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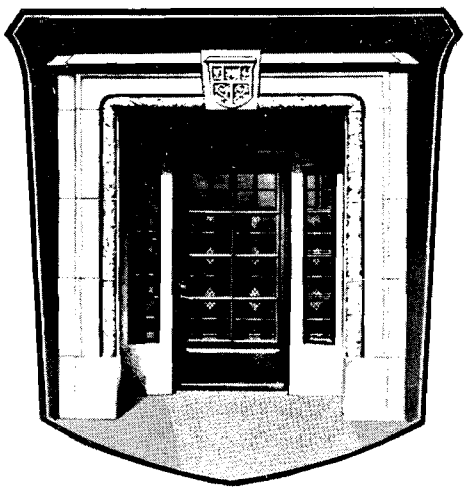

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THE COMMONER FORMS OF PRURITUS ANI CONSIDERED EUTROPHICALLY

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PROEM

One of the unsolved and vexacious problems of medical practice is pruritus ani. It is a common disorder which challenges the diagnostic and therapeutic skill of general practitioners, internists, gynecologists, dermatologists, proctologists, bacteriologists, fungologists and virologists. The intense itching characterizing this disorder results in intense physical suffering and mental disquietude – to produce a serious impairment of the patient's disposition and general health.

ETIOLOGY

Medical literature contains a disparate amount of opinions concerning the cause and treatment of pruritus ani. The concensus considers it a local symptom and not a disease, which is caused by, or associated with, a diverse number of systemic diseases and disorders - diabetes, syphilis, tuberculosis, malaria, gout, rheumatism, allergic states, intestinal infestation with seat or pin worms, proctitis, coloproctitis, gall bladder infections and inflammation; appendix, uterine and genito-urinary tract infections and, latterly, a result of sulfa drug and antibiotic medication and the ingestion of chemical contaminants of the "cide" family – pesticides, herbicides, insecticides, repellants, plant disease inhibitors, commerical soil fertilizers, food additives as enrichment factors or as anti-staling, tenderizing or otherwise "improving" all kinds of foodstuffs. In addition to the foregoing, the problem of pollutants will be discussed in more detail in the next few pages.

It has been postulated that a multiplicity of local conditions and diseases may be the cause of, or the exciting factor, triggering the itching crisis. Among these are inflamed and infected papillae, cryptitis, fissure in ano, fistula, tegumentary and subtegumentary abscesses, perirectal infections and abscesses and inflamed hemorrhoidal veins. Local irritants, such as pediculi, detergents, excessive use of soap in bathing, profuse perspiration, irritating discharges from the anus and vagina, the wearing of tight fitting underwear or underwear dyed with poor quality dyes, uncleanliness, the use of newsprint (printer's ink) for toilet paper and from "harsh toilet tissues" – before the era of "satin finish", for toilet tissue. Some cases of pruritis ani have been ascribed to the use of drugs, notably quinine, belladonna, morphine, arsenic cocaine and antibiotics and, latterly, antibiotics and chemical contaminants in the form of additives or sprayed pesticides on foods. Certain articles of food have also been called contributory or caustive agents – the most popular being pork, shellfish, salt-

water fish, tinned meats, strong cheeses, tea, coffee, strong condiments, and the excessive use of alcohol and tobacco.

Several observers have advanced theories concerning the cause of the majority of cases of pruritus ani, and more or less associate the disorder with a specific cause. Among these may be mentioned Wallis of St. Marks Hospital, London, who claims that 90 per cent of all cases of true pruritus ani are caused by small, shallow ulcerations of the mucous membranes between the sphincters. In 1919, D. H. Murray claimed that pruritis ani was due to a streptococcus infection and blamed the Streptococcus faecalis as the offending organism. Montague voices the opinion that about 77 per cent of all cases of pruritus ani are caused by internal hemorrhoids. Recently Hugh and Howard Hailey *(1)* stated that the majority of cases of essential, idiopathic or true pruritus of the anus and vulvae are due to eczema. They consider lichen simplex, neurodermatitis and eczema to be the same. They do not consider as causative certain systemic diseases and coexistent changes in and around the anus and rectum. They consider eczema on these parts to be caused by the same factors as produce it on other parts of the body. The patient's heredity in respect to hypersensitiveness is assumed to be the indirect cause of the eczema. In their opinion, eczema, asthma, hay fever, migraine, urticaria, and sometimes arthritis, pyelitis and sinusitis are closely related manifestations of hypersensitiveness. In addition to this, they state that a direct cause is necessary for the attack: chemical (drugs, dyes), clothing (wool, rubber, synthetic fabrics), hemorrhoids, diet, heat, perspiration and friction, and atmospheric conditions. Pathologic conditions in the pelvis are coincidental with and not causative of pruritis vulvae. This conclusion is based upon the observation that excellent treatment of these abnormal conditions often fails to relieve the itching. Moreover, they believe that hemorrhoids may be a direct or exciting cause of pruritis ani in a hypersensitive person, but they are not the primary cause, because the removal of the hemorrhoids may relieve the itching for a few weeks, but does not prevent a recurrence of the condition. They admit that the laboratory diagnosis of eczema is not definite, but they believe that they are justified in diagnosing persistent anal and vulval pruritis as exzema after eliminating fungus infections, certain generalized skin diseases, trichomoniasis, pediculosis, diabetes and transient dermatitis venenata. Various authors have reported cases of pruritis ani et vulvae which presented no visible skin changes, but this author has never seen such cases. The itching may precede the local skin changes and if it persists eczema will develop.

Buie supports the hypothesis that there are two types of the disease, the direct and the indirect type. He states:

> There are several types of indirect anal pruritis: first, indirect pruritis of neurogenic origin; second, indirect pruritus due to focal infection; and third, indirect pruritus of allergic or idiosyncratic origin. No investigation should be considered complete until all of these possible causes have received due consideration. *(2)*

He is of the opinion, however, that the majority of cases of anal pruritus are of

the "direct" type: i.e., the direct result of bacterial activity and/or bacterial toxins upon the anal tissues, producing the characteristic tissue reactions and changes. *(2)*

Pruritus ani is more common in men than in women. It may occur at any age, but the majority of cases occur after 30 years of age. It is more common among those leading a sendentary life. It afflicts the rich and the poor of all races, but is least prevalent in the Negro race, perhaps due to that racial peculiarity which Curtice Rosser has termed the fibroplastic diathesis – "the inherent ethnic predisposition to develop adult connective tissue in excess in response to trauma of any type." *(3)*

From this brief review it is apparent that most observers are not in complete agreement regarding the cause of pruritus ani. No single, constant, etiologic factor has been ascribed as its cause. With the exception of those cases which are manifestly caused by local extrinsic irritants, or to senile changes, I believe that all cases of pruritus ani are due to several intrinsic factors, the result of a single, constant, etiologic factor – improper nutrition. One may subscribe to any one or more of the hypotheses which have been sponsored as the cause of pruritus ani, but in the final analysis the question arises what produces the assumed cause?

> Medicine has concerned itself for centuries with attemption to alleviate symptoms or to rectify the disordered function of organs. Practical experience has shown the error of treating symptoms and organs. The bacteriologist has shown the relationship of certain types of bacteria to certain disease entities. The relationship of focal infection to systemic disease has been a most important contribution to the understanding of disorders which has been hitherto obscure as to their origin. Many investigators have not been content with this conception and they have begun an inquiry as to what enables focal infection to take place. A study of the infections has shown the desirability of preventing their occurrence rather than treating their incidence. The influence of diet on health and disease is now almost an article of faith with a large proportion of the medical profession. *(4)*

Since 1922, intensive and numerous scientific investigations, observations and researches have more than supported the soundness of the text of the foregoing quotation. Today, progressive scientific workers are invariably searching for the etiologic factor, or factors, upon which such diseases and disorders as allergic states, rheumatism, diabetes, rectal diseases, intestinal infections and the numerous pyogenic infections, etc., are predicated. It is no longer possible to consider these diseases and disorders, which are so frequently associated with pruritis ani (and other conditions), to be inescapable and immutable biologic (chiefly microbic) accidents. It is impossible to evade the question; what is fundamentally responsible for the development of these diseases and disorders?

