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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Notice

Due to the critical shortage of medical officers, the Chief, Bureau of Medicine and Surgery, has recommended, and the Chief of Naval Personnel has concurred, that Reserve medical officers now on active duty who desire to submit requests for extension of their active duty for a period of three months or more will be given favorable consideration.

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Residency Training in the Navy

The results of previous notices concerning residency training have been most gratifying. However, applications are still desired from Regular officers and those Reserve officers who have completed their obligated service under the Universal Military Training and Service Act, as amended, in the following specialties: Internal Medicine, Radiology, Pathology, Pediatrics (opening in Pediatrics at Chelsea, Oakland, and Philadelphia), Urology, and Otolaryngology (Philadelphia only).

It is now the desire of the Bureau of Medicine and Surgery to continue a resident in training without interruption until he has completed the formal training requirements leading to certification by an American Specialty Board. This procedure will be strictly adhered to in every case where the needs of the Service permit and providing the officer shows satisfactory progress as a resident. (ProfDiv, BuMed)

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Plans and Policies of the Surgeon General

In an address delivered 1 June 1955, the opening day of the recent Symposium of the Surgeon General, Rear Admiral B. W. Hogan, MC USN, Chief of the Bureau of Medicine and Surgery, discussed his policies and plans. Admiral Hogan was introduced by Rear Admiral B. E. Bradley, MC USN, Chairman of the Symposium and Deputy Surgeon General.

In brief, Admiral Hogan stated: that the Symposium was called early in his term of office to lay a firm foundation for progress and development during the next four years, and to establish a basis for effective, coordinated effort by complete two-way sharing of information regarding problems, views, plans, and policies.

In a memorandum of 26 April to all officers of the Medical Department, the Surgeon General discussed briefly some of his purposes and plans, and listed a number of specific objectives. In this address, a fuller explanation and a description of the general situation is given.

Perhaps the most important problem now is the serious and potentially critical shortage of physicians and dentists in the Regular Navy Medical and Dental Corps. During the past 20 months there were about 300 resignations (over 20% of the total Corps) from the Regular Medical Corps, and only 37 new Medical officers were commissioned. In the past 33 months the Regular Dental Corps has lost over 150 officers by resignation and commissioned only about one-fourth that number of new officers. Resignations are about 15 career physicians and 5 dentists per month. Many of these officers are highly trained specialists who are sorely needed. Replacing these officers with men on 2-year tours of involuntary duty would render many facilities incapable of furnishing professionally acceptable medical and dental care. Indoctrination, training, and time in transit decrease the productive period of service about one-quarter causing waste in money and professional manpower in filling such billets with 2-year men.

There is hope that eventually the Military Medical Dental Scholarships program of the Department of Defense will be enacted into law and serve to strengthen the Regular Corps.

As counter measures, the Surgeon General has reported to the Secretary of the Navy, via the Chief of Naval Personnel, in detail, setting forth the seriousness of the situation and urging immediate remedial action. This report has been accorded sympathetic interest.

In order to increase career attractiveness, so as to influence a greater number of capable men to choose a Navy Career and remain for at least a 20-year tour, two steps could be taken by administrative action while others would require new legislation, usually taking one to three years to accomplish. Granting of requests for voluntary retirement after 20 or more years of active military service is now policy. It also would be

possible to allot five years of constructive service for promotion purposes to physicians coming in after one year internship, provided corresponding adjustment in status is first accorded certain younger officers already in service, to prevent inequity and inversion. This would mean, when implemented, that original commissioning would be as LT instead of LTJG. Similarly, for dentists, 4 years of constructive service could be allotted the difference pertaining to the year of internship required of physicians before being commissioned.

The Ensign 1995 (Medical and Dental) program has proven to be of value. Five hundred and two medical students are in this program at present and the goal is 2000. Each of these men has agreed to accept a superseding appointment as LTJG if offered, retain his commission for eight years in the Naval Reserve, and to serve on active duty for two years after appointment and after completion of no more than 12 months of civilian internship. Participants in the program accumulate longevity for pay purposes and are given preferential consideration for naval internships. They may also be given up to 60 days of active duty training with full pay and allowances after completing at least 2 years of their medical course. An Ensign 1995 (Medical) is eligible for annual training duty at naval research activities, hospitals, or some other suitable medical training facility.

The Ensign 1995 (Dental) program goes a step further in that last year 46 fourth year dental students were commissioned as active duty ensigns assigned to finish their undergraduate training. In return they agreed to accept Regular Navy appointments upon graduation and to serve 3 years.

Remedial actions dependent on new legislation can rarely be accomplished quickly. In this category would be a proposal for allotting 5 years of constructive service for pay purposes. Another proposal is an increase in special pay for physicians and dentists which might be coupled with a bonus for continuing in service for definite periods after 5, 10, and 16 years respectively. This entire problem is looked upon with such interest and concern by officials in positions of high authority that it seems certain that every remedial action possible will be taken.

Career planning along one of three primary career channels is emphasized; Clinical practice, Research, and Administration; some subsidiary channels are operational or military medicine, industrial medicine, preventive medicine, et cetera. Background information concerning the above may be obtained from a letter of the Surgeon General of 28 April describing the need for a certain number of career clinical officers and the desire that they be provided equal promotion opportunities with administrative officials.

In a large sense, it is a command responsibility to make Navy medicine and dentistry attractive as a career. There is much that those concerned can do to increase morale and a sense of belonging to the organization. Interviews 5 or 6 months before expiration of a limited period of service can

be most effective. Special attempts should be made to determine what factors may influence the decision to continue or not continue in the service. Similar action is important in relation to the reenlistments of hospital corpsmen.

In the medical care of dependents, a new bill is being prepared which, it is hoped, will meet Congressional approval. Two bills have been disapproved. Active dependent service is essential for training and residency programs.

In staffing hospitals, a scientific yardstick to measure workload imposed on doctors, nurses, and corpsmen by inpatients and outpatients, is being worked out. With this, it is hoped that the limited number of billets can be distributed fairly and equably.

An energetic and conscientious District medical officer can contribute in a notable manner by coordinating the utilization of medical personnel in his District. The use of civilian physicians in industrial or other activities should be studied so that, perhaps, medical officer billets could be deleted.

In closing, the Surgeon General discussed briefly the reply made by the Bureau concerning the report of the Hoover Commission on Federal medical services published in February 1955.

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How Do You Rate, Financially and Physically, Doctor?

A recent study made by the Hartford County (Conn.) Medical Society of 144 obituaries of local physicians and probate court cases involving their estates reveals some illuminating--and startling--facts which should make any physician do a bit of checking on his own financial status and on just how fair he is being to his own health.

The study revealed the following, according to an article in the Hartford Times and abstracted by the New England Mutual Life Insurance Company's official bulletin, *The Pilot's Log*:

One out of eight of the physicians who died between 1940 and 1953 was in debt at the time of death.

Of the 144 doctor estates studied, one out of three . . . left net assets of less than \$10,000.

The Hartford survey disclosed only one extremely wealthy doctor out of the 144 and that \$575,915 of his estate was consumed by estate taxes and other settlement expenses.

Only one doctor in eight survived his wife!

The doctors aged 40 to 50 died twice as fast as the general population, and in the 60-70 bracket, the doctors' death rate was 50% higher than the insurance table.

Heart diseases and cerebral hemorrhage were the chief causes of death.

Expenses of settlement of the estates studied ranged from a minimum of 13% to as much as one third.

The age at death of the physicians when compared with life insurance mortality tables showed that there were two vulnerable age periods for medical men--40 to 50 and 60 to 70.

One out of three physicians left no will.

