## Etiology of rheumatism, diet in rheumatism, relation of chorea and rheumatism and of tonsillitis and rheumatism / by Joseph E. Winters.

#### **Contributors**

Winters, Joseph Edcil, 1848-1922. Royal College of Surgeons of England

#### **Publication/Creation**

[New York, N.Y.]: [The Author], [1907?]

#### **Persistent URL**

https://wellcomecollection.org/works/jah36h2v

#### **Provider**

Royal College of Surgeons

#### License and attribution

This material has been provided by This material has been provided by The Royal College of Surgeons of England. The original may be consulted at The Royal College of Surgeons of England. Where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).



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

# ETIOLOGY OF RHEUMATISM DIET IN RHEUMATISM 9.

RELATION OF CHOREA AND RHEUMATISM

AND OF

TONSILLITIS AND RHEUMATISM

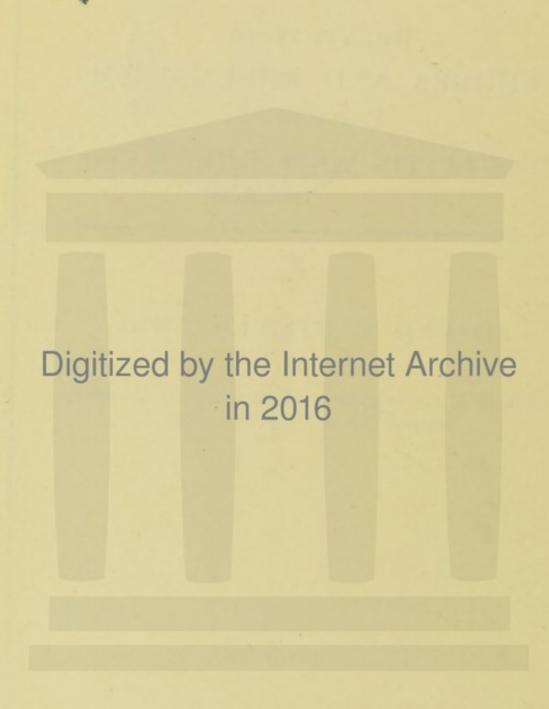
BY

JOSEPH E. WINTERS, M.D.,

NEW YORK,

Professor of the Diseases of Children, Cornell University
Medical College (New York City)

COPYRIGHT BY JOSEPH E. WINTERS



### ETIOLOGY OF RHEUMATISM\*

The natural history of rheumatism invests it with uncommon interest.

In a few hours the joints become greatly swollen, tender, and painful; this continues with unabated severity for weeks; yet inflammatory action does not progress beyond the stage it was on the first day.

After weeks or months it ceases spontaneously; leaves no impairment; the joints are in as perfect condition as

they were before the disease began.

Acute and subacute types alternate for years in the same parts; still there is no disorganization. Chronic, subacute, and acute exist in the same parts at the same moment of time.

A man has no respite from the incubus of rheumatism for a score of years: he contracts typhoid fever; a milk diet is enforced for two months; he emerges rheumaticfree. He engrafts former diet; thraldom of rheumatism ensues.

Surely these are peculiarities remarkable enough to arrest the attention and excite the interest of every medical man.

At any time in its course rheumatism may involve the heart, the lungs, or the nervous centres, and terminate life abruptly. Nothing is more important to the physician than an understanding of the nature of this complaint.

Medical literature contains nothing logical or of any value on the etiology of rheumatism. The late Dr. Wilson Fox, of London, once said: "I never see rheumatic fever any more. If a case comes into hospital my house physician prescribes full doses of salicylic acid, and the man is practically cured before I see him."

<sup>\*</sup>Read before the Society of Alumni of Bellevue Hospital, Nov. 6, 1907.

That there is a positive, chemical antidote elucidates the etiology. This antidote is an *organic*, chemical compound. Synthetic salicylic acid has no effect. The antidote must be from Nature, organic, vegetable.