The concept of deficiency diseases has changed since 1922 into a broader and more complex concept. In the early era of nutritional investigation, there were only a few well defined clinical syndromes as scurvy, beri-beri, rickets, etc., which were considered to be the direct manifestation of improper nutrition.

Today, many clinical syndromes have been added to the list and as research proceeds it is increasingly recognized that practically all, if not all, of the systemic diseases are direct or indirect manifestations of improper nutrition or nutritive failure. The primary and secondary anemias, the hemorrhagic diathesis, tropical and non-tropical sprue, pellagra, the several nonspecific types of colitis, tuberculosis, rheumatism, several dermatologic and neurologic diseases, allergic states, endocrine disturbances, and the many masked, immature, poorly defined and borderline manifestations of improper nutrition and/or nutritive failure, are all recent additions to the concept of deficiency diseases.

The attention of many professionals is being directed intensively toward deficiency diseases which may result from a lack of one or more of the vitamins and other nutrient factors – the ternary elements, the ponderable and imponderable mineral elements, the enzymes, coenzymes, etc. Spectacular results have been and are being obtained through a better understanding of the role which each of these nutrient factors play in health and/or disease by correcting the nutritional intake and by supplementing what is called a balanced diet fortified by specific vitamin and mineral therapy. The drug industry were early exploiters of every favorable claim regarding vitamins. Their propagandic drive is still operating in full swing to condition, via third class mail, detail men, advertisements in the JAMA and pitch magazines, the physician's perspective regarding the necessity of prescribing vitamin concentrates; latterly, as a result of the expanding scope of the role of nutrition as a major etiologic and therapeutic sine qua non, they have added minerals, trace elements, and proteins in the form of amino acids.

PRURITIS ANI AND THE POLLUTION PROBLEM

But, does a physician who regularly peruses the JAMA, his State Journal of Medicine, etc., get an orientated concept of the part which nutrition plays in the production of the diseases which he is called upon to diagnose and to manage therapeutically? The AMA has its Council on Foods and Nutrition; it publishes a magazine for the layman, *TODAY'S HEALTH:* and, to some extent, the Council on Drugs synchronizes its function with that of the Council on Foods and Nutrition. The State Medical Journal has a section on nutrition which, occasionally, contains academic articles, by institutional or other nutritionists, of the "swivel-chair" type. These articles contain little practical information for the profession at large – they are chiefly non-specific, academic generalizations of certain facets of the disciplines concerning food, nutrition, and animal or poultry husbandry.

In *TODAY'S HEALTH,* containing many so-called health menus, you will find that the main objective, wittingly or unwittingly, consciously or unconsciously, is to plug and include into the menus, all of the food products of the variegated units of the food industry. Many of these suggested menus include pizzas, cheese (processed) cake, and other horrendous culinary concoctions composed wholly of food ingredients which nutritionists, writing for *TODAY'S HEALTH,* and other publicity media, condemn as foods deficient in almost all nutritional

principles, How is the consumer to know what to buy when, in thumbing through the pages of *TODAY'S HEALTH*, he finds a photograph of a beautiful nurse offering to an anemic-looking boy, a paper cup of a cola drink which will "brighten his visit" to the Doctor?

Responding to the motivational pitch-stuff, the housewife is sold commercial ice cream which, to date, does not have to list the ingredients (including chemicals) on the container. These chemicals are non-nutritious and, if habitually consumed may be harmful. I use "may be harmful" advisedly, because it is the sort of conciliatory wording which comes from HEW and other governmental, supervisory agencies.

Thousands of fish in the Mississippi River basin had to be poisoned; the fishing industry in the river basin had to be obliterated; and, latterly, the mussels supplying shells for the button industry in the upper reaches of the Tennessee River (TVA) had to also be poisoned, before the pundits staffing the HEW, the FDA, the Council on Food and Nutrition, and the Department of Agriculture, were aroused from their lethargy, so frequently associated with official security, to protest, mildly, this wanton destruction of an important food supply in the mid-section of the nation, and to begin to look into the unwarranted pollution of streams in this huge river basin. The public is told that more research is needed before a positive decision can be reached as to the specific poison which is responsible for this holocaust.

The U. S. Public Health authorities recently stated that the mass poisoning of fresh water fish in the Mississippi River basin was due, largely, to a chemical called Endrin. But, Endrin is not the only poison which is dumped into the tributary streams which empty into the Mississippi River. Pustulant sewage, containing as it does the stinking (putrescent) fecal matter from healthy and sick animals, insects, plants, humans and pets; the urinary exretion from these animals, insects, humans and pets; plus the mass of expectorated pathologic spittle which is spewed into toilets and on sidewalks, are, by weight, enough to make our water supply, not only unsafe, but sickening! But, it does not end with this– just think what the laundry people who wash our dirty clothes with detergents, to do the job quickly and "bleachingly", as well as the drainage of polluted water from kitchens and bathroom sinks, etc., are doing. It is nauseating to know that the water which you drink has been through normal and diseased animals, and humans, many times; it also has been drained from cesspools. To a degree it has been rehabilitated (purified) in restless ocean and river currents, tides, wind-wave reactions, and the hydrologic cycle.

Nor is this the only source of pollution. Our huge industrial plants, especially those concerned with the manufacture of chemicals, are pouring their waste materials into the channels of every available stream, to go down the main channel stream and, finally, to be emptied into the oceans, to pollute, taint or poison all marine life. Several years ago, a gentleman wrote a book in which he stated that his only protein food was from fish, because fish was the only edible food which man, in his wisdom, had not tampered with. But, this is no longer true. In the newspapers, especially on back pages, are to be found, from

time to time, desultory warnings that bivalves, crustaceans and fish are frequently unfit to eat because of their being subjected to anti-spoilage chemicals during processing and also because scavengers must eat the putresecent residues from animals, humans, laundries, industrial plants, etc., which is dumped into streams, lakes and oceans, either directly or indirectly.

And, the pollution story rolls on and on! Have you ever walked into a subway entrance and counted the number of cigarette and cigar butts, saturated with human saliva, colored with chemical lipstick, etc., etc., which all goes down the drain into the oceans to rot and become a layer of putrescent, organic material that will be precipitated into the scavengic scum which these scavengers have to subsist upon as a food supply? No wonder they are sick, poisoned and, frequently, become depopulated and, probably, in the near future, if the poisoning continues, extinct. No species can survive unless the food supply is biologically adjusted to their metabolic needs. Add to this the probability of the presence salmonella, leukemia, the virus of infectious hepatitis, the typhoid bacillus, and the amoebic parasites which are frequent contaminants of sewerage.

Cigarettes also contain chemicals which are used in processing tobacco for either chewing, pipe tobacco, cigarettes or cigars. Some, of course, is still processed into snuff! But, people socially registered, will not admit to using it!

Nor does this pollution problem stop here. The therapeutic-minded members of the medical and dental profession are recommending, and unfortunately, sometimes under duress, forcing communities to accept fluoridation of their water supply. And, don't forget that your tap water supply is unfit to drink unless heavily chlorinated.

Food chemists and technologists are adding synthetics and other chemicals to many food products which, as processed, are admittedly nutritionally inadequate. This is what they would have you believe is the scientific improvement of your food supply.