As the Hartford Times pointed out: "Doctors, frequently envied for their incomes during the productive years, don't leave the huge estates many think they do."

Also, the facts should be of interest to those who think many doctors have a rocking-chair job and can't understand why a physician needs some rest and recreation like any other human being.

These data teach a lesson which should not be ignored, Doctor.

* * * * *

Induced Hypotension

The introduction of easily injectable ganglionic-blocking agents in the form of the methonium compounds has led to the widespread usage of hexamethonium and, to a lesser extent, pentamethonium, to lower the blood pressure to systolic levels of 50 to 60 mm. Hg and so control excessive vascular ooze in the operative field. Pendiomid, a diethylenediamine derivative, and more importantly, arfonad, a thiophanium compound, have provided even more controllable methods for blocking the transmission within the sympathetic ganglia.

These simple intravenous methods for inducing hypotension have led to an extensive use of these techniques in anesthesia and surgery. The question must at least be raised whether they have not led also to their extensive misuse, for there can no longer be doubt that these techniques frequently exceed the bounds of physiological rectitude, and that certain fatal and nonfatal complications resulting from their use have been far more common than previously was supposed. In an attempt to obtain anonymous but unbiased reports of these techniques--and particularly the unfortunate sequelae--questionnaires were sent by the Section on Anesthesiology of the Yale University School of Medicine to the members of the Association of Anaesthetists of Great Britain and Ireland, and to the Diplomates of the American Board of Anesthesiology. In all, a total of 27,930 cases were reported, of which 15,354, or roughly 55%, were conducted by the use of the methonium compounds; 9577, or 34%, by the induction of total spinal block, which has the advantage of producing surgical anesthesia

over much of the body in addition to inducing hypotension; 414, or 1.5%, by the institution of the somewhat cumbersome technique of arteriotomy; 359 and 63, respectively, by the injection of arfonad and pendiomid; and 2163 by the use of a variety of miscellaneous techniques.

The level of the blood pressure sought by the various physicians anesthetizing these 27,930 cases varied markedly from 60 mm. Hg or less to 100 mm. Hg or even higher. It should be noted, however, that in 20,246 cases, or 72% of the total number, an attempt was made to reduce the blood pressure to 80 mm. Hg or below. This is of considerable importance, inasmuch as it has been shown statistically that the incidence of major complications reported in these questionnaires is significantly higher when the blood pressure is reduced to 80 mm. Hg or below than if the arterial pressure is permitted to remain above that level.

The complications encountered in the 27,930 cases totaled 908, representing the extremely high complication rate of one in every 31 cases. Suppression of kidney function, in the form of anuria or oliguria, occurred 106 times. Thromboses of various essential arterial supplies, including cerebral, retinal, and coronary, were reported in 50 cases, and were associated frequently with a mortality. Cardiac arrest, or cardiovascular collapse in general, occurred on 58 occasions and, again, were followed frequently by death. Reactionary hemorrhage was by far the most common important complication, occurring 243 times. Prolonged effects, either persistent hypotension or delayed awakening, were reported in 269 cases. Blurred vision was found postoperatively in 127 instances of methonium-induced hypotension, while miscellaneous complications were encountered in another 45 cases.

Ninety-six mortalities were associated with the use of these techniques in the 27,930 cases, or a mortality rate of one in 291 patients. It is evident that compromising the circulation to such vital structures as the kidney, the brain, and the heart accounted for more than 50% of the deaths.

The contraindications to the induction of hypotension during operation follow quite reasonably upon knowledge of the complications and mortalities. Disease of the various branches of the vascular tree, including cardiovascular disease in general, arteriosclerosis, cardiac disease per se, cerebrovascular disease, and severe hypotension; renal disease; hepatic disease; the extremes of age, more particularly the geriatric patient; disturbances of blood volume, including anemia, hemorrhage, shock, low blood volume, and polycythemia; and uncomplicated elective surgery--all are considered contraindications to the use of these techniques.

A modified technique of "controlled hypotension," therefore, has been evolved in which the blood pressure is lowered the minimal extent compatible with the control of the bleeding, and is maintained at this lowered level the shortest time consistent with the adequate accomplishment of the surgical intervention.

The thiophanium compound, arfonad, has been utilized in this modified technique because it produces an evanescent, though potent, depressor response of the arterial pressure. It is possible to employ the drug by continuous intravenous infusion, and in this manner provide variable and graded fluctuations of the blood pressure and achieve minute-to-minute control of both the degree and the duration of the hypotension. This controllability is of further important value in that it permits the rapid termination of the hypotensive state at the end of surgery or the rapid abandonment of the technique in the face of inadvertent hemorrhage and similar surgical exigencies.

The deliberate induction of arterial hypotension during anesthesia and surgery, to effect a diminution of blood loss, is accomplished either by a reduction of the total circulating blood volume or by a decrease of peripheral resistance. The various techniques which are employed are described and their relative merits are discussed from a physiological point of view.

The evidence clearly indicates that the morbidities and mortalities associated with the use of induced hypotension are related closely to both the degree and the duration of the hypotension. The profound dangers of induced hypotension dictate that the use of these techniques be restricted to those cases in which they are potentially life-saving. The indications for the control of hemorrhage, the production of a relatively bloodless operative field, or the reduction of organ or intravascular tension, are enumerated. (Little, D. M. Jr., LT MC USNR, Induced Hypotension During Anesthesia and Surgery; *Anesthesiology*, 16: 320-332, May 1955)

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Radioactive Isotopes in a Community Hospital

The intensified clinical application of isotopes since 1946 has led to the accumulation of a vast and varied experience throughout the United States as noted in the medical literature and in various other medical contacts. In certain respects, clinical application of these substances seems currently to be on firmer ground than some of the newer developments in other fields of medicine.

It is appropriate that the application of radioactive isotopes should keep pace with other medical developments of the past two decades. In more and more small, general hospitals throughout the United States, medical specialists are available to cope with even the more formidable diagnostic and therapeutic problems. This is a natural consequence of the improved system of specialty training of the past three decades and the rigid specialty-board requirements, as well as improved anesthesia, fluid balance, transfusions, and so forth. In many such hospitals, angiography,

admission photoroentgen-ray survey films of the chest, cardiovascular and adrenal surgery, diagnostic presacral air injection and remarkable extension of radical surgical procedures have become commonplace and successful. It seems incongruous that the well trained young specialist who leaves a large medical center to practice such procedures in a community hospital should not also have in his armamentarium whatever help can be gained from the diagnostic and therapeutic application of radioactive isotopes.

Those who work in community hospitals might properly look to the university centers in this country and abroad, and to federally subsidized projects in their search for isotopes that have been thoroughly tried and found practical for human needs. Fortunately, extensive experimental and research facilities--notably the Oak Ridge Institute of Nuclear Studies--are available in this country. There is no reason to consider the use of radioactive isotopes to be experimental or to conduct any experimental application on patients in small general hospitals; any such information is available from the specially equipped centers. Thus, the practical application at the community-hospital level involves two principal considerations: the use of a particular isotope should improve the accuracy of diagnosis or the effectiveness of therapy in the condition to be dealt with as compared to older or more readily available modalities; and the cost to the patient should be less than, or equivalent to, existing fees for drugs, hospital services, and professional fees to accomplish the same medical result.

To some extent, these criteria may prove to be mutually compensatory.

The decision concerning the feasibility of a program and the selection of a particular isotope to be employed involves teamwork. One of the many wise provisions of the Atomic Energy Commission regarding medical application of isotopes specifies that these decisions at local-hospital levels shall be made jointly by such specialists as internists, hematologists, pathologists, surgeons, radiologists, and medical nuclear physicists. The last are available from large medical centers and university posts on consultation or part-time basis and are important additions to the medical scene.

