerous. Added to these are a class of cases in which adhesions, more or less strong, preclude safe replacements by any method short of opening the peritoneal cavity and cutting these adhesions. The suffering and the measure of incapacity these posterior fixations of the uterus entail admit of a wide degree of severity. In one case the patient suffers but little; in another the same apparent physical condition produces invalidism, appearing in a variety of symptoms too familiar to require repetition. Coincident with this, and so closely related to it as to often baffle perfect differentiation as to its ætiology, is a train of reflex phenomena manifested through the sympathetic nervous system, which adds to the patient's discomfort and serves to complicate the ends to be accomplished by rational treatment.

Added to this in not a few cases is the barrier this condition offers to reproduction. The fixation of the uterus effectually prevents the ascent of the gravid uterus, and as a result abortion or premature labor follows. So far as reproduction is concerned the consequences are the same as sterility. The reasons which prompt those so suffering to seek relief are twofold, first, and most frequently the pain and the impairment the condition imposes, and, as a second consideration, the desire of motherhood.

The principles which guide in the management of these cases form the theme to which I briefly invite your consideration. Experience and judgment must decide as to the wisdom of interfering in a given case. Not every case of posterior fixation of the uterus justifies resort to laparotomy for its relief, while some cases will respond to none but radical measures. In this discussion I shall not refer to the Alexander operation, for its field of usefulness is in cases of retro-displacements, in which reposition is not precluded by adhesions; neither will reference be made to ventro-fixation as a remedy in procidentia.

If the abdomen is opened to correct the displacement, one of three methods may be adopted, viz., intra-pelvic shortening of the round ligaments, ventro-fixation, ventro-suspension.

* Read before the Brooklyn Gynecological Society, January 4, 1901.

The utility of intra-pelvic shortening of the round ligaments has quite recently taken a position as a rational and efficient method in the correction of these deviations. It has limitations, and this fact will determine its applicability. If, after a retroverted or retroflexed uterus is relieved of adhesions and the barriers to normal replacement are, as far as practicable, removed, the question must then be determined as to the method to be followed in thus retaining it. If the round ligaments are of sufficient tensile strength to maintain the vagina properly, their shortening is clearly indicated as the simplest and best method at our command. The exact manner will depend much on the judgment or preference of the operator.

In Montgomery's new text-book on "Practical Gynecology" he describes the technique of three operations for intra-peritoneal shortening of the round ligaments as follows: "The operation may be performed, as Wiley has suggested, by doubling up from two to four inches of the ligament on each side and uniting it by sutures, so that the shortening of the ligament draws and holds forward the fundus." "Mann grasps the broad ligament about the junction of its middle and outer thirds and folds the ligaments in three parts, which are united by sutures, so that the ligament is well shortened on each side." "A. P. Dudley of New York performs an operation which he calls desmopyenesis. It is carried out as follows: After opening the abdomen, an assistant introduces two fingers into the vagina, pushes the uterus as high as possible in the pelvis, and it is thus brought through the abdominal incision; an oval denudation is made upon the anterior wall, taking care not to go too near the bladder; then each round ligament is brought up to the portion of the peritoneal covering of the inner side, denuded to correspond to that on the uterus, and the three denuded surfaces are united with catgut sutures."

In adjusting these sutures care must be taken to pass them sufficiently deep in the uterine tissue to secure against cutting out before union has occurred. The uterus when dropped forward is held in position of anteversion.

Whichever method is deemed best for any particular case, Dr. D. Tod Gilliam of Indianapolis, in a paper read before the American Association of Obstetricians and Gynecologists at Louisville in September last, advocated round ligament ventro-suspension of the uterus for retro-displaced uterus. He advocates this measure in that it will afford a natural support, with fair mobility and permanency, and will adapt itself to pregnancy and parturition. His method is a three-inch abdominal section, the breaking up of adhesions, bringing the round ligament to the opening, with the patient in the Trendelenburg post-

ure, and carry a thread about it one and a half inches from the uterus on both sides. He then exposes the rectus muscle near the lower end of the incision, and passes the margin of the incision and more than an inch above the pubes, and places the thread which surrounds the ligament into its jaws. The forceps is now withdrawn and both ligament and thread are brought up through the perforated wound in the abdomen, and while the ligament is held taut fastened by a to-and-fro catgut suture passed deeply through the ligament, including the tissues on either side. Whichever method is deemed best for any particular case may be adopted, or any other modification which seems more nearly to meet the indications when the round ligaments are much attenuated; or in the event of their absence, which occasionally happens, they cannot be made available for such purposes.