The Food and Drug Administration and the Department of Agriculture do not require that the host of chemicals, which are spawned by the Ph.D's in the tiled laboratories of the chemical industry, be well tested for toxicity before being approved for use in the processing of foods. A half-hearted attempt has been made to have the food processor list all the ingredients in a food item. Notably, this has been applied to bread. The ingredients are usually listed in such fine print and at a certain point on the wrapper that the housewife does not see it, or bother to read it. Assuming, however, that she did read it, how many housewives would be well informed as to the toxicity of these chemicals? You have to be a chemist to be well informed about them. So, the listing of chemical additives is not an effectual way for notifying, or at least, informing, the consumer as to the hazards of what may be going into his "breadbasket." I do believe that labels should contain all the ingredients in a food item and I also strongly advocate dating (not just saying Monday or Friday) so that the consumer will know positively the date on which a food item has been processed, packaged, or embalmed in a tin can. The date of the slaughter of an animal should be on every

cut of meat sold to the consumer. The age of the animal should also be prominently displayed so that people will not be eating steaks from "worn-out old bulls and milk cows." But, the management of the food processing units of the food industry will tell you that this places an undue burden upon them and they have a way of getting by with introducing all kinds of toxic additives into foods. I sometimes wonder if some government employees are not afflicted with pruritic palms – an affliction as old as the food industry itself.

But, all of this is of little concern to the average individual, colossal ignoramus that he is in respect to food chemistry and technology, despite our vaunted educational program which only seems to produce more juvenile delinquents, pitch guys, and race riots. So, we go into a period of life which is heralded as the "nuclear age," because we have been able to ditch a camera-loaded instrument on the surface of the moon. So what!

In my reviews of the current literature in the JAMA and other circulation media, I have been unable to identify any specific dietary instructions, either as a dietary scheme, or as it concerns specific supplements that may be added to the dietary, to offset the presumed, assumed, and actual shortcomings, of what the patient is, again, presumed and assumed to consume. No intensive investigation is made as to the food habits, the food predilections, the beverage consumption, etc., etc., of the patient. Most patients who pride themselves upon being nutritionally oriented, will state that their dietary is 100% perfect. But, my experience with these people is that their dietary is deficient in some respects and excessive in others.

One patient, who claimed to be a lay nutritionist, and honestly believes that he is the "last word" in nutritional lore, consulted me and, upon requesting him to submit a daily list of his food consumption at breakfast, lunch, dinner, and in-between snacks, became highly incensed. Did he not know what to eat? What! He, a self-professed nutritionist, versed in calories, and in vitamin micrograms for each food eaten, could not possibly be "off beat"!

He vehemently decried and condemned the use of processed foods, chiefly granulated sugar, white flour (enriched and non-enriched), all of the highly milled flours, hydrogenated fats, and the multiplicity of other market foods which are highly processed for consumer consumption. Upon cooperating, concerning the composition of his food intake, it was found that this hyper-nutritionist was quite fond of such "goodies" as cheese cake, made of pasteurized processed cheese, egg powder, saturated fats, and other non-nutritious food factors. He was also fond of Danish pastries, rich ice creams, and other "goodies" which are to be found in the plush type of restaurant. This gentleman nutritionist, in his craving for cheese cake, et.al. is paying lip service to the processing units of the food industry which he condemns.

So, where do we go from here? Shall so-called nutritionists continue to condemn and degenerate the honesty and integrity of the processing units of the food industry when it serves their purpose to do so, and then proceed to lap up these processed "goodies" for no better reason than "they love them"? How

can the consumer, who states that he is anxious to become oriented about matters nutritional, compete with the food industry's offerings in the food field if these nutritionally-minus "goodies" are lapped up, greedily, by self-dubbed nutritionists, just because "they like" the taste of these highly processed foods. What kind of professional hypocrisy is this?

The reader may, perhaps, question whether this discussion of the pollution problem is germane to the subject of this article. Upon mature reflection, even a layman can appreciate the part which this sloppy management of the pollution problem plays in tainting, impoverishing and actually poisoning the food supply, Certainly, the first consideration in a therapeutic approach in the treatment of this troublesome disease is that the patient be alerted to the nutritive pitfalls that he encounters in his search for good foods that are to make up his daily fare. Polluted foods must be eliminated as much as possible if one wishes to intelligently treat a patient suffering from pruritis ani or a pruritis afflicting any other part of the body.

It must not be overlooked, or forgotten, that the anus of every living, and inanimate, thing is the exhaust tailpipe, the function of which is to get rid of waste products. The nature of the waste product depends upon the fuel (food) used in the internal combustion engine (includes jet and rocket engines) and the internal combusiton engine of humans – the gastro-intestinal tract. If the fuel (food) is not of the right composition, then corrosion will take place in the tailpipe of engines and living creatures. If the fuel (food) is proper and adequate, then no corrosion of the tailpipe will occur – because the corrosive elements are not constituents of the waste product.

So, the physician must know the composition of the fuel (food) which the patient consumes to have a comprehensive idea of the corrosive effect of waste products on the tailpipe.

The air that you breathe – from incinerators, cigarette or tobacco smoke that you inhale, and the exhaust of engines – all are corrosive agents affecting and afflicting the ventilation (respiratory) system. This corrosive effect should also be checked and properly evaluated by the attending physician. It does have a bearing upon "tailpipe" corrosion!

The situation must be viewed from its broadest aspects and the corrective measures, of course, will depend upon the orientation of the therapist in nutritional lore.

The foregoing remarks, and especially the discussion on the pollution problem, in their relation to the nutritional perspective which is to be outlined – not alone in respect to the etiology (cause) of pruritis ani and numerous other conditions – but also with regard to the specific dietotherapy of this condition, merit ampliative discussion. To understand the sponsored perspective in respect to proper nutrition and constructive meal planning, it becomes necessary to consider some pertinent factors upon which the definitive aspects of this nutritional perspective are predicated.

THE EUTROPHIC MILIEU

The subject of nutrition is a hot-bed of contention, bickering, disharmony,

bally-hoo and bewilderment. Claims and counterclaims are in acute conflict. Factual and nonfactual statements clash with each other and with one another, respectively. Hundreds of clinicians and research workers have mounted the nutritional "band wagon," proclaiming the discovery of additional vitamins and reporting miraculous cures. In scientific journals, current periodicals and newspapers are featured the great discoveries of so-and-so and his co-workers. The co-worker gag represents the big-wig aspect of many seeking publicity. In addition to this, the conclusions of clinicians and research workers are bent, warped, garbled, distorted, and sometimes deliberately misinterpreted and/or interpolated to meet the specific need of the advertiser of food products.

As a result of this short-sighted and mostly senseless, needless, and useless bally-hoo the subject of nutrition and dietetics is enmeshed and entangled in a web of contention and confusion. The whole subject, which is a simple one, has been made to appear the most complicated problem in existence, which few people may hope faintly to comprehend and which none may aspire to solve. This confusion is very helpful to those who seek to "factoryize" all food products and it is also helpful to faddists, quacks and propagandists. These individuals or agencies exploit the apparent lack of unanimity of opinion, or the apparent element of discord, for the specific purpose of making it easy for them to support their misleading statements, pro or con, with evidence from the literature on the subject of nutrition which is accepted as "authoritative." Therefore, it is imperative for the physician and the patient to have a proper appreciation of the fact that processing does not improve the biologic value of foods. It is important to realize that claims made by advertisers, either directly through the medium of paid advertisements, or through the medium of articles written by subsidized authors, are nothing more nor less than special pleadings sponsored by the food and drug industries.