Some of these agents and their uses may be itemized as follows:

Radioactive iodine (I^{131}) for the diagnosis and therapy of certain thyroid disorders and for some euthyroid cardiac patients.

Radioactive phosphorus (P^{32}) for therapy of primary polycythemia rubra vera if the patient volume makes this practical and for chronic leukemias if deep x-ray therapy is not chosen.

Radioactive colloidal gold (Au^{198}) or colloidal chromic phosphate (P^{32}) for the palliative therapy of cancer in body cavities and for certain selected prostatic and uterine neoplastic lesions.

Radioactive iron 59 , chromium 51 , and iodinated human serum albumin (I^{131}) may be employed for evaluation of red-cell mass, plasma volume, cardiac output, circulation time, and other diagnostic studies (such as those to detect lesions of the brain and liver).

As substitutes for radium, radon, and x-ray sources, radioactive strontium (Sr^{90}) instead of surface beta radium sources; cobalt (Co^{60}) instead of interstitial radium needles, intracavitary radium or surface gamma radium sources or as multicurie telecobalt sources as an alternative for supervoltage x-ray or teleradium therapy; and radioactive gold (Au^{198}) instead of permanent radon implants.

Of the foregoing by far the broadest application is that of I^{131} , which meets the practical criteria already suggested of effectiveness and cost. The specificity of metabolic localization of I^{131} in the thyroid gland is so remarkable that it seems safe to predict that it will have a permanent and expanding place in medicine. Selection of other isotopes logically varies with hospital needs, individual talents of staff members, background of training in isotope usage, and patterns of practice in terms of total patients.

For more than 50 years, there have been few restrictions on the use and application of radium and radon by any physician who may choose to employ them. In sharp contrast, in its isotope-distribution policy, the Atomic Energy Commission has imposed reasonable and wise regulations. It is necessary for a local hospital's isotope committee to provide numerous details of personnel, instrumentation, protection, and, particularly, the exact proposed plans of diagnostic and therapeutic dosages for each isotope to be employed. The Commission's authorization is required before procurement of radioactive isotopes is permitted from the original Oak Ridge facilities or the more recently available commercial sources such as Abbott Laboratories or Tracerlab, Incorporated. Direct instruction and field inspection by personnel of the Commission has done much to protect patients, hospital personnel, and physicians from unnecessary hazards.

The remainder of the discussion concerns principally I^{131} , but in large measure the considerations involved apply to other isotopes as well. At present, the availability of calibrated amounts of I^{131} , packaged for individual use and transmitted by air express, is quite practical for the small general hospital. It is thus possible to avoid the initial expense, space allotment, labor, and maintenance cost in operation of a "hot lab." Decay curves and initial strength are supplied with each shipment. The eight-day half life of I^{131} makes air express practical and rail express impractical.

On the basis of precalibrated diagnostic and therapeutic doses from a commercial supplier, it is possible to set up necessary measuring and protective equipment with flexibility for future expansion at a cost of about \$1500 to \$1800. Less than this amount can be spent or, of course, a great deal more.

The initiation of a program carries with it a real necessity for attention to purely radiation hazards. This involves proper care in the storage

and supervision of use and disposal of all materials according to well established physical facts and policies. Of almost equal necessity is the problem of reassurance regarding absence of radiation hazards. Many patients and hospital personnel are not aware of the accuracy and knowledge of physical measurement of radiation available to all.

Several developments of recent years favor the initiation and operation of isotope programs for even the smaller general hospitals: the distribution program of the Atomic Energy Commission initiated in 1946; the availability of precalibrated diagnostic and therapeutic units delivered by air-transport facilities from commercial sources; the availability of isotope training for physicians and of part-time consultant medical nuclear physicists; the availability of reasonably priced radiation detection and measurement equipment; and, most important of all, the accumulation of well documented clinical experience especially in I^{131} usage.

After 20 years of research in physical aspects, animal experimentation, and in the past 15 years, increasing application of radioactive isotopes for human needs, there are many cases in which an isotope like I^{131} is of practical value, meeting criteria of effectiveness and cost for use in the community hospital. Teamwork among interested physicians and logical awareness of effects of isotopes without blind or illogical fear of them should guide the development and operation of an isotope program. I^{131} has a permanent and expanding place in the diagnosis and therapy of selected thyroid problems and in certain euthyroid cardiac patients who are likely to benefit by lessened metabolism. (Turner, J. W., Radioactive Isotopes in a Community Hospital: *New England J. Med.*, 252: 806-809, May 12th, 1955)

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New Treatment of Barbiturate Intoxication

The increasing popularity of barbiturates as suicidal agents has created a world-wide problem, and over the past decade the amount of barbiturate used on both sides of the Atlantic has more than trebled while the incidence of barbiturate coma has increased five-fold. Until recently, the over-all death rate from barbiturate intoxication, treated with central analeptics of different types, has remained steady at about 10%, increasing to over 20% in serious cases. This figure has now been reduced as a result of improved medical care, and possibly, although to a much less extent, the more judicious use of the newer central analeptics.

The authors discuss a new method of treatment incorporating the use of two new substances, BB-methylethylglutarimide (NP13) and 2:4-diamino-5-phenylthiazole hydrobromide or hydrochloride (D. A. P. T.), which they think should, when used in conjunction with good medical treatment, further reduce the death rate from this condition.

The merit of the method lies in the fact that the more active agent, NP13, unlike the central analeptics in current use, appears to exert--in therapeutic doses at least--a direct antagonism to the offending barbiturate, and will readily restore the patient from a deep coma to a desired state of light anesthesia, the "safe state" from which spontaneous recovery to full consciousness usually occurs within eight hours. This removes the need for strict and prolonged medical and nursing care and virtually eliminates the risk of complications. The chemical structure of NP13 indicates a definite resemblance to the barbiturate ring system.

D. A. P. T.--itself a weak barbiturate antagonist--is, however, a good synergist to NP13 as well as an excellent respiratory stimulant. It greatly reduces the risk of toxic manifestations which sometimes occur when NP13 alone is given rapidly and in high dosage. Both substances in therapeutic doses appear to cause a slight rise in blood pressure, and a large dose (75mg.) given intravenously to a barbiturized patient has produced a large rise in blood pressure and sweating, suggesting a direct effect on the autonomic ganglia. However, both substances, especially NP13 in high dosage and particularly if given rapidly, will cause convulsions in both barbiturized and normal animals.

The treatment suggested for cases of barbiturate intoxication consists of: (1) general medical treatment; and (2) specific treatment with NP13 and D. A. P. T.

The authors have found the following minimal procedures to be satisfactory. A laryngoscope is passed in the casualty department to assess the pharyngeal and laryngeal reflexes. If these are absent, a cuffed tube is inserted and the stomach contents are carefully aspirated if the patient is treated within 4 to 5 hours of ingesting the barbiturate. Gastric lavage should not be performed. An antibiotic "cover" should be employed. The patient is then transferred to the ward if necessary and a clear airway and adequate oxygenation are ensured. Close watch should be kept for complications.

Specific treatment with NP13 and D. A. P. T. should preferably be given in the ward. An emergency tray, containing amongst other things 2.5% thiopentone sodium, should be at hand in case the patient should show any idiosyncrasy to these drugs. The two drugs are administered in physiological saline in the following dilutions: NP13 0.5% (5 mg. per ml.) and D. A. P. T. 1.5% (15 mg. per ml.).