This manner of maintaining the uterus in position, which seems ideal and might be justly termed physiological, appears free of danger to the patient, which may be a fatal objection to fixation or suspension. If pregnancy follows, there should be with the enlargements of the uterus and adnexa such a corresponding lengthening of the round ligaments as will in no way interfere with the progress and termination of normal gestation, and herein lies its value. It would seem in physiological grounds that ventro-suspension would better meet the exigencies of gestation than ventro-fixation, though it would appear that in suspension there is greater risk of intestinal congestion or obstruction, than in ventro-fixation.

This, however, is not the principal risk which attends these measures, whether from ventro-fixation or ventro-suspension.

The danger arises from their becoming a barrier to normal and safe gestation. The recent experience of an eminent fellow of this Society, which is about to be made public, will serve to impress the skeptical with the danger attending such procedure, even though they may have escaped the grave complication which compromised the life of the unfortunate mother. The case was briefly as follows, for through the courtesy of the gentleman I was present at the operation. A woman, in her first pregnancy, had been operated on by one of the most distinguished American gynecologists for retro-deviation, and the intent was to suture the uterus to the abdominal wall so as to correct the displacement. It was found on completion of the period of gestation that Nature was unable to accomplish delivery from an anterior fixed position of the uterus, the fundus being close to the anterior abdominal wall. The cervix was fixed posteriorly high up by the tilting forward of the uterine body, the cervical canal was four or five inches long, and the cervix refused to dilate on the appearance of labor. Cæsarian section was resorted to as the only possible mode of procedure, and twins removed. The twins survived; the mother succumbed to exhaustion. The operation revealed a dense adhesion about one inch square, holding the fundus close to the abdominal wall, which accounts for the "dystocia." The expectation of the operator that two or four stitches which united the fundus of the uterus to the anterior abdominal wall would stretch into a suspensory ligament was not realized, but instead there was an unexpected plastic exudate which became organized into adhesions so strong as to hold the uterus immovably forward. Just here is the element of uncertainty and danger. No operator can predict in advance if the uterus is stitched to the abdominal wall, how large or strong the resulting adhesions will become. If small, they will probably stretch into a suspensory ligament; if dense and large, they may result in innumerable adhesions, with a train of symptoms such as has been described. From the small number of accidents of this nature which have been recorded the inference is that the risk of ventro-suspension is relatively small, and if it could be demonstrated that such was the fact, it would go far towards relieving operators of the anxiety concerning such complications. On theoretical grounds it would appear that the danger of illness or the entanglement of the mesentery in such adhesions was a serious menace to the safety of the patient, but it must be admitted that in practice the gravity of procedure lacks confirmation. But notwithstanding the fact that cases have not been more frequently reported, I cannot escape the belief but that they have occurred. The question is raised by some of large experience whether an operator is justified in allowing his patient to take the risk of complications attending pregnancy after anterior suspension and fixation. There is some risk, no one will deny—how much or how little no one can predict with absolute certainty.

In a recent case coming under my observation of a young multipara suffering from chronic ovaritis on the left side, with prolapse of the organ, and extreme retroversion with adhesions, which was attended with pronounced neurasthenia. I removed the diseased, inflamed, and prolapsed ovary, stitched the uterus to the abdominal wall by silkworm-gut suture, which passed through the abdominal wall, and was fastened to a large, flat button at the lower angle of the abdominal incision, so that it could be removed, and ligated the right Fallopian tube, for the purpose of preventing further conception.