Nature has balanced the chemical composition of all natural foods and every component principle or element in these foods is necessary for their proper digestion, absorption and metabolism. To destroy or to rob any natural food of one or more of its component elements is to impair the biologic value of the food. For example, when a grain of wheat is milled and separated into five parts, each of which is destined to be used separately, one of Nature's original food patterns has been destroyed. The fractions (flour, bran, gluten, wheat-germ oil, etc.), which are sold separately and used separately, represent only a part of the total food pattern. The elements which have been separated from the starch (flour) are essential for the proper digestion, absorption and metabolism of the starch fraction. No addition of milk or eggs can compensate for the minerals, fats and proteins which the miller has segregated during his mechanical processing. The addition of processed bran to the diet of an excessive consumer of white bread does not compensate for the natural bran which has been removed from the wheat.

A natural food pattern may be altered in chemical composition or impaired in food value by other types of processing. For example, the pasteurization of milk, a simple thermic process which is compulsory, removes vitamins, hormones and enzymes which are indispensable for the proper digestion, absorption and the

utilization of its chemical constituents. Moreover, the thermic process disarranges the mineral elements and a good proportion of the calcium is precipitated in the pasteurization vats. It is questionable whether or not the impairment of the food value of milk which attends pasteurization can be compensated properly by the addition of natural or synthetic vitamins. The thermic process of cooking, if improperly applied, will alter the chemical composition of a natural food and impair its nutritional value.

Grains, cereals and vegetables are ground, polished, precooked and dispensed in undated containers and packages. Vegetables are bleached by several methods, thus destroying the chlorophyll and greatly impairing the mineral and vitamin content. A large proportion of fruits and berries are processed by cooking, canning, drying, and treating with sulphur, or combining with large quantities of sugar in the manufacture of jams, jellies, preserves, etc. Citrus fruits are dyed or subjected to gas-treatment to make them appear tree-ripened. From the juices of sugar cane or beets, all minerals and vitamins are extracted or destroyed to produce "refined" table sugar which, with the exception of bolted flours (chiefly wheat and corn), table salt and polished rice, is the most artificial, metabolically inconsonant food in the American diet. Meats and fish are dried, salted, pickled, smoked and soaked in "smoke solutions". Meat from "worn out old bulls and milch cows" is tenderized before slaughter by injecting intravenously a large dose of meat tenderizer. No one knows just how sick it makes these old animals and, apparently no one cares, as long as they can macerate the steaks with their natural teeth or "choppers". Prior to this scientific procedure concerned with the tenderizing of tough steaks, meats were subjected to partial putrefactive decomposition to make them succulent. The reputation of many "steak joints" is due to their serving "hung" steaks. Chemicals are added to tinned meats to prevent putrefaction, the result of bacterial activity. Commercial poultry farm eggs are nonfertile and devoid of the gestational hormone. Egg powder from "spotted eggs" is used in the baking industry perhaps accounting for outbreaks of botulism. Foods are subjected to many unnecessary processes for preservation, storage and transportation – chiefly to prevent spoilage and earn profits.

With this nutritional perspective in mind, it is not illogical to suspect that persons afflicted with pruritis ani and the many diseases with which this condition is frequently associated, are victims of improper nutrition. It is an established fact that an unbalanced diet will exert an unfavorable influence on the intestinal flora. When one correlates this viewpoint with the pathologic manifestations of pruritus ani, it is not difficult to consider this disorder as a local neurodermatologic expression of faulty and/or improper nutrition and the attendant physiologic failure of the protective function of the intestinal flora.

If the intestinal flora has a definite physiobiologic significance in relation to health, and if the maintenance of this interrelationship depends upon the diet, then the study of these interrelationships must necessarily begin with the part which a given diet will exert upon either the maintenance or nonmaintenance of a normal intestinal flora. The human intestinal flora is usually classified as

facultative or normal, fermentative or acid-forming, and putrefactive or base-forming. The type of flora which predominates is dependent upon the amount of carbohydrates, proteins and fats consumed as food and the subsequent proper or improper digestion of these ternary elements. Briefly, a well-balanced scheme of nutrition will promote a normal intestinal flora which is capable of inhibiting or preventing the unfavorable activity of either fermentative or putrefactive bacteria. A preponderant amount of carbohydrate encourages the fermentative types of bacteria; the excessive consumption of proteins promotes putrefactive types of bacterial activity. The excessive consumption of fats may exaggerate and intensify either of these abnormal processes. Moreover, it is a known fact that the excessive consumption of one or more of the ternary elements, and this is especially true of the processed kinds, requires a correspondingly larger quantity of the accessory nutritive principles for their proper digestion, absorption and metabolism.

Many years ago Pavlov proved that a mixed meal containing excessive quantities of the ternary elements predisposed to a faulty digestion of carbohydrates or proteins, i.e., if proteins were well digested, the carbohydrates would only be partially digested and the residue would promote a fermentative type of intestinal flora, and vice versa. *(5)*

Specifically, what are the nutritive errors, faults, etc., which are associated with pruritus ani? With the exception of the cases which are due to a local extrinsic irritant, or to senile changes in the aged, I believe that all cases of pruritus ani, from a nutritional etiologic standpoint, can be divided into three distinct groups:

GROUP I. These are the starch and sugar eaters, who consume an incredibly large amount of concentrated, processed kinds of starches and sugar. Naturally, this necessitates the concomitant consumption of excessive amounts of fats; too frequently these are synthetic fats or fat substitutes. Their protein intake is inadequate, not alone in respect to quality. Moreover, these people consume a totally inadequate amount of foods rich in the acessory nutritive principles - properly cooked vegetables, green salads, fresh fruit, berries, melons and milk. The intestinal flora is invariably actively and intensely fermentative and the perineal dermatosis is characteristic of the moist type of eczema.

GROUP II. The meat eaters are those who consume incredibly a preponderant percentage of which are highly processed, frequently partially decomposed by putrefactive processes, and of poor biologic value. These processed proteins are salted, smoked, sundried, pickled or tinned fish, shellfish and meats. They are all difficult to digest. The undigested, unused portions of these processed proteins find their way to the colon where the putrefactive processes are completed, with the attendant formation of large amounts of toxic substances. Not infrequently the carbohydrate intake is inadequate, not alone in respect to quality. Moreover, these people consume a totally inadequate amount of foods rich in the acessory nutritive principles - properly cooked vege-

tables, green salads, fresh fruit, berries, melons, and milk. The intestinal flora is invariably actively putrefactive and the perineal dermatosis is usually characteristic of the dry form of eczema.

GROUP III. The mixed meal addicts comprise those who consume incredibly large amounts of carbohydrates, proteins and fats. The preponderant percentages of these ternary elements are highly processed, practically devoid of minerals, vitamins, roughage, etc. Moreover, these people consume a totally inadequate amount of foods rich in the accessory nutritive principles - properly cooked vegetables, green salads, fresh fruit, berries, melons and milk. The type of intestinal bacterial activity is inconstant, alternatingly fermentative or putrefactive, depending upon the carbohydrate or protein content of the diet. The perineal dermatosis is usually characteristic of the moist type of eczema.

As a result of these grossly unbalanced diets, which are rich in calories and poor in biologic value, there is a definite disturbance, or shall I say disorganization, of the normal physiologic function of the intestinal flora, with a concomitant elaboration of toxic products which act as direct irritants to the perineal skin. The end results of these dietary errors of omission and commission are not limited to this evident effect on the intestinal flora. Indeed, the biologic effect of such improper and inadequate diets has been shown to be widespread and universal, which explains why pruritus ani has been associated with such a variety of systemic diseases and disorders. With this etiologic hypothesis in mind, a more intelligent and comprehensive therapeutic perspective can be formulated, and in my experience the results obtained in my series of cases indicate that the hypothesis is essentially sound.

PATHOLOGY

Irrespective of whether or not pruritis ani may be ascribed to local and/or remote pathology, or nutritional disorders of metabolism, the pathologic changes in the skin surrounding the anus eventually will be the same because of the incessant rubbing and scratching of the affected area and the irritant effect of the abnormal composition of the fecal material which paves the way for an infection of the skin in the subcutaneous tissues. As a rule, the onset of the itching does not take place until the skin surrounding the anal orifice displays evidences of local inflammatory involvement. These changes are a reddening of the skin, which may be dry or moist.