Wintergreen oil is 96 per cent methyl salicylate. 169 grains methyl salicylate yield 138 grains of salicylic acid.

The operation of this antidote still further illuminates

the etiology.

Salicylic acid is converted by the alkaline secretions in the intestine into salicylate. In the blood the bases are set free; salicylic acid is at once eliminated, appearing in the urine in a few minutes.

It is a *base* which neutralizes the rheumatic virus. A base operates by chemical union with an *acid*. This is inevitable; it is Nature's law.

It is a base which is a specific in rheumatic fever. It is an acid, therefore, which is the morbific principle in

rheumatism.

Every disease, in its most pronounced typical form, has one, unequivocal, absolutely diagnostic, pathognomonic symptom. In rheumatism this is profuse, drenching, sour-smelling, acid perspiration. The normally alkaline saliva becomes acid; the urine is hyperacid; the fæces become acid. This condition belongs exclusively to rheumatism. These symptoms are not to be found except in rheumatic fever.

A vegetable acid holding a base in *light chemical union* dispels them: inconfutably demonstrative of acid-neutralization.

Salicylic acid is a specific in rheumatic fever. Salicylic acid does not *cure* rheumatism.

At the New York Academy of Medicine Dr. Andrew H. Smith said that since the introduction of salicylic acid he experienced no difficulty in getting his patients about three-fourths well. If some one would tell him how to cure the remaining fourth of their disease he would be greatly obliged.

A remaining fourth of the disease lurks in the tissue fluids. The morbific principle of this fourth is the same.

The same antidote must neutralize.

Salicylates liberate their bases in the blood—they never reach the tissue fluids. Tissue fluids are rendered alkalescent by same chemical constituents as blood. These are compounds of potassium and sodium. They are taken in with food.

Food bases are liberated at the spot where the acids of metabolism are set free. Vegetable foods contain three to four times as much basic material as animal food. They supply a chemical antidote for the remaining fourth of the disease as salicylate of soda does for rheumatic fever. They are specific for this remnant; they cure rheumatism; they prevent its recurrence.

Rheumatic fever and its remaining fourth are identical; identical chemical compounds from Nature's laboratory are antidotal. For the blood, a base in light chemical union with a vegetable acid; for tissue fluids, bases in

stable chemical union as in food.

### CONTROL OBSERVATIONS.

Other Therapy is Inert.—With treatment other than chemical, the behavior is the same as in untreated cases; i.e., ceases spontaneously, graduates insensibly into subacute, or leaves a legacy of the chronic.

### "SPONTANEOUS CURE."

A self-imposed, or, an anorexia-inflicted milk diet heralds and impels this eventuality. Restricted ingestion, increased oxidation, level proteid-excess. Metabolism attains an equilibrium, disease ceases. It is a parallel of a typhoid patient on a milk diet emerging rheumatic-free. Every case of "spontaneous cure" is a dietetic cure.

### RESORT CURE.

Repute is proportionate to rigorousness of diet. At a Spa, where diet is inflexibly maintained, cure accrues. Where the medical constabulary is lax, repute declines, public estimate wanes. Every case of Hot-Springs cure, Mineral-Springs cure is a case of dietetic cure.

Acid-products of proteid metabolism cause rheumatism. It is cured by neutralization of acids by bases abundant

in certain articles of diet.

When bases are deficient, acids satisfy their chemical affinity by union with basic constituents of blood and other tissues.

The first of the reserve alkalies to be drawn upon for

neutralization of acids are those of the blood. Reduction in alkalescence of blood causes disintegration of red blood cells—rheumatic anemia: Always the first sign, often the

only symptom in a child.

In profound rheumatic states as in hyperpyrexia, sodium carbonate of the plasma is decomposed, carbonic acid set free. Accumulation of carbonic acid shuts off oxidation. Menacing symptoms in rheumatic hyperpyrexia are due to rapid, large withdrawal from blood of the basic element, sodium; fatal reduction in alkalescence of blood; liberation of carbonic acid; arrest of detoxicating oxidative processes.