In deciding what is best to be done where in-

traperitoneal shortening of the round ligaments is insufficient or impracticable for correcting posterior deviations, associated with adhesions, making laparotomy necessary, the circumstances surrounding each case, the condition of the patient, and the desire for children in those married or those anticipating marriage, must be taken into account, and each case decided upon its merits. This statement, however, is not to be construed into a sentimental license for the prevention of conception per se. In case these posterior displacements demand operative interference, in those who have passed the child-bearing age, or those who will never enter wedlock, resort had better be had first to shortening of the round ligaments, if that will overcome the deviation, and if not, ventro-fixation or ventro-suspension. Due weight should be given to the risk of intestinal angulation or from obstruction to gestation arising from the undue size of the ligaments or adhesions which arise as a result of anterior fixation or suspension. The utility of these methods in relieving one of the most distressing ailments to which woman is subject is extremely satisfactory. The dragging pain, the backache, the mechanical obstacles to defecation, the direct pressure, and the reflex symptoms, few or many, which perturb the sympathetic nervous system, give place to healthy innervation, and returning health asserts its rightful sway.

To recapitulate: (a) Posterior deviations, with fixation from adhesions, are usually a serious menace to health and often a barrier to child-bearing; (b) that this condition of affairs can best be treated by laparotomy; (c) that after the adhesions have been severed the cure should be completed by maintaining the uterus in an anterior position: first, by intraperitoneal shortening of the round ligaments; second, if this is insufficient, resort should be had to anterior abdominal suspension or fixation; (d) that experience, while not settling all points associated with this subject, nevertheless has demonstrated that the efforts of maintaining the uterus in an anterior position either by ventro-suspension or ventro-fixation are, from the uncertainty of the degree and extent of the adhesion, not devoid of danger in the case of conception, which should be considered, and in many instances provided against; (e) that ligation or resection of the Fallopian tube is a more rational procedure than ovariotomy, for the prevention of conception, where justifiable, as it does not unsex the woman, and saves her from the premature menopause and its unpleasant consequences—a physiologic reason of much weight; and (f) the value of these methods of treatment of posterior deviations is amply demonstrated, and the necessity of their adoption should be more generally considered.

263 Hancock Street.

*Irreducible Incarcerated Retroflexed Gravid Uterus.**

Dr. William A. Quinn of Henderson, Ky., read a paper on this subject, in which he stated that the pregnant uterus may become retroflexed by reason of great laxity of the uterine ligaments. It may become incarcerated by adhesions formed before conception takes place, or by the cervix pressing against the pubic arch, lifting the bladder out of the pelvis, elongating the urethra, and preventing perfect evacuation of the urine, which has a tendency to force the fundus down under the promontory of the sacrum. Softening of the lower segment, which takes place in the gravid uterus, lessens its self-support and its resistance, and robs it of its natural power to rise out of the pelvis and correct its position. With the persistence of the conditions which cause the retroflexion, and the rapidly increasing size of the uterus, it soon becomes incarcerated and cannot free itself. If the condition is recognized on or before the end of the third month, if adhesions and other complications are absent, often it is only necessary to thoroughly evacuate the bladder and lower bowel, and the uterus will free itself, or it may sometimes be necessary to place the patient in the knee-breast posture, and even to administer an anæsthetic, and it will require the employment of no unusual skill to easily and readily restore the organ to its normal position. Lusk, in his work on obstetrics, mentions sixteen cases by E. Martin, in four of which spontaneous reposition of the organ followed the evacuation of the bladder, and in eleven reposition was accomplished in the knee-elbow position. Lusk himself had never met with a case of irreducible, incarcerated gravid uterus.

A very prominent ætiologic factor in the causation of this condition is unrepaired former injuries to the pelvic floor. An incarcerated retroflexed gravid uterus, with the fundus snugly fitting down into the hollow of the sacrum under the promontory, meeting with no resistance from the pelvic floor, as pregnancy advances, goes on increasing uniformly in size until at about four and a half months it will be found to have so molded itself to the pelvis as to become irreducible.

