

lack of special knowledge required for their compounding so that chemical or physical changes will not be brought about.

The patient expects the physician to be thoroughly competent to write and the pharmacist to compound the prescription for his use, thereby insuring him a better effect and a speedier recovery from his diseased condition. Any pharmaceutical deficiency in the drug selection by the physician, or by the pharmacist in preparing the mixture will serve to decrease its efficiency and thus the patient will not receive the beneficial results he has a right to expect. We therefore can see the importance to all concerned in having a proper pharmaceutical prescription written and compounded.

THE TEMPTATION TO USE PROPRIETARY GOODS.

The examination of any pharmacist's prescription files will soon convince a physician that there is a great deal of imperfect prescribing. Many mixtures are ordered that have such prominent chemical and physical incompatibilities that they can not be combined without so many changes occurring as to render them inert, unpalatable, irritant or in some manner incapable of producing their desired effects. Many that without having a decomposition occur are so unpalatable that they can not be readily administered or after administration be retained and absorbed, whereas a little knowledge of the principles of pharmacy would frequently have enabled the prescriber to add some menstruum that would have decreased, if not completely prevented, the irritation and thereby increased his chances of obtaining the desired effects. The various elixirs, syrups, wines, solutions, etc., of proprietary or semi-proprietary character that are on the market are daily brought to the notice of the profession and the laity by circulars, agents and in the medical and lay publications. They owe their great popularity with the public to the directions so freely given in their advertising and wrapping circulars, thereby obviating the necessity of a consultation fee for the physician. The professional user finds a preparation ready-made for administration that does not require any thought on his part about compatibility or other pharmaceutical properties nor as to their dosage; for has he not been fully supplied with advertising matter describing the careful selection of the drugs, the expert assistance employed in their combination, the therapeutic indications for their use and the size and frequency of the dosage? Not only does the unprepared prescriber find liquid mixtures ready for his use, but all kinds of solid preparations are also awaiting him. No one can deny the valuable service rendered on many occasions by some of these preparations, but the physician who places his chief dependence upon these prescribes by rule and not by reason. He uses a dosage and mixture that is based on general therapeutic indications without being able to make such changes in constituents and their proportionate dosage as the special case would indicate. The free use of this class of pharmaceuticals can, in my estimation, be laid to the ease with which they can be obtained, the less knowledge demanded in their prescribing, the slight knowledge the average prescriber has of pharmacy, and the general tendency to recover from abnormal conditions if nature is not interfered with in too many ways. Just as long as drug therapy proves of value in the treatment of disease it will be a necessary portion of the students' and physicians' course of instruction and the principles that govern the selection and pharmaceutical properties of the drugs are just as important as the knowledge of their dosage and action.

The more exact the preparations can be made the more definite will be their action and they will be more exact the nearer they conform to the official or established lines indicated by the pharmacopeia. The better the instruction given the medical student upon these principles of pharmacy and pharmaceutical practices, the better able he will be to order drugs that can be administered and that will produce the therapeutic effects desirable in the diseased condition.

The fact of so much imperfect prescribing is enough to demand a better instruction in the pure pharmacy of the drugs than has been given in the past in any medical school. The tendency to draw away from this study that is being shown in many medical institutions must be corrected or their graduates will go out less prepared to prescribe drugs than they have been in the past and until we reach the condition in which we can do without drugs, the physician must prescribe them. Prescribing for his patient has always been one of the weakest points in the young physician's preparation for the practice of his profession.

CONCLUSIONS.

1. Better preliminary preparation is required (both general and scientific) than has been the rule for medical students.
2. The study of chemistry, botany and physics should be thorough, especially along the lines of their basic principles, before a student enters upon the medical course itself.
3. The pharmaceutical bearings of chemistry, botany and physics as well as the general principles of pharmacy should be considered during the first year's work in the medical school proper.
4. The next year should present the general application of the principles and practice of pharmacy to the prescribing of drugs, and should preferably be given by a teacher qualified by both pharmaceutical and medical experiences.
5. The clinical or practical year's instruction should not pass over the pharmacy of the drug treatment with a few words, but should give full directions from the pharmaceutical as well as the pharmacologic side of the use of the drug. Whenever drug treatment is indicated it is just as essential to produce beneficial results for the patient as the ability of the physician to diagnose the pathologic condition present, and pharmacy is as essential for therapeutics as pathology for diagnosis.
6. Pharmacy is the basic study that gives the physician the most exact knowledge possible regarding the quality of his drugs, hence should be begun in his earliest student days and continued throughout his entire college course and professional life, unless he becomes an osteopath or a christian scientist.
7. Adherence to the official preparations of the pharmacopeia is desirable and more thorough instruction upon its principles will prove valuable.

THE OUTDOOR TREATMENT OF TUBERCULOSIS.*

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Few medical men will now dispute the fact that our great remedies in the treatment of tuberculosis are pure air, rest and food. The more abundantly the former can be given the greater and faster will be the progress

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towards recovery. Pure air in greatest abundance can best be secured by tent life. It is a pleasure to witness the rapid improvement when this mode of life is inaugurated. The sleep becomes more restful and refreshing, the appetite is improved and the vigor and vitality greatly increased.