In the moist cases the skin is red, edematous, oozing, with whitish areas of maceration and there are usually several areas where the skin has been denuded of epithelium. There is a marked hypertrophy and edema of the skin and subcutaneous tissues in this type. The sulci are deep, filled with feces or epithelial debris, and fissured. A long fissure may extend along the median raphe from the anal orifice anteriorly to the scrotum, or posteriorly along the median per-

ineal crease for several inches.

In the dry cases, the skin may present an almost normal appearance, or it may be considerably reddened with a tendency to scale. Due to the absence of edema, the skin does not fold deeply, but in the sulci are to be found thread-like fissures which extend up into the rectal mucuosa. A careful examination will frequently reveal an infection of the crypts of Morgagni. The accumulation of fecal material in these rectal pockets promotes bacterial infection of these spaces, and the infected secretions overflow on the perineal skin and act as an irritant. In normal or underweight individuals, irritating rectal and anal secretions are readily evaporated, and produce less erosion of the skin surface. In the obese, perineal ventilation is proportional to the degree of obesity and the irritating secretions are mixed with perspiration and fecal matter to produce the macerated, oozing, edematous condition of the perineal skin. In either type, there may be an extention of the dermatosis to the skin of the abdomen, the scrotum, the vulva and the inner surfaces of one or both thighs. In long-standing cases the skin surrounding the anus loses its elasticity and becomes hard, fibrotic and leathery in appearance. This condition is not brought about by the itching, but is the result of the constant scratching and rubbing which the patient resorts to in a frantic effort to obtain relief. This spreads the infection, which produces the fibrosis of the tissues.

SYMPTOMS

The chief and predominating symptom is itching, which may be mild and intermittently present, or severe and continuously present. The itch is usually worse at night perhaps due to the fact that the bed clothes prevent a proper ventilation of the perineum. The itch is described as a biting, smarting, burning and agonizing sensation, which creates an irresistible desire on the part of the patient to scratch or wound the flesh which is itching. The patient with pruritis ani seeks for and demands immediate relief. In some cases it is almost impossible to control the itching, because of the persistent and vigorous scratching and rubbing which the patient performs either consciously or unconsciously. Indeed, the urge to scratch is compulsive in nature.

THERAPY

It is manifest that treatment should be directed toward the removal or correction of the cause of the local condition. The patient is given a complete physical examination, which includes a complete hematologic examination, urinalysis, stool examination, and whenever indicated, a Wassermann, blood chemistry, and a basal metabolism determination. The dietary predilections and food habits of the patient are obtained by careful inquiry and compared with the results of the stool examination. A complete physical examination and the laboratory investigations will rarely fail to disclose any constitutional disease which might be present. According to their food habits the patients are classified as (1) starch and

sugar eaters, (2) meat eaters, and (3) mixed meal addicts.

The starch-and-sugar eater will complain of other symptoms than pruritus ani. Among the more frequent may be a foul, fetid breath, especially after breakfast, a red tongue which may be fissured or heavily coated with a yellowish-gray furry substance; sour stomach; over acidity; excessive intestinal distention after meals; headaches; a lethargic feeling, especially after lunch; a feeling of tenseness and irritability; periods of depression; frequent, unformed, "mushy" bowel movements which have a distinct acid odor, beginning with the so-called "alarm-clock" bowel movement early in the day; an excessive heart rate, etc. The fecal flora will be abnormally saccharolytic, generating excessive quantities of several irritating acids, notably butyric, caproic and formic acid. B. coli acts upon formic acid to form sodium formate, and if the bacterial activity persists long enough this formic acid salt will be converted into sodium carbonate. All of these substances are irritating and produce a moist eczema. The sigmoidoscopic examination reveals a congested mucous membrane, with perhaps punctate hemorrhagic spots and shallow ulcerations on the mucous membrane between the sphincters. The stool examination reveals an increase in the number of B. Coli, B. aerogenes capsulatus, and streptococci, usually the Streptococcus faecalis. When excessive quantities of fats are consumed with the carbohydrates, B. aerogenes capsulatus and B. butyricus may be particularly active. Indeed, one is frequently lead to speculate as to whether or not this clinical picture represents an immature manifestation of sprue. Moreover, the mental depression, the irritability, the increased heart rate, and the frequent presence of a definite tremor of the fingers, suggest a disturbance of the thyroid gland function.

In the meat eaters, consuming excessive amounts of concentrated proteins (frequently the processed varieties), and excessive amounts of fats, the stool examination will reveal an abnormal proteolytic, or putrefactive type of intestinal flora. The flora is dominated by putrefactive forms of B. coli, and large numbers of streptococci and diplococci. Due to bacterial activity, the amino acid tryptophane produces indol and perhaps propionic acid. If the fat content is high, large numbers of B aerogenes capsulatus and B. butyricus may be present. At times, the fatty acids are neutralized by bases which are formed during the course of putrefaction; this is especially true of ammonia, which forms ammonium butyrate in excess. Ammonium butyrate is a distinct intestinal irritant and produces a diarrheal condition not infrequently observed in this type of infection. Alternating with these transient attacks of diarrhea are periods of constipation. As a rule, the meat eaters are not overweight and due to the fact that there is adequate ventilation of the perineum, with a consequent rapid evaporation of the fecal discharges which escape through the anal canal, the dermatosis is either moderately moist or dry. The sigmoidoscopic examination reveals a moderately congested rectal mucosa which is glazed in appearance. The character of the stool is gummy and flaky, and these gummy flakes are frequently adherent to the mucosa.

The mixed-meal addicts consume carbohydrates, fats, and proteins far in excess of their physiologic requirements. The intestinal flora fluctuates between the extremes of fermentation and putrefaction depending upon the nature of the

food which the patient consumes mostly. The sigmoidoscopic examination will reveal either a congested, glazed mucous membrane, or a congested mucous membrane which will frequently exhibit small, punctate hemorrhagic spots. These pin-head ulcerations are not alone present between the sphincters, but also as far upward as one can insert a sigmoidoscope. The dermatosis of the mixed meal addict is usually characteristic of a moist eczema.

In all three groups, careful investigation reveals that these people consumed few of the foods rich in the accessory food factors, i.e., vegetables, salads, raw fruits and milk. Naturally, this intensified the nutritive fault and the combined nutritional faults are the fundamental cause of whatever constitutional disease there may be present to apparently cause, or complicate, the local condition. In 1939, James S. McLester, M.D. stated in his article that these nutritive faults are "more often partial in extent and multiple in nature with a clinical picture that is correspondingly lacking in detail and hazy in outline."(6)

NUTRITIONAL MANAGEMENT

We now have a basis upon which an intelligent approach can be made to therapeutics. Fundamentally, the sheet anchor is a proper and adequate scheme of nutrition. It is obvious that an adequate diet will not alone promote the patient's general health, but it will also exert a far-reaching, normalizing influence on the intestinal flora.

It is important to realize that even such a clear-cut deficiency disease as pernicious anemia is frequently complicated by additional or contributory deficincies. Minot(7) has stated that it is often of more practical importance to recognize that the patient has a nutritional deficiency than to be able to name exactly what nutritional deficiency he has. It is important to pin-point the nutritional deficiency. In pernicious anemia something more than liver concentrate, gastric substance, hydrochloric acid, B-12, etc., is indicated. This same reasoning is as applicable to pruritus ani as it is to pernicious anemia.