This explains rheumatism from muscular and articular soreness following unusual exercise to rheumatic anæmia and rheumatic hyperpyrexia. It also makes it clear why there is no line of separation between cases classified as subacute and acute; between chronic and subacute; from acute to hyperpyrexia. They are varying degrees of the same chemical disorder, alternating, blending indiscernibly.

Neglected, untreated acute rheumatism may evidence no moderation for weeks; yet after weeks or months of unrelinquished severity, it is as amenable to enlightened treatment as it would have been on the first day.

With the application of unchanging chemical laws at any time in its course, acid-neutralization is at once prompt and complete. Decisive, irrefragable attestation of chem-

ical etiology.

Uncomplicated acute 'rheumatism, irrespective of duration or severity, never ends in suppuration. This extraordinary feature is likewise explained by the chemical nature of the complaint. Numerous recrudescences at varying intervals for years, constituting a large part of the life history of the patient, can only be solved by recognizing its issuing from disordered metabolism.

Metabolic etiology elucidates and makes inevitable the natural history; the natural history makes other origin

than perverted physiological chemistry impossible.

# INCREASING PREVALENCE OF RHEUMATISM IN CHILDHOOD PHYSIOLOGICALLY EXPOUNDED.

Muscles constitute 43 per cent. of the total body-weight in an adult; in a young child relatively one-half this proportion. A child is laying down muscle with great rapidity. Muscle is 20 per cent. proteid. Muscles take the first place in metabolic activity. Metabolism in growing structures is  $2\frac{1}{2}$  to  $6\frac{3}{10}$  times greater than in parts already formed. A child is ever luxuriant in acid products of proteid disassimilation.

Proteid and minerals are growth constituents. Phosphate of potash is the muscle salt. Vegetables are 23 per cent. minerals, mostly compounds of potash. For muscle growth, for neutralization of acid products of metabolic activity, rich potassium-containing foods are imperative,

i.e., cereals, potato, bread, green vegetables.

Proteid disassimilation yields acid products. For neutralization there must be abundant proportions of potassium and sodium. To reach tissue fluids they must be organic. To be commensurate they must be vegetable.

Vegetable acids in their oxidation yield alkaline carbonates. Fresh vegetables and fruits are especially rich in vegetable acids, and under oxidation are converted into corresponding carbonates to render tissue fluids and blood alkaline.

Physiological chemistry is a clear mandate for rich potassium-containing foods: cereals, potato, bread; vegetables and raw fruits, charged with vegetable acids, with the rheumatic disposition.

Withdrawal of these foods is commonly practised.

Withdrawal of them makes cure impossible.

### ANIMAL BROTHS AS A FACTOR.

Consummate destitution of assimilable basic salts constitutes them contributive to rheumatism. Consisting of extractives, metabolic activity is stimulated immoderately. Devoid of tissue-builders, they are noxious in a growing child. A mother must be told that beef tea and every animal broth is absolutely foodless. Carnivorous animals live longer on no food than on animal broths!

### INFLUENCE OF SUGAR.

Sugar is an irritant to the tissues. It is an irritant to the mucous membrane of the stomach, causing a great outpouring of mucus. This surrounds the particles of food and hinders digestion. Fermentation follows. Lactic acid is formed in this fermentation. Fifty per cent. of cane sugar taken may be converted into lactic acid. Two or three ounces of sugar is frequently taken in the form of sweets—its perniciousness exceeds computation. The bacilli that cause milk to curdle form 80 per cent. of lactic acid from glucose. These bacilli are always present

in the alimentary canal.

When the glycogen-forming power of the liver is unable to keep pace with the demands made upon it, there results what is termed alimentary glycosuria. Recent researches make it probable that an enzyme in the cells of the body effects lactic-acid fermentation from sugar in every instance when the glycogen-forming power of the liver is unequal to the demands. When intracellular enzymes produce lactic acid from sugar, this withdraws alkalies from the tissues.

Inordinate reliance in basic-free broths; immoderation in lactic-acid-forming sweets, are fundamentally answerable for the rheumatic proclivity, and the alarming increase of heart disease in childhood.