The authors' experience led them to adopt the following mode of administration: Set up a 5% glucose intravenous infusion (dextran if indicated) as a means of affording rapid action of the drugs. Inject, by two separate (20 ml.) syringes, into the rubber tubing of the drip every three to five minutes, 1 ml. D. A. P. T. solution, followed immediately by 10 ml. NP13 solution. This probably allows more control than would direct

infusion of the two solutions. Decrease these quantities by half if the patient's response should cause concern. The response is assessed by the following, noted after each injection: pulse, respirations, blood pressure, tone, reflexes (knee, ankle, plantar withdrawal; the return of laryngeal and pharyngeal reflexes is judged by their effects on the endotracheal tube or, in its absence, by signs of swallowing and coughing); eye signs (movement, lacrimation, reaction of pupil to light); presence of voluntary movement, reaction to supraorbital pain stimulus (often misleading); phonation, state of peripheral circulation, colour and temperature of skin. These afford a good progress report of a patient's recovery.

Continue the injections until the patient is brought to the "safe state" denoted by a return of tone and reflexes (including pharyngeal and laryngeal). This is usually associated with groaning, voluntary movement, and return towards normal of pulse rate, respiratory rate, and blood pressure. The treatment generally takes about two hours in a deeply comatose patient. A total dose of 200 ml. (1.0 g.) NP13 solution and 20 ml. (0.3 g.) D. A. P. T. solution is usually adequate in most cases. No attempt should be made to wake the patient.

Once the "safe state" has been reached, remove the endotracheal tube and treat the patient as if recovering from light anesthesia. Spontaneous recovery to full consciousness usually occurs within eight hours.

The rapid restoration of the comatose patient to the easily manageable "safe state" has three advantages: (1) It obviates the need for prolonged endotracheal intubation; (2) It minimizes both the immediate risk to the patient's life and the remote risk associated with possible complications of the prolonged barbiturate coma; and (3) It is valuable from the viewpoint of hospital economy in that it affords relief from prolonged and strict nursing.

A new method of treating acute barbiturate intoxication is outlined, which compares more than favourably with other methods in that it minimizes the risk of complications and removes the need for strict and prolonged medical and nursing care without incurring the risk of convulsions and secondary depression sometimes accompanying treatment with analeptics.

Animal and clinical investigations have revealed that NP13 and D. A. P. T. possess a high therapeutic index and quickly relieve the acute phase of severe barbiturate coma, whereby the patient is deliberately restored to an easily manageable state of light anesthesia, the "safe state" from which spontaneous recovery to full consciousness usually occurs within eight hours.

It is suggested that these substances may provide an effective means of controlling anesthesia induced by barbiturates, both in enabling a rapid recovery to the conscious state where desired, and in counteracting any emergency such as laryngeal spasm. (Shulman, A. et al., A New Treatment of Barbiturate Intoxication: Brit. M. J., No. 4924: 1238-1244, May 21st, 1955)

Routine Aspiration of Breast Cysts

Breast cyst aspiration is a safe, painless, inexpensive way to differentiate a benign breast lesion from a potentially malignant one. It shows immediately whether the lesion is really cystic and not dangerous or solid and possibly malignant. If a cancer should be growing inside the cyst, aspiration would reveal the presence of bloody cyst fluid. If a cancer should grow in the cyst wall rather than in the cyst lumen, withdrawal of the cyst fluid not only would fail to make the mass disappear, but it would make the nodularity of the cancer more apparent. In addition to these diagnostic advantages of breast cyst aspiration, there is a very real likelihood that the simple procedure of aspiration will prove curative, thus preventing an unnecessary operation. This happy result is caused by the fact that in many instances discrete breast cysts have little or no epithelial lining; thus when the fluid is removed, the collapsed cyst walls grow together and the cyst is obliterated.

All the patients of this series were told that solid breast tumors must be removed but that many cystic breast tumors can be cured by aspiration. It was made clear that if aspiration yields no fluid, or if the fluid is bloody, or if the fluid returns promptly, or even if the mass does not completely disappear with the aspiration, then excision of the area must be carried out. Once these facts were understood and the patient agreed to return in four weeks for final appraisal of the results obtained by aspiration, the cyst was aspirated in the office.

This report is based upon the analysis of 267 breast aspirations carried out for 202 consecutive women thought to have a definite discrete cystic lesion of the breast. Areas of multiple or conglomerate cyst formation and masses thought to be solid were excised without aspiration. There were 210 successful aspirations yielding fluid and 57 dry taps in which no fluid was obtained. Masses which yielded no fluid were considered solid and prompt excision advised in every instance. Forty of the 57 dry taps were found to be some form of benign lesion, such as soft fibro-adenoma or adenosis or lipoma. In 5 instances, the breast mass was aspirated and no fluid was obtained, but before the patient could be operated upon, the mass completely disappeared.

The cysts chosen for aspiration were usually solitary cysts and, more rarely, multiple, but they always seemed fluctuant or springy on palpation. Areas thought to be solid were excised and not aspirated. The aspirated fluid was usually turbid greenish or amber-colored. It varied in amount from 0.5 to 50 ml., the average being 8.1 ml. The mass completely disappeared after 206 of the 210 aspirations. The remaining 4 cysts became smaller, but nevertheless, the residual thickness was immediately excised. The thickness proved to be small areas of mazoplasia about the larger aspirated cyst.

Because aspiration was not carried out unless the patient agreed to return in one month for reexamination, follow-up studies are complete for 210 consecutive breast cyst aspirations that form the basis for this report. The minimum follow-up period of one month is adequate to evaluate the procedure, because if an emptied cyst is destined to refill, in the great majority of instances it does so within one month.

One hundred and ninety-four of the 210 aspirated cysts disappeared after one or more aspirations, and the aspirated area remained free of cysts from one month to several years. There were 8 that required 2 aspirations and one that required 3 aspirations before the cyst could no longer be detected by palpation. It is rarely advisable to aspirate the same cyst more than twice. Sixteen cysts either refilled or the mass did not completely disappear with aspiration. These were excised. One of these was a galactocele. Seven cysts were found to be partially lined by low epithelium or to have no demonstrable epithelial lining. Seven cysts showed clusters of small cysts in the large cyst wall. One cyst was completely lined by epithelium or papillary projections, but the process was not considered malignant.

Those who fear routine aspiration and favor excision of all breast cysts do so because they feel that, unless all such lesions are excised an intracystic cancer might be overlooked. The authors do not believe the danger of overlooking an intracystic cancer is great enough to justify routine excision of every discrete cyst of the breast. The development of intracystic breast cancer appears to be a very rare occurrence.

Some surgeons object to the routine aspiration of breast cysts because they fear that such an easy solution to the problem might make a woman careless of any breast masses which might develop at some later date. The authors believe that every effort should be made to spare the patient the pain and expense of an operative procedure. Rather, she should be protected from the inevitable fear that goes with every biopsy operation. Many of these patients come to the surgeon extremely frightened by either what they have read or what they have heard from the referring physician. A discussion about the value of an operation for biopsy, the operation for removal of the cyst, and then the waiting for the pathologist's report add up to quite an emotional experience. In some introspective persons, this could result in the development of an abnormal fear of cancer. It seems far more reasonable to reserve breast-cyst excision with its attending fear, pain, and expense for the relatively few patients who are not cured by the simple procedure of breast-cyst aspiration. (Goode, J. V., McNeill, J. P., Gordon, C. E., Routine Aspiration of Discrete Breast Cysts: Arch. Surg., 70: 686-689, May 1955)

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Intrathoracic Surgery in Patients Over Sixty

Increased longevity, coupled with the increased incidence of bronchogenic carcinoma, has resulted in the necessity for considering thoracotomy and pulmonary resection in an expanding segment of the population. The over-all safety, as well as the feasibility of well-ordered thoracotomy, is established, but little specific attention has been directed to its performance in the later decades of life even though numerous studies have been made of the results of general surgical operations in the aged. One might well expect that elderly patients, subjected to thoracic surgical procedures, would do well as a group because all investigators seem to agree that high mortality rates in such persons are encountered only in those undergoing emergency operations, or in those who are in poor states of hydration or nutritional balance. These adverse situations are uncommon in thoracic diseases amenable to surgical treatment.