Tent life does not mean or should not mean roughing it, as many suppose. The same watchful care should be exercised, as good food given, as comfortable a bed, as much rest, as would be obtained in the most luxurious home or the best equipped closed sanitarium. The unfortunate results arising from mistaken notions in this regard has been most forcibly emphasized by a case recently coming under my observation. A young man with rapidly developing tuberculosis, rapid emaciation, daily fever, with little appetite and little strength, was advised by his physician to come west. He was told to get a tent and a horse and rough it. He was advised to cook his own food and to take care of himself and of his horse whether he liked it or not. He graphically described his experience, and were not the results so serious they would have been amusing. He said: "I had never been on a horse but once in my life. I lifted a heavy saddle on and off several times a day, hauled away at the cinch band, fought to get the bit in, chopped bales of hay and straw, carried pails of water, etc. In consequence I had the most horribly strained right lung and shoulder on earth. The temperature went up to 104 and the pulse 118."

A tubercular patient with little appetite, with little strength, with progressive emaciation and fever, is in no condition whatever to rough it or to take care of himself. Indeed, it should now be recognized as a cardinal principle that a tubercular patient in such condition should be given rest and quiet instead of exercise, and if the temperature is high the rest should be absolute. Not infrequently people are sent from the east to a high altitude and are advised to take little or no medicine, but to depend on fresh air and exercise. The advice should be for fresh air and no exercise until the patient becomes acclimated or until the fever has subsided, if present.

The idea of tent life has so long been identified with roughing it, with hardship and inconvenience and so many physicians still cling to the thought that the strenuous life of the camper is a part of the treatment that it is often difficult to impress any other idea. The hardships and the inconvenience of tent life where one is obliged to do all the work and to care for himself is often distasteful and irksome to a perfectly well and strong individual, but to the invalid with little strength, with no appetite and with fever, such a life is positively most injurious. While advising tent life as the means of obtaining the greatest amount of pure fresh air, yet we would advise with it and as a part of the treatment, food, rest and comfort. To insure the best results those who take up tent life should do so under careful medical supervision in order that the amount of exercise, as well as the food and medication, may be regulated according to the needs and the condition of the patient.

Instead of large closed sanitarium I have long been convinced that the outdoor treatment of tuberculosis as represented by tent life, so arranged as to give every comfort, and every facility that might be obtained in the best equipped closed sanitarium would be the means of saving a far larger proportion of our tubercular patients. The best results will be obtained in that climate that will permit of sleeping in a tent the year round. We should preferably select a climate with sufficient altitude,

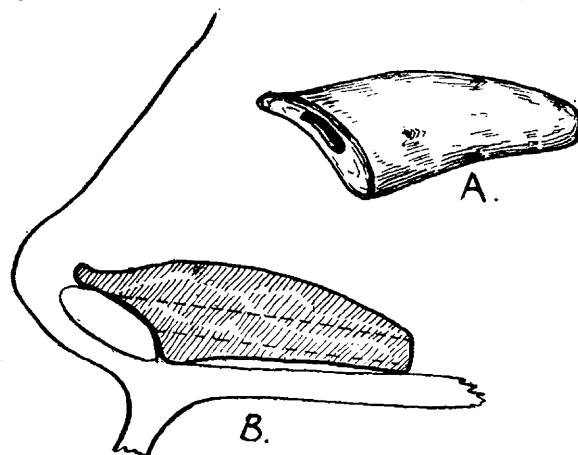
with dryness, uniformity of temperature, and of sufficient mildness to permit of a practically outdoor life night and day during the whole year. Many such localities can be found in New Mexico and among the foothills of Arizona. The climate of Colorado is too rigorous for an outdoor life during the winter season, but many patients sleep in tents here from the early summer until October, and some even as late as December, with the greatest benefit. The winters of Colorado are too severe for the majority of tubercular cases and the summers of New Mexico and Arizona are too hot and uncomfortable for the best welfare of these cases unless they flee from the arid plains to the mountains during this season. I am convinced that the best results are obtained by shifting these patients about, allowing them to take up their residence and outdoor life in Colorado during the summer season and permitting them to spend the winters in the same manner in Arizona or New Mexico.

A CORK NASAL SPLINT.

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DETROIT.

The ordinary Asch or Mayer hard rubber splint used after operations on the nasal septum is by no means a comfortable thing to wear. Its anterior lower edge projects conspicuously,



A. The splint. B. Diagrammatic section of nose, showing splint in place. Observe the angle (140 degrees), which the anterior face of splint makes with the nasal floor.

while its upper edge, by its constant pressure, generally makes the tip of the nose very tender and painful. Some metallic splints I have seen are cleverly contrived, but the patient is unpleasantly conscious of their weight, and I am not sure but they have a tendency to fall out of the nose. Cork seems to offer, by its lightness and elasticity, some decided advantages, and I have made and used some splints of this material which have proved very satisfactory. The surgeon may make them for himself, with the aid of a sharp knife, a file and some sandpaper. A hole is bored through a piece of cork of proper size by means of a perforator, and the splint is shaped to suit the needs of the individual case. After the splint is shaped, it is dropped into hot melted paraffin, which both sterilizes it and fills up the numerous inequalities in its surface, so that it does not absorb the nasal secretions and its cleansing is easy. It will be noticed by the figure that the splint, when in place, is completely within the nasal cavity. Owing to this, as well as to its color, it may be worn without being conspicuous. Moreover, its lightness makes it very comfortable for the patient, and the tip of the nose does not become sore from pressure.

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COMPASSION and timidity are mistaken kindness at the first dressing of the ordinary fracture of the lower end of the radius.—Roberts.