# THE NATURAL HISTORY OF RHEUMATISM IN CHILDHOOD TRANSCENDS IN INTEREST THE ADULT FORM.

A large part of the oxidation of the body occurs in the muscles.

An adult of 150 pounds, with 43 per cent. of his total body-weight voluntary muscles, 20 per cent. of which is proteid, has the fundamental elements for a rheumatic storm. A child of 50 pounds, with half the *relative* proportion of voluntary muscles of the adult, is exempt from this bias.

Numerous minor events make up the rheumatism of childhood.

The large appropriation of potash by the growing muscles; the exuberance of acid products of the muscle-laboring child, make the balance between supply and demand of minerals close and easily lost. A growing child is continually on the verge of an excess of acid products. Growth imposes enhanced vulnerability to acid irritant. With every overplus a minor phase is manifested. Recurring minor events are inherent to growth; they are natural to the period. This seeming irregularity is regular; it is normal. Recurring, masked, atypical rheumatism in childhood is physiological.

A minor manifestation is often fraught with momentous import. Urticaria, tonsillitis, torticollis, inflammation of a single tendon, is notably liable to have a concomitant, insidious endocarditis in operation; frequently an incurable valvular lesion has origin in a phenomenon seemingly so trivial.

# EQUIVOCAL EXPRESSIONS TYPIFY THE RHEUMATISM OF CHILDHOOD.

A child has evening temperature; a night's rest and the warmth of the bed bring morning remission. For many successive nights and days these periods are reenacted. Influenza, malaria, typhoid fever, remittent fever, catarrhal fever, mucous fever, indigestion, one, or all in turn, are diagnosticated. Purpuric spots; an urticaria; a scarcely noticeable stiffness of a muscle; later a persistent anemia, and, perhaps, a chorea and a valvular murmur, disclose the true nature of the ailment. In a child with temperature, diagnosis is not complete until rheumatism has been excluded absolutely, not only by elimination of above signs, but by securing the effect of a clean tongue, and a milk diet.

Pleurisy with effusion and pneumonia are commonly rheumatic, but neither is believed to be until a valvular murmur is audible. Recurrent vomiting is an unfailing portent of lurking rheumatism. High temperature and anemia may be the only symptoms of grave rheumatic disorder. Epistaxis with anemia is mostly rheumatic. Anemia with endocarditis may be the first step in the disease. With no outward mark or token, the heart may be irreparably afflicted.

# IN ADULTS ENDOCARDITIS IS NOT CONCOMITANT TO MINOR RHEUMATIC PHASES. GROWTH INTERPRETS THIS.

At point of contact of the lunula of the mitral valve with systole, the fibrous portion is reflected, forming a fold. At this fold there is localized exaggerated cell proliferation with consequent intensification of vulnerability.

Every endocardial inflammation in a child begins at this fold. With every excess of acid products growing leaflets feel first and greatest the acid irritant. To safeguard a child's heart he must be rheumatic-free. The remaining fourth of

the disease in adults is the essence of the disease in child-hood.

Impartial in its predilections; fickle and uncertain in its course; little amenable to specific treatment; tending to spontaneous recovery; disposition to recurrence; grave tendency to cardiac involvement, are distinctive of the natural history of rheumatism of childhood—unmistakable coin of the mint of perverted physiological chemistry.

### CHOREA.

Affiliation of chorea with rheumatism is universally admitted. Regarding commonness of association, divergence in conclusions has reached the zenith. Evenly astute, able, and experienced observers affirm 15 per cent.

and 85 per cent. are rheumatic!

The natural history of chorea is an apocalypse. Gradual onset; slow, irregular progress; unamenable to specific treatment; disposition to spontaneous recovery; propension to recurrence; ominous tendency to cardiac involvement, are pre-eminent in the natural history of chorea—the very similitude of its parent, rheumatism.