In an effort to adjudge the risk of thoracotomy and pulmonary resection in elderly people, the authors analyzed their recent experiences. The results of this analysis and some reactions to the problems involved are presented.

Thirty-one patients 60 years of age or older were subjected to thoracotomy. The indication in all cases was known or suspected malignancy. In 23 of the 31 patients, the presence of malignancy was confirmed. Definitive surgical procedures were carried out in all but 8 cases, and included all degrees of pulmonary resection. In the older patients, there was a tendency to use lobectomy for removal of tumors, but pneumonectomy was performed in 6 instances.

Two deaths occurred in the entire series. One was the result of a technical accident in an otherwise unmanageable situation; the other resulted from flooding of the contralateral lung by heavy bronchial secretions during the preliminary stages of a proposed pneumonectomy for carcinoma.

Eleven postoperative complications of all types occurred, but only 4 were directly surgical. Only one of these (emphema and bronchopleural fistula) could be considered to add significantly to morbidity; the other 3 were recurrent atelectasis, moderate subcutaneous emphysema, and a pneumothorax occurring spontaneously late in the postoperative period.

Of 9 patients with known cardiac disease, only 4 suffered from failure postoperatively. These 4 responded to appropriate therapy and cardiac disease was not adjudged responsible for either of the deaths recorded.

The authors were impressed by the fact that the elderly patient can undergo extensive intrathoracic surgery. Favorable prognostic signs are: good performance in simple work tests, and mental alertness in a patient who manifests a will to survive and gives evidence that he can accept the

discomfort and inconvenience of operation in return for the prospect of prolonged life. (Campbell, D. C. Jr., Major USAF (MC), and Langston, H. T., Intrathoracic Surgical Procedures in Patients Past the Age of 60: Journal of the American Geriatrics Society, 3: 330-336, May 1955)

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Simple Mastectomy for Carcinoma of the Breast

The treatment of carcinoma of the breast continues to be a controversial subject. Recently, Professor R. McWhirter of Edinburgh, added to the controversy by reporting that simple mastectomy and roentgenotherapy had produced better results, in his hands, than had radical mastectomy. Many surgeons have been extremely reluctant to accept the implications of McWhirter's reports. This reluctance, it is believed, exists mainly for two reasons: (1) The impact of Halsted on the surgical profession has been so immense and almost completely beneficial, that anything contrary to the Halstedian concepts of cancer surgery has been difficult to accept; (2) The modern trend in the treatment of malignancies is toward more extensive resections, as evidenced in breast carcinoma therapy by Wangenstein's clavicle-dividing supraclavicular node resection (actually inaugurated and rejected by Halsted), Handley's internal mammary node resection, Urban's chest wall resection (also tried and rejected by Halsted), and Prudente's interscapulothoracic-mammary amputation. Ramsdell, however, after a visit to Edinburgh where he was "impressed with the high quality of surgery there practiced, with the sincerity of the group and with the traditions of that old medical center," conceded that, "If the Edinburgh statistics can be substantiated, the whole concept of our thinking on this subject of (breast) cancer must be modified." As a method of evaluation of the Edinburgh statistics, the results of simple mastectomy and roentgenotherapy in the hands of others have been investigated. For this statistical evaluation, all patients dead at the end of five years are counted as dead, regardless of cause, and all alive are counted as alive whether metastases are present or not. With this method of accounting for patients, the term "survival rate" is more appropriate than "cure rate," and is, therefore used.

Radical mastectomy is physiologically, psychologically, and cosmetically mutilating. It has a low mortality, but fair morbidity, and may leave the patient with a useless arm. Postoperative chest pain is not uncommon. Less than 50% of all patients with carcinoma of the breast are alive five years after the diagnosis is made. Undoubtedly, there is room for improvement in the treatment of carcinoma of the breast.

No one will deny that simple mastectomy-irradiation therapy would be a more desirable method of treating carcinoma of the breast if the results

at least equaled those obtained with radical mastectomy. McWhirter has reported that he had a better survival rate with the simple mastectomy-irradiation technique than with radical mastectomy. In an effort to evaluate McWhirter's results, which have not been accepted by some surgeons, reports by other investigators on the treatment of breast carcinoma by simple mastectomy and irradiation were tabulated. The average five-year survival rate for 808 cases was 59.6%. The average five-year survival rate following radical mastectomy, as reported by several authors, for 2955 cases, was 54.5%. The difference (5.1%) in the two survival rates is significant statistically, as it amounts to over twice the value of the standard error of the difference (2.2%)

It is realized that case selection may weight these statistics. However, all cases treated by radical mastectomy were theoretically curable; many treated by simple mastectomy were not. Other factors, such as pathologic type of cancer, grade of malignancy, duration of disease at time of treatment, and age of patient at time of treatment, may influence the results to favor one side or the other, but the reports cited are generally not in sufficient detail to permit adequate detailed comparative studies.

McWhirter's explanation for the apparent success of simple mastectomy and irradiation is based on three factors: (1) If the disease is confined to the breast, simple mastectomy will provide a cure. (2) If the regional nodes are involved, surgery often fails to produce a cure. Because irradiation is acknowledged to be beneficial in recurrences and metastases, its use primarily should likewise afford sterilization, or at least inactivation, of the tumor cells. (3) If the malignant cells have spread beyond the regional nodes, no method of therapy succeeds.

While this seemingly logical explanation of the success of simple mastectomy-irradiation technique in the treatment of cancer of the breast may represent the fundamental principles, yet another explanation has indirectly appeared recently. Several authors, notably MacDonald, Park and Lees, Johnson, and McKinnon, have attempted to show that "biological predeterminism" exists, and that the nature of the cancer, not the type of treatment, determines the patient's outcome. Thus, a minute cancer of only a few cells may invade the lymphatics and/or blood vessels quite early, while another cancer will become large, ulcerative, and fixed, but remain localized. Searching statistical analyses by the aforementioned authors appear to bear out their theories. Thus, breast cancers are divided into two main groups: (1) early metastasizing, and (2) late, or perhaps, non-metastasizing. Simple mastectomy and irradiation should be ample treatment for the latter, while no known type of therapy is adequate for the former. This interesting and provocative theory certainly merits further investigation.

Reported statistics from various clinics seem to indicate that simple mastectomy with roentgenotherapy provides at least as high a five-year

survival rate as radical mastectomy. The reasons for this are not entirely clear at the present time. (Deaton, W.R. Jr., Simple Mastectomy for Carcinoma of the Breast--Reported Results: Surgery, 37: 720-723, May 1955)

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Carcinoma of the Prostate Treated with Radioactive Gold

The object of this report is to present a series of 100 cases treated by combined interstitial injection of radioactive gold and surgery, and analyzed as of June 1, 1953, and again as of June 1, 1954. All of the patients, therefore, have been observed for at least two years, and some for as long as 39 months. An additional group of 52 cases has been under observation for a shorter period--one to two years.

In all the reported cases, retropubic exploration was done, with microscopic proof of the neoplasm and determination of the gross extent of the primary lesion as well as the presence or absence of metastatic nodes.