MEAL PLANNING

The most important therapeutic requisite is to teach the patient how to plan each meal constructively, the objective being to offset the shortcomings and mi-imize the excesses of which he is a victim. Moreover, the patient must be made, to realize the nutritional shortcomings of all processed foods as outlined in the sketchy consideration of the agencies and factors which may alter or impair natural foodstuffs. In addition to this, he should be taught, in a collective sense, the indispensability of such nutritive factors as minerals, vitamins, enzymes and hormones contained in natural foods, natural roughage, etc., all of which may be obtained more economically from natural foods than from drugstores. The situation may be summed up in the statement that "no chemist can improve food by processing."

If a patient's nutrition is to be improved, then the physician should supply him with specific instructions for planning his meals. The proper nutrition of the

patient will depend upon two factors: (1) a comprehensive knowledge on the part of the physician of what constitutes proper and improper nutrition and (2) upon the co-operation of the patient. In view of the fact that the meal planning scheme which is to be outlined presently may appear heteroxidal to persons whose minds have been inescapably conditioned by custom, tradition, social mores, etc., it is expedient to consider the premises upon which it is based.

Man is an omnivorous creature capable of eating a wide variety of foodstuffs; since the beginning of time he has subsisted upon a mixed diet. A properly planned mixed diet will include generous amounts of foods of excellent nutritional value. In constructing a meal planning scheme, however, there are a number of factors which should be taken into consideration. The first consideration concerns the biologic quality of the foodstuffs to be included in the daily fare. The second consideration concerns the balance (variety, quality and quantity) of good biologic value which are to be included in the daily fare. The third consideration relates to the limitations of the digestive organs and secretions of the alimentary tract.

We have already considered the factors and agencies which may alter and impair the biologic value of foodstuffs. We have also pointed out the nutritive errors and faults of which the average patient, suffering with pruritus ani, is a victim and modern nutritional research has demonstrated conclusively that these nutritive errors, faults, etc., are not limited to persons afflicted with pruritis ani, but are almost universal in practice and extent. What are the limitations of the digestive organs in respect to the average mixed meal - meals composed preponderantly of concentrated proteins, carbohydrates and fats? Will man's digestive apparatus function more efficiently and with less stress and strain on the glands of secretion if meals are planned in consonance with certain well established physiologic facts concerning digestion? Reference to Pavlov's "Work of the Digestive Glands" (pages 37-41) will reveal some interesting facts - he has demonstrated that each of the ternary elements (proteins, carbohydrates and fats) excites specific, definitive secretory responses of the digestive organs in respect to quantity, acid-ferment content, rate of flow and the duration of the secretory activity. To a large extent, Pavlov's chief concern was with conditioned reflexes and his consuming interest in this subject partially conditioned his perspective. The total significance of his findings, however, did not entirely escape his attention because he comments positively upon the evident limitations of the digestive tract efficiently to digest a mixed meal (composed preponderantly of proteins, carbohydrates and fats) without the aid of compensatory processes. Pavlov observed that the compensatory processes were frequently faulty, improper or inadequate. When this was the case, digestive disorders occurred. His observations and conclusions in respect to gastric secretions can be summarized as follows: (1) the secretory curve (rate, quantity, quality and duration) necessary for the proper gastric preparation of proteins for their final degradation by the pancreatic juice is in sharp contrast to the secretory curve necessary for the gastric preparation of carbohydrates for the carbohydrolytic action of the pancreatic juices, (2) vice versa, and (3) fats ingested prior to, during, or immediately after a protein meal will inhibit the secretion of hydrochloric acid for one or two hours.

He has conclusively demonstrated that meat proteins require large quantities of hydrochloric acid and a relatively small amount of gastric ferment (pepsin). On the other hand, he has demonstrated that vegetable proteins (bread, etc.,) require large quantities of ferment and small quantities of hydrochloric acid.

These secretory limitations are not limited to the stomach, but also involve the pancreas. Pancreatic juice may be proteolytic, carbohydrolytic, and/or lipolytic. If a meal is composed preponderantly of concentrated proteins, carbohydrates and fats (the traditional mixed meal) then the pancreas is taxed to its utmost to produce a sufficient quantity of juice to digest this meal. If, however, meals are planned so that concentrated proteins are not combined with concentrated carbohydrates and fats, then it is reasonable to assume that the digestion of the proteins and fats, or the carbohydrates and fats, will be performed more efficiently than would be the case if all three of these concentrated elements were combined at one meal.

Modern nutritional research has also shed unwittingly additional light on the impracticality of combining the concentrated ternary elements at every meal. I base this last statement upon the unanimous criticism which modern nutritional investigators and most clinical nutritionists have directed at the so-called American diet. What are these criticisms?

A critical, analytic digest of the accredited treatises on the subject of nutrition and diet will reveal a unanimity of opinion on what is wrong with the American diet. The errors of omission and commission may be summed up as follows: (1) the average person consumes excessive quantities of concentrated proteins, carbohydrates and fats; (2) the average person consumes an insufficient amount of food rich in the accessory food factors—raw and cooked vegetables, fruits, and milk. If this is the case, the consensus being that it is, then how can the excessive consumption of concentrated proteins, carbohydrates and fats be decreased to approximate the normal physiologic requirements of metabolism, if each of the three meals per day is composed of concentrated proteins, carbohydrates and fats? Moreover, if meals are planned in the traditional way, there is little likelihood that a person will include in his diet a sufficient quantity of the foods containing the vitally necessary accessory food factors. Inasmuch as it has been clearly shown that it is desirable to <u>decrease</u> the consumption of the concentrated ternary elements and <u>increase</u> the consumption of foods containing the accessory food factors, then what objection can there be to a scheme of meal planning which automatically <u>decreases</u> the consumption of the concentrated ternary elements to within the normal physiologic requirements, or to a scheme of meal planning which <u>increases</u> the consumption of the kinds of food which contain the necessary accessory food factors in quantities sufficient to meet the normal physiologic requirements? It is a well recognized fact that the accessory food factors are indispensable for the proper digestion, absorption, and metabolism of the concentrated ternary elements. It can be stated with little fear of rational contradiction that the customary, traditional practice of combining the concentrated ternary elements at every meal has not been founded upon scientific investigation or fact. On the other hand, if one will take into consideration the limitations of the diges-

tive organs and their secretions, and the well established criticisms which modern nutritional investigators have leveled at the so-called American diet, then there is some semblance of levelheadedness in any scheme of meal planning which minimizes the dietary excesses and offsets the dietary shortcomings of the average person.

CONSTRUCTIVE MEAL PLANNING. The instructions are specific and precise in respect to the kind of food which may be consumed at each meal. Space, unfortunately, does not permit the printing of the scheme of meal planning which has been used in this work. The general arrangement of this plan is graphic. The foods which are to be included in each meal are arranged in groups, for example, all of the fruits are listed in a group, as are the vegetables, salads, proteins, carbohydrates, fats, etc. The groups are designated as OBLIGATORY or OPTIONAL. If the patient is overweight or has a tendency to put on weight, the optional groups are omitted. In addition, there are specific instructions for the preparation and the cooking of foods.

Briefly stated, the meals are planned as follows:

Breakfast. To be made up solely of fresh, uncooked fruits, berries, mellons, unsulphured dried fruits, milk or buttermilk and unsweetened coffee or tea and coffee substitutes.

Luncheon. This is the starch meal and consists of vegetable soup (optional) without meat stock, an unprocessed starch, a raw vegetable salad cooked fresh vegetables (optional), butter, and a milk beverage.

Dinner. This is the protein meal. It is composed of a vegetable soup which may contain meat stock, but no starch; a flesh protein, or flesh protein substitute (as cheese, or nuts, or legumes); two or more properly cooked fresh vegetables (one should be of the leafy variety); a large green salad; fresh fruits, berries or melon for dessert; and unsweetened coffee or tea, if desired. No starch is allowed at this meal.