### CLINICAL CORROBORANTS.

Some of the voluntary muscles sometimes undergo a sudden short involuntary spasm. They are, however, never wholly, nor constantly withdrawn from the government of the will. There is no loss of consciousness, no hebetude, no defect of volition, no fever. There is merely, simply, and solely, an incapacity for performing voluntary movements with precision.

These discordant motions sometimes continue throughout the day for weeks and months together (still there is no lesion, disease in the brain has not progressed beyond the stage it was on the first day), pass off spontaneously; leave behind no permanent impairment of muscular coordination, or of mental power—the brain is as perfect as

it was before the disease began.

It is plain, it is indisputable—it is inevitable, it is necessary, it is nature's law—that some chemical irritant ex-

cites spasm of the muscles.

The spasmodic movements are sudden, and each is of very short duration—each jactitation is an electrical reaction to an acid irritant.

The brain is rich in proteid. Whenever metabolism is abnormal or excessive, there is deficiency of basic salts for

neutralization of acid products.

The brain of a child is growing with great rapidity, functional activity is unrestrained, metabolism exuberant. Luxuriant metabolism is facile. Agitation, perturbation, even disquietude, fillips metabolism, *i.e.*, studies, fright, shock, etc.

Sydenham wrote, "This affection arises from some humor falling on the nerves, and such irritation causes the

spasm."

When emotion accelerates metabolism, when products of proteid disassimilation are not neutralized, the humor of Sydenham arises—an acid which irritates and causes the spasm.

With acid neutralization, the brain is as it was before

the disease began.

### FAILURE OF SPECIFICS.

Salicylate of soda never reaches tissue fluids, in consequence it is unavailing in chorea.

### SPONTANEOUS CURE.

Progression of disease; acceleration of proteid disassimilation; augmentation of spasm. Disease waxes; appetite wanes. Bland ingesta; curtailment of proteid; replenishment of basic salts. Metabolism attains an equilibrium; electrical spasm subsides.

The concatenation of causes and effects reveals "spon-

taneous cure" a dietetic cure.

Metabolic etiology, dietetic restoration, elucidate natural history—render it inevitable.

In contrast with the usual tardiness of its development.

there is the occasional suddenness of its occurrence.

Abrupt onset forebodes severity.

Early cardiac implication; fever; delirium; fatuity, hebetude; loss of consciousness; hyperpyrexia. With supervention of these symptoms, muscular spasm is superseded by great restlessness or stuporous calm. At culmination, depute a clinical clerk to transcribe every phenomenon. Have him transcribe with equal faithfulness the phenomena of rheumatic fever with cerebral implication (cerebral rheumatism). Refer the records to a com-

petent medical committee. This committee will be impotent to determine which is the record of chorea, and which of cerebral rheumatism.

With fatal issue the pathologist is incompetent to discern which is the brain of the chorea subject and which of cerebral rheumatism—there is no pathognostic lesion in either.

He interrogates the heart and is confronted with identity. There is no pathological dissimilitude between chorea and cerebral rheumatism. Neither the scalpel of the pathological anatomist, nor the magnifying-glass of the microscopist, discloses any dissimilarity in the lesions.

Inflammation of the mitral valve is a rheumatic stigma.

This lesion is constant in chorea.

### CHOREA RECORDS.—FATAL CASES.

Raymond:—19 Cases. Endocarditis 19.

Fagge:—18 Cases. Endocarditis 17.

Sturges (Guy's, St. Bartholomew's, St. George's, St. Thomas Hospitals):—80 Cases. Cardiac 75 Cases.

Total, 117 Cases. Cardiac 111 = 94.8 per cent.

For comparison there are the records of forty-five autopsies on rheumatism in Guy's Hospital. Cardiac 37 = 82.2 per cent.

The lesion which is never set up by any other stimulus than the rheumatic stimulus is more constant in chorea

than in rheumatism. It is the sole lesion in chorea.

In chorea as in rheumatism, precipitous type and fatal

In chorea as in rheumatism, precipitous type and fatal issue are more frequent in first attacks than in subsequent ones. In both it is the older child, too, with its greater total bulk of proteid, in whom the graver and more fatal form is usually met with. In both, danger to life is in proportion to height of temperature and condition of heart.