The authors analyzed the 100 cases proved by biopsy and approached through a retropubic incision. The cases were divided according to the size of the primary mass, designating them 1 to 4 plus. Because all patients were operated upon retropubically, involvement or non-involvement of lymph nodes was also determined. Seventy cases were without gross involvement of the lymph nodes and 30 were with lymph node involvement. In June 1953, 24 to 27 months after treatment, 20 of the patients without involvement of lymph nodes were alive with evidence of carcinoma, 25 were alive without evidence of disease, and 25 had died. Of the 30 with lymph node involvement, 13 were alive with evidence of carcinoma, 6 were alive without disease, and 11 were dead. Of the total, therefore, there were 33 alive with disease, 31 alive without evidence of disease, and 36 dead. One year later, June 1954, a study of the same 100 cases showed that 9 of the 20 who had been alive with evidence of disease and with uninvolved lymph nodes had died, and 3 of those who were thought not to have disease had also died. Of the group with obvious lymph node involvement, 6 of those with disease in 1953 died, whereas all 6 without evidence of disease still remained alive and well. Of the 100 patients, therefore, observed from 24 to 39 months, 46 were still alive, 18 with obvious carcinoma, and 28 without evidence of neoplasm, while 54 were dead.

Briefly, treatment is as follows: The mass of the primary lesion is estimated and is injected with radioactive gold in the approximate amount of 2 mc per gram of tissue. About 10 to 12 cc. of material are used for the average neoplasm, with a dosage of from 80 to 125 mc. The

authors regard 175 mc as a maximum dose, and the millicurie-gram ratio is reduced when very large tumors are treated. It is important to inject small amounts of material under considerably pressure, because the injection of large amounts forms pathways which prevent adequate distribution throughout the neoplasm. They are now of the opinion that the judicious use of surgery and multiple small injections of Au¹⁹⁸ will give the best results. Only a small mass can be injected with sufficient material to sterilize it. The destruction of large amounts of tumor may result in a necrotic mass, and it may become necessary to remove this by open surgery or by transurethral resection. It is in these masses of necrotic tissue that the calculi form. These calculi are small and can be removed with a resectoscope or crushed and washed out.

Experience indicates also that it is practically impossible to sterilize any except the smallest of neoplasms with radioactive material alone. The authors have, therefore, resorted to surgical removal of the tumor before or after interstitial injection of the Au¹⁹⁸. Time and method of surgical removal and of additional injection are individualized for each patient. Subsequent perineal injections must be done for residual neoplastic masses.

Because all of these patients would eventually die of cancer if treated palliatively, it seems worthwhile to continue this method in an effort to save some. (Kerr, H. D., Flocks, R. H., Elkins, H. B., Culp, D., and Evans, T. C., Follow-Up Study of One Hundred Cases of Carcinoma of the Prostate Treated with Radioactive Gold: *Radiology*, 64: 637-641, May 1955)

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Venereal Disease Among Teen-Agers

Limitation of funds and personnel for venereal disease control has made it necessary to pinpoint, insofar as possible, the segments of the population in which venereal disease occurs most often and to which epidemiology can most effectively and profitably be applied.

With increasing attention being given to problems of youth, such data would also provide an opportunity to study the venereal disease problem among teen-agers. In addition, it was deemed important to determine the relative frequency of reported venereal disease among young adults as compared to older persons. It was anticipated that the findings from, and analysis of, these data would greatly increase the knowledge of the venereal disease problem, improve case finding efficiency, and heighten the accuracy of estimates of the incidence and prevalence of syphilis and gonorrhea.

Morbidity reports, routinely submitted by state and city health departments, indicate the number of cases reported by disease, stage of disease, race, sex, and reporting source, but do not provide information relating

to age. Reporting areas were, therefore, requested to prepare a special report of venereal disease cases by single years of age for all syphilis and gonorrhea cases reported in the calendar year 1953.

This report--the first to be published on this study--considers in general that portion of the venereal disease problem which occurs among persons under 20 years of age and relates these data to juvenile delinquency and other problems of youth.

Infectious venereal disease is diagnosed more often among males than among females because of more obvious signs or painful symptoms in the male. However, blood testing surveys have shown that both sexes have equal syphilis prevalence rates. Another factor, which must be considered, is the very significant difference in both incidence and prevalence of venereal disease between whites and nonwhites. In analyzing the relative frequency of infectious venereal disease reported among teen-agers, the number of cases under age 20 in each race-sex group must be compared with the total number of cases for that group to demonstrate how the percentage of infectious venereal disease under age 20 varies among the four race-sex groups.

An illustration shows how the percentage of infectious venereal disease in persons under age 20 varies with sex and race. The proportion of cases in this age group ranges from less than 12% among white males to more than 34% among nonwhite females. Females of both races have a higher proportion of cases in persons under 20 years of age than do males, and for each sex, the rate for nonwhites is higher than the rate for whites. This is true for every state as well as for the nation as a whole. Also illustrated is the percentage of infectious venereal disease cases for males and for females under age 20 for each of the 47 states participating in the study. Wide ranges occur between states, and percentages for all teen-agers vary from 9.6% to 33.9%.

The percentage of infectious venereal disease among persons under 20 years of age in the various states indicates that the greater proportions, by and large, coincide with the states having the greater total venereal disease problems. These states have characteristically operated vigorous control programs during the past decade, but their socioeconomic levels and the age and race distributions of their populations have placed them in a relatively unfavorable--although improving--situation with respect to most health problems. The high percentages of venereal disease among teen-agers in these areas are, therefore, a valid measure of how far the venereal disease control programs in these states have yet to go before the venereal disease aspect of their total youth problem compares favorably with that of states having low percentages of infectious venereal disease among their youth. The authors have used this percentage of infectious venereal disease among persons under 20 years of age as an index of the venereal disease problem among teen-agers, and have related it to other problems of youth.

Infectious venereal disease reported in persons 10 to 19 years of age is separated into two components, primary and secondary syphilis and gonorrhea, in an effort to distinguish sexually acquired from nonsexually acquired infections. It will be observed that the age distribution for primary and secondary syphilis, which is rarely nonsexually acquired, is in general the same as for gonorrhea. In both diseases, the upward swing begins in females at age 12 and in males at age 14, and illustrates the point that infectious venereal disease is sexually acquired at a much earlier age than has been realized. Females have a higher proportion of cases than males in the earlier years up to age 17, at which age the percentage in males becomes higher than in females. As a matter of fact, the 18th year of age is the modal year for all females, whereas the male frequency continues to increase with age into the early twenties. The dip at age 17 among females with primary and secondary syphilis is not explainable unless females at that age claimed to be a year older than they were. This phenomenon does not appear in the gonorrhea distribution, however.

Illustrated are the cumulative percentages of infectious venereal disease cases in persons 10 to 19 years of age, by sex. Because there were no appreciable differences in the percentage distributions by race, these data were not shown separately by race. The cumulative percentage of infected females is higher than the cumulative percentage of infected males at each age from 10 through 18 years. The greatest difference in cumulative percentage is at age 16 where the difference is 15.9%. The curves indicate that 50% of females in the group 10 to 19 years of age become infected by the time they reach the age of 17.5 years, whereas 50% of the males become infected by the time they reach the age of 18.0 years. Twenty-five percent of the females are infected by age 16.1 years, whereas one-fourth of the males become infected by age 17.0 years.

All the evidence presented points to the fact that there is a definite degree of association between teen-age venereal disease and other problems of youth. The extent of venereal disease among teen-agers varies directly with criminal proceedings for Federal offenses among the same age group, promiscuity among persons under 20 years of age, fetal deaths among teen-age mothers, and lack of financial stability, and varies inversely with educational status. This latter point is the one encouraging aspect of the problem because the higher percentage of juveniles enrolled in school, the lower the venereal disease attack rate in this age group.