The author quoted Hirst, who, in his work on obstetrics, gives an illustration from a frozen section of irreducible retroverted uterus of three and a half to four months, with death from rupture of the bladder. Hirst likewise mentions a collection of fifty-one fatal cases.

The following, in order of frequency, were the

* Abstract of paper read before the Southern Surgical and Gynecological Association, November 15, 1900.

causes of death: Uræmia and exhaustion, rupture of the bladder, septicæmia, peritonitis from inflammation of the bladder, pyæmia, rupture of the peritoneum and of the vagina, errors in treatment, and gangrene of the colon.

Dr. Quinn then cited an interesting case at considerable length, in which it became necessary to extirpate the uterus by the abdominal route. Six weeks from the time of the operation the patient was able to attend to her household duties.

On examining the specimen the uterus was found to contain a fetus, the arrest of development to which seemed to have occurred between the fifth and sixth months of fetal life.

At the time he did this operation he was not aware that abdominal section had ever been advised or practiced previously in cases of irreducible incarcerated retroflexed gravid uteri. Even the most recent works on obstetrics made no mention of it. In searching the literature, however, the author found that cœliotomy had been done in similar cases by seven different surgeons, and he said that to Dr. Mann of Buffalo belonged the credit of first doing cœliotomy for this obstetric complication.

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Popular Ignorance Respecting Medicine.

JOHN WILLIAMS, M. D.

"Christian science," with its claim to cure all diseases by ignoring them, flourishes most among the upper classes. Here it appears in gorgeous colors accompanied with the sound of trumpets, while at the other end of society it is found presenting a humble but obstinate front in the coroner's court or before the police magistrate in the persons of its loyal devotees known as the "Peculiar People." Besides these immaterial means of curing diseases such as inflammation, paralysis, toothache, tuberculosis, and cancer, there are a countless number of undiscovered drugs, known only to their proprietors, which for good reasons are not made known to the public, each of which, according to their proprietors, and believers in these panaceas, have performed marvels in preventing and curing diseases, known and unknown, fatal and not fatal—indeed, it matters not of what nature, for all diseases, it is said, are cured by these undiscovered drugs. The astonishing fact is that any disease remains to afflict the human frame.

QUACK ADVERTISEMENTS.

You ask me where I obtain these extraordinary facts. I reply: Look at almost any newspaper, daily or weekly, religious or secular, and you will find all that I have stated. You will see accounts of marvelous and impossible cures and statements of effects produced by drugs which everyone possessed of the most elementary knowledge of the laws of health and of the processes which take place in the living body knows to be entirely devoid of foundation. Nevertheless, these statements are published broadcast, day by day and week by week, in newspapers which profess to teach and lead the public and to form public opinion. These newspapers are the property of men who hold more or less influential positions and are respected in the country. They are edited, some by clergymen, some by ministers, and some by laymen.

The statements which I have referred to are sanctioned by silence, in speech, or in writing, by all concerned in the publication of these journals. They occasionally contain testimonials to the wonderful virtues of the advertised drug, and these emanate from all manner of men, some of whom are probably like the historical camel evolved in a garret, while others hold positions and make professions which would lead one to expect that they would not be guilty of attaching their names to, or be a party to publishing, anything for the truth of which they could not vouch.

Now and again a bard in a frenzy of inspiration pours fourth in rhythmic or alliterative measure the wondrous work of quackery and the miracles of ignorance.

When I find the religious newspapers besmeared with such advertisements as I have referred to, some of them not only false but foul and wicked, I cannot help feeling the blush of shame as I bear in mind under whose ægis they are published. The faithful, finding them in in their weekly guide, accept them without question and act upon them as truths tested by the standard, sanctioned by their party oracles, and sealed with their approval.

How long will this continue? So long as the practice will pay the manufacturer and purveyor? Is it not possible to cause the purveyor at least to realize the character of the material to which he forms the conduit from the manufacturer to the purchaser? If this be not possible then the remedy must and will be found in the education which, if not now, will by and by be given in our schools. Let the elements of science, the laws of growth and decay, and the laws regulating the functions of the living body be taught in our schools and our young men and young women will themselves be able to estimate this mephitic rubbish at its proper value.