Chorea and rheumatism show the same greater relative frequency in girls than in boys. Seasonal prevalence is the same in both. Foul tongue and offensive breath and constipation are pronounced in both, and measures directed

to the relief of these mitigate both complaints.

A not infrequent complication of scarlet fever is rheumatism, endocarditis, pleurisy with serous effusion. Scarlatina is the only exanthematous disease that has chorea as a sequela!

For more than two centuries (1686) the natural propen-

situdes of rheumatism have dominated chorea. A com-

mon origin is inevitable.

Affirmation that 85 per cent. of choreas are associated with rheumatism, comprehends 85 per cent. of truth; avouchment that 15 per cent. have rheumatic connection embraces 85 per cent. of error.

Chorea is invariably a rheumatic disease. Acknowledgment of rheumatic origin bespeaks regimen for forestalling

cardiac inflammation.

### TONSILLITIS.

Commonness, conjoined with the frequency of a concomitant insidious endocarditis, imparts to tonsillitis preeminence amongst the rheumatic group of diseases of children. Recurrent vomiting portends tonsillitis. Both are the progeny of animal broths and sweets. Devoid of basic constituent, the superabounding metabolism of growth early bequeaths acid excess.

An unthought-of evil is on the palate, causing the child to eschew green vegetables, cereals, potato—indispensable

for abundance of neutralizing and building minerals.

Derangements of metabolism and of digestion are the sole etiologic factors of rheumatic tonsillitis. Logical analysis quashes the preposterous and monstrous assumption that the tonsils are the port of entry for rheumatic infection.

Every observant physician is constrained to concede that faults of diet lie at the root of tonsillitis. Tonsillectomy for this condition is as illogical and unscientific as rubbing the joints for the cure and prevention of rheumatic arthritis. The incidence of rheumatic throat is neither lessened nor mitigated by complete extirpation of the tonsils.

Hypertrophied and *indurated* tonsils must be removed. This, however, is wholly independent from their having causative relation to rheumatism.

It is unbelievable, unthinkable that an hypothesis so superficial, so pregnant with harm, should find lodgment

with a profession of such grave responsibilities.

Dietetic-metabolic conception intercepts valvular inefficiency; unfounded port-of-entry postulate transmits this lesion—discrediting to practitioner, opprobrious to medical science.

### MANAGEMENT: PREVENTION-EFFACEMENT.

The remaining fourth of the disease in adults is the essence of the disease in childhood.

Salicylate is of minor value. Diet is tantamount to a

specific. '

With rheumatic fever, salicylate is borne in large doses. A child of ten years may be given ten grains every two hours—for twenty-four hours—thereafter according to effect.

When the tongue is foul, salicylate is inefficacious. The entire channel of alimentation (liver included) must be cleared and cleansed before administration of salicylate. Calomel followed by rhubarb and soda is prerequisite.

For stimulation of intestinal follicles and liver give throughout the disease one grain (or more) of pulverized rhubarb and twenty grains of bicarbonate of soda three

times a day, before nourishment.

### DIET.

Rheumatism is a dietetic disease; it is curable by diet. While a vestige of active rheumatism tarries, milk must constitute the sole diet.

The proteid of milk contains no nuclein, and yields no uric acid. The urine becomes uric-acid-free on milk diet. Milk contains an abundance of phosphate of potash—muscle-salt. Citric acid, a valuable antirheumatic, is present in considerable amount.

Salicylate, rhubarb and soda, milk, water, is all that is

permitted during active rheumatism.

Tonics, tinctures, liquid peptonoid, beef peptonoid, panopeptin, defeat treatment. Vicious influence of these nullify specifics and diet-cure is impossible if any one of these is given.

Mutton broth, chicken broth, beef tea, beef juice, etc., foil treatment. Surreptitious addition of sugar to milk in

one case rendered treatment nugatory.