The meaning of venereal disease among teen-agers might be interpreted in several ways. It could be argued that, in a country where there is a considerable incidence of infectious venereal disease, it is only natural that sexually active teen-agers account for a substantial proportion of all venereal infections. On the other hand, a youngster infected with a venereal disease has obviously deviated from the accepted pattern of approved social

behavior. In this sense, venereal disease itself might be considered a manifestation of the broad problem of juvenile delinquency.

These correlations highlight again an important phase of the nation's prospects in the field of health: the protection which adequate income, wise and well organized communities, and familial and social guidance can give to American youth has indirect benefits in the field of health. The correlations indicate that venereal disease is but one of the problems to which less-protected and, therefore, less-privileged, youth is exposed.

Current indications of increases of venereal disease in many states, recent outbreaks of venereal disease involving high percentages of teenagers, and the extensive juvenile delinquency which has recently been of so much general concern, highlight the serious problem which exists in the venereal disease control program and to which utmost efforts must now be directed.

That the venereal disease program, as well as other health programs, was able during the last decade to make headway in the presence of other youth problems, arises largely from the fact that the techniques of case-finding, diagnosis, and treatment vigorously supported with local, state, and Federal funds, acquired a momentum greater than the speed at which these diseases were transmitted. This reduction in incidence and prevalence of venereal diseases among teen-agers might be envisioned, not only as a specific accomplishment in disease control, but as part of a total effort toward providing youth protection against the many hazards of growing up as part of the nation's effort to create a favorable climate and soil for its most important product. (Donohue, B. S., M. P. H., et al., Venereal Disease Among Teen-Agers--Its Relationship to Juvenile Delinquency: Pub. Health Rep., 70: 453-461, May 1955)

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"A Letter"

This letter from a High Ranking Naval officer to the Commanding Officer of the U. S. Naval Hospital, National Naval Medical Center, is published with the permission of the writer, the Commanding Officer of the Hospital, and the Chief of the Bureau of Medicine and Surgery.

"Having just completed a series of treatments and major surgery in the naval hospital under your command, I desire to express my sincere appreciation for everything that was done for me and the highly efficient and effective manner in which everything was done.

The doctors, technicians, nurses, and hospital corpsmen were at all times competent, courteous, helpful, and proficient - nothing was ever left undone.

I particularly wish to commend in the highest possible terms Captain J. M. Hanner and Lieutenant M. B. Sullivan, who performed the surgery which was unqualifiedly successful.

Furthermore, please accept my congratulations for your own competence and the proficiency of your entire staff and the operation of your splendid hospital. "

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Letter of Thanks to Marine Adder

A grateful Vietnamese refugee took the time to write a letter of appreciation to the doctors aboard USNS Marine Adder thanking them for officiating at the birth of his daughter during a recent "passage to Freedom" lift.

"To the two doctors of the Marine Adder:

Before writing this letter I hope you know my sincerity and gratefulness and I hope you will extend my feelings to the American Government and all the corpsmen and sailors aboard the Adder.

The USNS Marine Adder is transporting us to the 'Free Harbour' which we are about to enter. I find carved in my memory many never to be forgotten feelings of the trip from Haiphong to Saigon. These feelings of the trip arise from your genuine international spirit, especially of your two doctors, the corpsmen, and sailors working to carry the task of leading humanity to freedom. These feelings I find in all my compatriots.

I will never forget the date 2-24-55 when my daughter Vu Nam My was born on your ship. For liberty and freedom you doctors have performed your duties and have given us the essential things that the baby will need.

To show our appreciation we again thank you the two doctors and the members of the Medical Department for what they have done for our baby. This letter we hope will serve as a souvenir of our baby Vu Nam My and the USNS Marine Adder which is shown on the birth certificate. We hope that one day we might have a chance to use this birth certificate as a passport to send our baby to the USA.

Before ending this letter I wish you and every crew member very good health to save humanity and to transport my people to the 'Free Harbour. '

Respectfully,

Vu Huy Trong "

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Food Service Management Program

Requests are desired from interested and eligible Medical Service Corps officers for attendance at a two year program in Food Service Management, to be conducted by the School of Hotel Administration, Cornell University, Ithaca, New York. The program commences in September 1955, and terminates in June 1957.

In general, eligible personnel are those who meet the requirements promulgated in BuMed Notice 1520 of 6 October 1954. However, in the case of exceptionally well qualified candidates, six months duty in the Food Service division of a naval hospital will be accepted in lieu of the former requirement of one year. In view of the time element, requests should be submitted by message. (ProfDiv, BuMed)

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Board Certifications - Inactive Duty Officers

American Board of Obstetrics and Gynecology

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LTJG James T. Wolstenholme (MC) USNR

LT Alfred D. Young (MC) USNR

American Board of Urology

LT James L. Goebel (MC) USNR

MEDICAL RESERVE SECTIONMedical Reserve Program Officers

In each continental Naval District, there is on full time active duty a Naval Reserve medical officer in the rank of captain or commander whose function is to assist the District Medical Officer in carrying out the stated mission of the Medical Reserve Program.

This officer, his administrative assistant, and necessary clerical personnel have specific duties in the procurement, assignment, and training of Medical Reserve personnel on inactive duty. To this end, Medical Reserve Program officers and their assistants are prepared to assist, counsel, and advise inactive Medical Reserve personnel on all matters pertaining to Naval Medicine and the Naval Reserve.

The inactive Medical Department Reservist who desires to become one of the many who are actively and profitably participating in the training offered within the Naval Reserve should contact, either personally or by mail, the Medical Program Officer within their district. The names and addresses of these officers and their administrative assistants are as follows:

CAPT Nelson S. Bigelow (MC) USNR CWO J. P. Vanlandingham, USN FIRST Naval District 495 Summer Street Boston 10, Mass.	CDR Raymond A. Wallace (MC) USNR CWO Lester L. Smith USN SIXTH Naval District U. S. Naval Base Charleston, S. C.
CDR Francis B. Eveland (MC) USNR CWO Stephen J. Molloy, USN THIRD Naval District 90 Church Street New York 7, New York	CAPT Morris Brooks (MC) USNR CWO Opal Sylvester USN EIGHTH Naval District Federal Building New Orleans 12, La.
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CAPT Edmund T. Lentz (MC) USNR CWO C. R. Taylor, USN FIFTH Naval District Naval Base Norfolk 11, Va.	CAPT Clement C. Troensegaard (MC) USNR CWO Thomas J. Callahan III, USN ELEVENTH Naval District 1027 West Broadway San Diego 30, Calif.

CAPT Arthur A. Bennett (MC) USNR
 CWO Cecil Teague, USN
 TWELFTH Naval District
 50 Fell Street
 San Francisco, Calif.

CAPT James L. Chapman (MC) USNR
 CWO James J. Olson, USN
 THIRTEENTH Naval District
 Seattle 99,
 Washington

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Captain D. J. O'Brien (MC) USNR, formerly Medical Reserve Program Officer for the Twelfth and Thirteenth Naval Districts, and now Director, Reserve Division, BuMed, acted as moderator for a panel of Medical Reserve Program Officers who were in attendance at the Surgeon General's Symposium of 1, 2, and 3 June 1955.

Following principal addresses by the Surgeon General and Dr. F. B. Berry, Assistant Secretary of Defense (Health and Medical), the Reserve panel convened at the Naval Medical Research Institute, National Naval Medical Center, Bethesda, Md., for a most interesting presentation of an agenda which featured talks by the Director, Reserve Division and the Program Officer of each naval district. Round table discussions followed each presentation.