Cinchonæ co. has been used in cases of severe drink craving. Allow the patient to take 10 to 20 drops in a little chloroform water whenever he feels the craving coming on; this acts satisfactorily in some cases.

CURRENT MEDICAL LITERATURE.

Les Lois de l'Energetique dans le Regime du Diabete Sucre.

One of the latest of the excellent series of clinical monographs in elucidation of various questions of the day, which are being published by Masson & Co. of Paris, is Dr. Dufourt's on "The Laws of the Conservation of Energy in the Regimen of Saccharine Diabetes."

Amongst the many uncertainties and obscurities which surround the problem of diabetes he regards it as certainly proved that glycosuria is caused by an inability of the cells of the body to destroy sugar, and he assumes that they are compelled to consume albumen and fat in its place. Therefore, in the dietetic treatment of diabetes we have first to determine what is the precise amount of food, whether in the form of albumen, fat, or sugar, which the body requires. This he shows has been determined by Rübner as follows:

At rest	32.9	heat units.
With light work	34.9	"
With medium work	41	"
With hard work	48	"

for one kilogram (2 lbs.) of body weight.

So that a diabetic performing only slight work and weighing one hundred and forty pounds requires daily the alimentary value of 2450 heat units (calories). The combustion value of the various alimentary principles has been established by the labors of Berthélot, Frankland, Rübner, and others, and the following are generally accepted:

One gram of albumen in being transformed into urea, water, and carbonic acid furnishes 4.1 heat units.

One gram of carbohydrates in being transformed into water and carbonic acid also furnishes 4.1 heat units..

One gram of fat affords 9.3 heat units.

Experience has shown that these substances are not absolutely interchangeable—that is to say, it is desirable to combine the three. Albumen is indispensable on account of the nitrogen which it alone can furnish, while experiments upon animals have shown that fat cannot altogether replace sugar. A diabetic must ingest sufficient albumen to supply the quantity of urea he is excreting, and, as is well known in this disease, the amount of urea is generally increased. According to Weintraud, a diabetic requires from 1 to 1.50 gram of albumen per kilogram of body weight—that is to say, a man weighing one hundred and forty pounds would require from 2 1-2 to 4 oz. of albumen daily, which would be represented by from 12 1-2 to 20 oz. of lean meat.

The author gives some useful tables of the chemical composition of the principal articles of vegetable diet and of fruits. According to these tables potatoes, carrots, and turnips contain much less carbohydrates than the various farinaceous substances, or beans and lentils, while of fruits, peaches, apricots, and prunes occupy the lowest rank. He refers to the method recommended by Kraus, Jr., of preparing fruit for diabetics by repeated boiling in different waters, which must be thrown away on each occasion. The fruit is then sweetened with saccharine and flavored with a little cinnamon, and affords an addition to the diabetic diet which is much appreciated. Dr. Dufourt agrees with most modern writers in finding the various bread substitutes more or less unsatisfactory, and considers that it is best to allow a very small quantity of ordinary bread or to do without it altogether. He recommends the use of definitely limited quantities of potato. He does not approve of any of the modern sweetening agents which have been introduced, but we think he is unnecessarily strict in objecting on the score of possible gastric disturbance to the use of saccharine. This substitute has been employed very largely in England during the last fifteen years by many persons besides those who are diabetic, but we do not know that it is abused or that any ill-effects are traced to it.

With respect to mineral salts, the usual quantity taken in food is so much in excess of what is needed by the body that there is not usually any reason to consider the subject specially, but we may remind our readers of some observations by Grube on the administration of powdered egg shell as a popular remedy in diabetes, and upon his own observations of the benefit to nutrition which followed the administration of powdered phosphate and carbonate of lime in imitation of this substance. Cabbage, spinach, lettuce, and mushrooms Dr. Dufourt recommends on account of the small quantity of sugar which they contain, and he sanctions the use of vegetable marrows, melons, and cucumbers, but some melons contain far too much sugar to be safely used. He also recommends endive, salsify, and ground artichokes.