FOCI OF INFECTION. The second therapeutic requisite is the search for foci of infection, and if found, they should be corrected or removed. In pruritus ani, the colon should be considered an infected area and it should be further realized that it is as subject to an infection of its tissues as it is to an infection of its contents. Moreover, it is important to recognize that the many foci of infection which occur throughout the extent of the alimentary tract exert a definitely unfavorable influence upon the colonic flora. All of these factors must be taken into consideration. The treatment of an infected colon may be divided into three subdivisions:

1. Free drainage, which is accomplished by properly administered colonic irrigations. Technic for administration of colonic irrigations has been published.(8)

2. After the colon has been emptied of its contents, medicated solutions are instilled throughout the lumen of the colon (from the rectum to the cecum). These medicaments promote healing of the inflamed mucosa, and destroy or inhibit the growth of pyogenic bacteria. The rationale of irrigations (colonic drainage), and the post-irrigative instillation of medicated solutions, is based upon an accepted principle of modern surgical practice. The surgeon does not lance an abscess to drain it of the contained pus. He opens the abscess to obtain free drainage of bacteria and bacterial toxins, which produced the abscess and the attendant constitutional symptoms, respectively. After the abscess has been opened and drained of bacteria and bacterial toxins, the surgeon swabs or irrigates the cavity with medicated solutions which will either destroy or inhibit the growth of the offending pyogenic organisms. A colon is irrigated not so much to empty it of its toxic fecal contents, but to drain it of countless numbers of a variety of micro-organisms infecting its tissues and its contents. The condition of the colon determines the kind of medicated solution used. The average infected colon reacts favorably to the following solution:

Pulvis antisepticus (USP; without alum)	3 iss
1-3000 sulution Acriviolet	3 iii
Water	0 iss

Spastic colons, which are invariably acutely inflamed, will frequently react unfavorably to the above solution. In these cases the following medicated solutions may be used:

Gomenol	3 ss
Liquid albolene	0 i
OR	
Gomenol	3 ss
Cod liver Oil	0 i

The patient is instructed to retain the oily solutions as long as possible.

3. Local Treatment. It is important to impress upon the patient the necessity of local hygiene. The anus should be washed with a neutral soap after every bowel movement and thoroughly dried with either a soft cloth, or absorbent tissue. In the moist dermatosis, it may be necessary to bathe the anus several times a day and apply Fuller's Earth in generous quantities. If the itching is intense, an anesthetic or antipruritic ointment or lotion may be applied. In the dry dermatosis the following prescription is frequently satisfactory:

Rx Pulveris calaminae	3	iv
Zinci oxidi	3	ii

Hydrargyri chloridi mitis	3	ss
Phenolis	Min.	XL
Adeps Lanae hydrosi	3	ii

SUMMARY OF THERAPEUTIC SCHEME

1. Corrective, constructive meal-planning scheme as outlined.
2. Removal or correction of infections of the alimentary tract (teeth, tonsils, sinuses, antras, gallbladder, appendix, colon and anus), the pulmonary tract and the genito-urinary tract.
3. Restoring the normalcy the biologic processes taking place in the intestinal tract, especially the colon, by constructive nutritional measures and properly administered colon therapy.
4. Local treatment of the perineum and anus (hygiene, ointments, and lotions.)

CLINICAL ANALYSIS OF CASES

A series of 32 cases of chronic, intractable (true) pruritus ani, comprising 25 males and 7 females (adults), all of whom had been treated unsuccessfully by orthodox measures, have been methodically investigated and treated. These 32 patients wholeheartedly co-operated as regards examinations, laboratory investigations, periodic observations and treatments. The 32 cases do not represent the total number of patients with pruritus ani which I have observed over a period of 48 years. It is difficult to obtain co-operation of a group of ambulant patients. To test the efficaciousness of a plan of treatment upon a group of patients depends upon their co-operation.

Six patients (18.7 per cent) — five males and one female — were treated surgically (Ball's operation, alcoholic injections, anesthetic oil injections) which relieved the itching temporarily over periods ranging from 6 months to about 1 year.

Thirteen patients (40.6 per cent) — 11 males and two females — had undergone some form of surgical treatment for hemorrhoids – injection; ligation; electrocautery; hemorroidectomy These cases were relieved temporarily over periods ranging from one to six months.

Five patients (15.5 per cent) — four males and one female — did not display any evidence of physical deterioration except premature disturbances of their dental tissues and a disturbance of the bacterial activity of the intestinal flora.

Twenty–nine patients (90.5 per cent) — 21 males and 8 females — were all overweight and had a moist eczematous condition of the perineum. Of this group, 15 males and 6 females (72.4 per cent) belonged to dietary Group I, and had a highly fermentative intestinal flora. The cholesteral levels of each of these patients was over 220 mg. %. The remainder of this group, comprising six males and two

females (27.5 per cent) belonged to dietary Group III and had a fluctuant, inconstant type of intestinal flora, predominantly fermentative.

Eight patients (25.0 per cent) — five males and three females — displayed eczematous eruptions on other parts of their bodies, chiefly about the pubes and the umbilical area of the abdomen.

Nine patients (28.1 per cent) — seven males and two females — had a dry eczematous condition of the perineum. Two females also had dry dermatosis of the vulvae. Of this group four males were of normal weight; three males and two females were underweight; all of the males belonged to dietary Group II; the females belonged to dietary Group III.

Eight patients (25.0 per cent) — four males and four females — gave a history of some form of allergic disease. Among these were two asthmatics; three were hypersensitive to such food articles as shellfish, fish, milk and strawberries; one was definitely allergic to lipstick, and another to benzocaine.

Seventeen patients (53.1 per cent) — eleven males and six females — displayed definite disturbance of the hematopoietic function. This included microcytic, hypochromic, true normocytic and normochronic anemias with a tendency to macrocytosis. The disturbance of the hemapoietic function is secondary to the nutritional errors of omission and commission of these patients.

All 32 cases (100 per cent) had evidences of a deterioration, or a disease, of the dental tissues. This ranged from "softening of the teeth" to the more extreme forms of dental pathology as pyorrhea, recession of the gums, gingivitis, erosion, cavities, decayed teeth, abscessed teeth, etc.

All 32 cases had abnormal fecal florae.

There is necessarily some overlapping of the figures reported. No attempt has been made to analyze statistically all of the complicating factors which these 32 cases of pruritus ani had or complained of; only the outstanding complications have been included.

SUMMARY AND CONCLUSIONS

Pruritus ani is a very common condition. Only a small percentage of patients afflicted with it will consult a physician for treatment. A large percentage of cases remain untreated, or treat themselves with various ointments, obtained at a drug store. Phlegmatic people frequently develop a marked tolerance to the itching and burning sensations and resort to scratching for relief. The average patient consulting a physician for pruritis ani is afflicted invariably with an extreme form of this disease.

The milder forms of pruritus ani are more common in the winter and early spring, due to the inability to obtain many fresh foods during these seasons. Of course, there are other factors which may intensify the disorder during these seasons - the wearing of coarse, heavy underwear; infrequent bathing; increased appetite for "heavy" foods; poorly ventilated rooms, etc.

In its chronic form, pruritus ani is a nerve-wracking, serious condition, which is unresponsive to local treatment, per se.

True pruritus ani should not be considered a local condition or disease; it is a significant manifestation of a profound disturbance of the biochemical processes of the total organism, irrespective of whether or not it is possible to establish this fact clinically.

Etiologically, true pruritus ani is chiefly the result of faulty, improper nutrition. The prolonged subsistence upon a faulty, improperly constituted dietary results in a disorganization of the biologic processes (enzymic, microbic, excretory, secretory, etc.) of the intestinal tract. The protective function of the intestinal mucosa is impaired and bacterial infection frequently occurs to complicate the condition. At this point, some form of nutritive failure becomes manifest, due to the inability of the digestive tract properly to digest and absorb nutritive essentials, many of which are either absent or present in minimal or subminimal amounts in the faulty diet. In addition, chemical substances are formed in the colonic tract to produce an inflamed condition of the colonic mucosa, the anus and the perineum.