Let rhubarb and soda, salicylate, milk, water, comprise all that pass the stomach, and repression is as assured as the rising of the setting sun. Miscarriage is certain evidence of transgression—noxious surreptition.

Extension of Diet.—Cereal cooked thoroughly with boiling water, served hot with butter and salt or with milk—

no cream, no sugar.

The second extension is the addition of baked potato,

bread and butter, bread and milk.

The cereals include rice, hominy, cream of wheat, oat meal, pettijohn (the latter two to be strained), yellow corn meal. No malted food, no dextrinized food is allowed. No adjusted, prepared, or commercialized food is ever given. Every predigested, need-no-cooking, ready-to-eat food is not only pernicious with the rheumatic disposition, but most harmful during the growth period.

Commercialization damages by impairing building material. At every period of childhood, every commercialized food, every proprietary food is deficient in constituents for making brain, muscle, bone-building materials.

The third extension of diet is green vegetables. All vegetables are allowed except beets and sweet potato—excluded owing to contained sugar. Tomatoes must be eaten raw—never stewed—and with salt only. Many eat raw tomatoes with vinegar and sugar and charge the rheumatic incidence to tomatoes rather than to a pampered and vicious palate. The sour taste of tomatoes is due to citric acid—a valuable antirheumatic.

Fruits are added next, and must be eaten as they come from nature. Cooking decomposes the organic union between the vegetable acids and the salts; taken raw, oxidation yields alkaline carbonates—fruits must always be eaten raw—not even apple sauce or baked apple is allowed. Grapes must not be eaten, as they contain from 10 to 30 per cent. of sugar. Grape fruit is interdicted. Lemon juice ranks high as an antirheumatic. One ounce of lemon juice contains 45 grains of citric acid. Under oxidation it is converted into corresponding carbonates to render blood and tissue fluids alkaline.

All fruits must be eaten as they come from the vine or

tree—never with sugar, cream, or milk.

When animal food is added to round out the diet, it must be in the form of meat, not beef juice or broths. The contained extractives are injurious.

Red meat is not objectionable. White meat is equivalent in extractives to red meat, and the ban on red meat is wholly unfounded. Beef and saddle of mutton may be taken with as much impunity as breast of chicken.

Fried eggplant, stuffed green peppers, lobster, chicken or other salads, with mayonnaise; custards, ice cream and

ices, slip, junket (liquid rennet is 19 per cent. alcohol), tea, coffee, and alcohol, are certain excitants of lurking rheumatism, by superinducing intestinal fermentation.

Every beverage containing alcohol is a potent rheumatic

factor.

To ratify one of these, and at the same time to direct rheumatic remedies, is to betray medical science. Renounce the patient who uses one of these, or increasing disease induces him to renounce his physician.

The rheumatic patient is never allowed any drink but

water.

### MANAGEMENT IN CHOREA.

Recumbence and seclusion are primary, fundamental, requisite. Exemption from either augments spasm; postpones recovery; imperils heart; superinduces fever,

jeopardizes life.

Jactitation must be mitigated by bromide in small doses three times daily, after nourishment. Tongue kept clean by rhubarb and soda three times a day before nourishment. In the early stage only milk; later cereals, potato, bread and butter, bread and milk.

For scrupulous, inflexible adherence to diet, a trained

nurse at the helm is indispensable.

Specific diet for effacement of recurrent vomiting, recurrent tonsillitis, or any phase of rheumatism (or poor nutrition) is not long maintained without this superintendence.

Meals must be served apart from others, and food other than that allowed never seen. Injudicious comment by

elders on diet is prohibited.

Ample building-foods, cereals, potato, bread, fresh vegetables; absence of broths, sugar, and sweet desserts would eliminate heart disease from childhood, also the pallid, ill-nourished, spindle-legged, semi-invalid children. The averment that children require sugar, is answered by the physiological fact that these foods undergo transformation into sugar, each carrying requisite, neutralizing building minerals.

In proper feeding during the growth-period, preventive

medicine will realize its highest attainment.