The biologic disturbance is not limited to the pathology which is to be found in the alimentary tract, chiefly in the lower colon and the anal tissues and the contiguous tegumentary areas surrounding the anus. In addition the biochemical levels of blood sugar, total cholesterol, total protein, and for chlorides as NACI were abnormal in all 32 cases. In the starch eaters blood sugar levels approached the maximal limits of normalcy. The total protein was on the low side and, of course, the cholesterol level was elevated because starch eaters eat more than their share of fats. Chloride levels as NAC1 were elevated in all cases of the patients tested because of the universal practice of table exercise with a salt cellar.

In the putrefactive classification, protein levels were about normal; the cholesterol levels were elevated; the blood sugar level was normal. In the mixed classification, there was a disturbance of all of these levels—their being an increase in the blood sugar level, the cholesterol level, the chloride level as NAC1 and a minimal total protein level. These values all reflect the effect which a faulty dietary has, not alone upon the digestive processes, but also upon what utilization the body makes of the end products of digestion. This is easy to explain because there is either an elevation or deficiency of one or more of the tenary elements and, coupled with this, of course, a deficiency of most of the "accessory food factors" which are component parts of a well planned dietary.

The results obtained in the series of 32 cases of true pruritus ani, upon a co-operative basis, in which constructive meal planning was the major therapeutic factor, support the hypotheses that pruritis ani is a secondary, indirect result of improper nutrition, and the direct result of a fundamental disturbance of the physiologic balance and function of the intestinal flora.

The several surgical measures which are now advocated for the relief of pruritus ani are not justifiable until every orthodox medical measure has failed. Undoubtedly, there are cases which will resist all medical treatment chiefly because they are faddists or will not co-operate in respect to following the dietary

instructions. As a result of this non-co-operative attitude, these cases may have to submit to surgical procedures for relief. But, surgical intervention is only a temporizing procedure. Most surgeons do not bother about giving patients post-operative dietary instructions. The few who do get their dietary instructions from a service which supplies them with diet menus for specific conditions find these diets are markedly deficient in many essential nutritive factors.

However, if all cases of pruritus ani were studied from a broad biologic standpoint, most of them could be cured or satisfactorily relieved by constructive meal planning and the simple medical procedures which have been outlined in this article.

It is important, at this point, to stress the shortcomings and the inadequacies of the dietary upon which these 32 patients subsisted prior to their consulting me and adopting the meal formulation schema which is outlined in my book, CONSTRUCTIVE MEAL PLANNING.(9)

All 32 of these patients kept an accurate record of their food and beverage intake. It is only by this means that the physician can keep abreast of the nutritive adequacy, or inadequacy, of the meals planned and consumed.

Despite the fact that the majority (about 75%) of these patients wholeheartedly tried to conform to their nutritive instructions, even those who conformed 100% still were victims of a minus, or inadequate, nutritive level. So, in all of these cases supplementary dietary factors have been employed to make up for the deficiencies noted, either from the food contents on their food and beverage lists, or from the laboratory findings in respect to food deficiencies.

In all of these cases food supplements, in the form of natural food supplements and, at other times, when the deficiencies were noteworthy, food supplements in the form of orthodox nutritive medication was prescribed. The prescribing of synthetic nutritive fractions, (vitamin C, vitamin B, vitamin A, iron, copper and other minerals), is often indicated in people manifesting a severe depletion of these elements and requiring a hasty restitution thereof in the form of orthodox so-called hematinics, tonics, metabolic stimulants, etc.

Patients were taught that they can obtain most of the necessary food elements by an intelligent selection of foodstuffs in markets. They have also been taught that, despite this intelligent selection, their foodstuffs may frequently be below par in respect to supplying them with the so-called "accessory food factors" because of factors previously outlined in this article.

The layman or professional perusing this study may arrive at one-sided or biased conclusions. Most people read reports, or articles, with a one-track mind --avidly trying to pick out of the melange something which they consider to be outstanding. This sort of mentation is not valid, because all of the tangled factors which are present in the melange, may play, or have played, an active part in the concatenative production of a symptom complex, or a disease syndrome.

At this point, it is well to recall Sir Clifford Allbutt's trenchant appraisal of his concept of disease -- he said, "Diseases are not entities; nor are they re-

curring phases of independent events; they are part and parcel of a universal series."

The physician's perspective in relation to etiology, symptomatology, pathology and his remedial efforts to reorder, or restore, what may be a simple, a complex or a chaotic clinical state to an approximation of normalcy, depends in large measure upon his dynamic concept of the relationships, and interrelationships, of these multitudinous factors. All of these desparate factors, remote or recent, are involved in the concatentive etiology of every clinical condition, irrespective of whether or not it can be attributed directly, or indirectly, to the activity of microscopic organisms.

It must also be kept in mind that any of these nebulous, indistinct, shadowy, and sometimes dissimilar and diverse factors may react concatenatively to produce a quasi-classical or classical picture of a complex symptomatology and pathology that frequently defies detection or indentification.

So, in considering the many factors which have been presented as casual in the production of what is too frequently regarded as a simple local manifestation of a skin disease, one may be tempted to attribute the occurrence of this condition as due solely to dietary factors. But this is not so when considered in the full context of clinical logic. The nutritional shortcomings manifested by nutritional deficiencies and excesses do not end there. We may have to consider the factors which may have, or have not, been in operation to worsen the nutritive integrity and adequacy of the food supply which, in turn, may account for many of the shortcomings due to deficiencies and/or excesses in a dietary pattern.

One cannot dismiss the effect of artificial (mostly chemical) fertilizers upon the soil; its organic pollution; and their effect upon food crops. The quantity and the quality of the food crops also depends upon many other factors -- climate, moisture, sunlight, soil culture, soil adequacy, etc., etc.

Assuming that all of these factors are normal, we cannot discount the effect of the widespread and lavish use of all kinds of chemicals, known as "cides" --insecticides, pesticides, hericides, etc., etc., upon what are considered normal food crops. Another factor, which one rarely thinks of, is that concerned with pollution of air, water, and soil by pollutant precipitants. Still another is concerned with the individual's habits--his dietary predilections (highly processed foods, chiefly made of highly milled products; artificially enriched food products; foods containing sugar in any form; prepared breakfast cereals, hot or cold; sweet, carbonated beverages; proteins of poor quality, embalmed in cans or processed by other preservation methods; fats of poor quality, especially hydrogenated and rancid fats, and diseased fats (saturated) from diseased animals, force fed to produce poundage; and the hundreds of products which are to be found on the shelves of all types of markets); his consumption of alcoholic beverages; his use of tobacco in all forms; etc., etc., which may play an important contributary role in the many-faceted aspects concerned with the etiology of an abnormal condition.

It is well to steer clear of what I have dubbed the "mono" philosophy of medicine.(10) This has been the orthodox concept for a long while, predicated largely upon the obsolete Pasteurian philosophy of the inseparability of disease from the activity of micro-organisms. This does not impeach nor destroy the validity of Pasteur's ideas and many of medicine's orthodox concepts of disease. Instead of weakening the Pasteurian concept, it enlarges it, and makes it more valid than it was fifty years ago.

The title of this paper is not factual because pruritis ani, or pruritis of any other part of the body, is not wholly a matter of dietetics as dietetics are usually considered, but it is due to the concatenation of all the factors which have been enumerated in the text of this article, plus many others, the importance of which we do not at present recognize, or associate, with this condition.

Therefore, this is a plea for a broad, all-inclusive marshalling of etiologic facets, evident or hidden, that may, or can be dynamic in the production of this and other symptomatologic complexes or diseases.

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