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From the Note Book

1 Rear Admiral B. W. Hogan, MC USN, Surgeon General of the Navy, returned to Washington, D. C., on May 28, 1955, following attendance at a meeting of the Surgeons General of the NATO nations in Paris, France, May 4 - 7, 1955, and subsequent visits to Navy Medical installations in Rome and Naples, Italy; Istanbul, Izmir, and Golcuk, Turkey; Athens, Greece; Amsterdam and The Hague, Netherlands; Bremerhaven, Germany; and London, England. (TIO, BuMed)

2 Rear Admiral B. E. Bradley, MC USN, Deputy and Assistant Chief of the Bureau of Medicine and Surgery, represented the Medical Department of the Navy at the 1955 Annual Session of the House of Delegates of the American Medical Association, June 6 - 10, 1955. (TIO, BuMed)

3 On 1 June 1955, Major General Silas B. Hays, MC USA, was sworn in as Surgeon General, U. S. Army. General Hays pledged cooperation with the civilian medical profession in seeking solutions to problems of mutual interest. (WRMS #416)

4 Dr. E. W. Goodpasture, Professor of Pathology, and former Acting Dean of Vanderbilt School of Medicine, has been appointed Scientific Director of the Department of Pathology, Armed Forces Institute of Pathology. (Army - Navy - Air Force Register, 21 May 1955)

5 The Naval Hospital, Guam, M. I., will be host to a Military-Medico Symposium on June 21 - 23, 1955. This will be the first such symposium in the history of Guam, and will give doctors in that area an opportunity to keep abreast of medical science and help promote increased standards of good health for the civil populace as well as for military forces in that area.

Sixteen consultants from the United States who are specialists in surgery, internal medicine, anesthesiology, plastic surgery, obstetrics and gynecology, ear, nose and throat, orthopedics, experimental medicine, and pathology will participate in the symposium. They will conduct wet and dry clinics, make ward rounds, and present papers covering new discoveries and techniques.

Invitations to attend the symposium have been extended to all service commands in the Far East; to all Trust Territories doctors; and to Guam civilian doctors and military medical facilities. (TIO, BuMed)

6 The Council on Hospital Dental Service of the American Dental Association has recently approved the Dental Service at the Naval Hospital, Bainbridge, Md. (TIO, BuMed)

7 CDR Paul Jarabak, DC USN, Chief of Dental Service, Naval Hospital, Guam, M. I., presented a lecture on "The Correction of Prognathism by Bilateral Intra-Oral Ostectomy" at a limited attendance clinic held at the Philippine Dental Association Annual Convention, Manila, P. I., May 6, 1955. (TIO, BuMed)

8 A national voluntary program of cooperative research and development to find and produce effective drugs for the treatment of cancer has been launched under sponsorship of the country's leading organizations and government agencies in this field of medical science. The sponsoring organizations are: American Cancer Society, Atomic Energy Commission, Damon Runyon Memorial Fund for Cancer Research, The Food and Drug Administration, and the National Cancer Institute of the U. S. Department of Health, Education, and Welfare, and the Veterans Administration. (CCNC)

9 Vacationing, an attractive, easy-to-read family health guide for vacations is being made available to the general public without charge as a public service by the Equitable Life Assurance Society of the United States.

Topics covered in the booklet include check lists for travel packing and home protection while you're away, fishing, swimming, sunbathing, how to avoid poison plants and insects, weight control, food and drink safeguards, as well as the importance of the physician in family vacation preparation and while the family is on vacation.

10 Nephrotomography is a combination of rapid intravenous nephrography and body section radiography. The procedure has been found of considerable value in the differentiation of renal cysts from neoplasms. The technic of the examination has been presented in a preliminary report. (Radiology, May 1955; J. A. Evans, M. D., J. C. Monteith, M. D., and W. Dubilier, M. D.)

11 A study over a 20-year period demonstrates that there are certain factors predisposing to prolonged labors which may require Dührssen's operation. These factors are: premature rupture of the bag of waters; onset of labor with an unengaged head in the primigravid woman; the occipito posterior or transverse position; a desultory type of labor with inertia; a cephalopelvic ratio of 1:1 with positional dystocia. (Am. J. Obst. & Gynec., June 1955; F. E. Rubovits, M. D., and N. R. Cooperman, M. D.)

12 A new method of paper-backed postage stamp skin grafting is described and 7 cases presented in which this method of treatment was used. (Surgery, May 1955; J. L. Elliott, M. D., and J. L. Grow, M. D.)

13 A new anti-rabies vaccine for human use, using rabies vaccine made from embryonated duck eggs, is described in J. Lab & Clin. Med., May 1955; F. B. Peck, Jr., M. D., H. M. Powell, and C. G. Culbertson, M. D.

14 A method of dosimetry for carcinoma of the cervix utilizing a modified Manchester technic with cobalt 60 is described in Radiology, April 1955; I. Meschan, M. D., T. H. Oddie, D. Sc., G. Regnier, M. D.

15 An article entitled "Investments for Dentists" is presented. The field of investments is divided into 13 main types with some subdivisions under the main types. (Am. J. Orthodontics, April 1955; V. L. Hunt, D. D. S., V. E. Hunt, D. D. S.)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

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BUMED INSTRUCTION 6240.2

23 May 1955

From: Chief, Bureau of Medicine and Surgery
Chief, Bureau of Supplies and Accounts
To: All Ships and Stations
Subj: Milk and milk products; sanitary requirements for use of
Ref: (a) Arts. 3-2, 3-4, and 22-4, ManMedDept
(b) Art. 1981, NavRegs
(c) Manual of Naval Hygiene and Sanitation, NavMed P-126
(NavMed P-5010 will supersede when published)
(d) Military Index of Specifications and Standards, Vol. III
Encl: (1) Minimum Sanitary Requirements for Milk and Milk Products

This Instruction promulgates information relative to the requirements for sanitary control of milk and milk products purchased for use in all food-service facilities of the Naval Establishment.

* * * * *

BUMED INSTRUCTION 4440.3

27 May 1955

From: Chief, Bureau of Medicine and Surgery
To: All BuMed Managed Activities
Subj: Material in nonaccountable status

The purpose of this Instruction is to improve material management practices at activities under the management control of this Bureau.

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BUMED NOTICE 4651

27 May 1955

From: Chief, Bureau of Medicine and Surgery
To: Activities Under BuMed Management Control
Subj: Conference travel--attendance at overseas meetings at Government expense
Ref: (a) SecNavInst 7200.2, Subj: Attendance at meetings of scientific, technical, professional, or similar organizations

- (b) BuMedInst 1321.2, Subj: Attendance at meetings of scientific, technical, professional, or similar organizations

This Notice emphasizes the need for advance review of attendance at overseas meetings of scientific, technical, and professional organizations at Government expense.

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BUMED INSTRUCTION 3750.1

31 May 1955

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Corps Personnel Regularly Assigned

Subj: Aircraft Accident Boards; responsibilities of medical officers assigned as members

Ref: (a) OpNavInst 3750.6A, Subj: Navy Aircraft Accident, Incident, and Forced Landing Reporting Procedure (NOTAL)

This Instruction stresses the importance of active participation by medical officers in Aircraft Accident Board investigations and proceedings.

* * * * *

AVIATION MEDICINE DIVISION



Did You Get Yours Today?

A plane lands wheels up. There is damage to the aircraft, the pilot is uninjured. Where does the medical officer fit into this picture? Some flight surgeons have been "getting the word" via a dispatch similar to the following:

YOUR 021614Z X REQ INCL FOL IN AAR X . . . NEW SUBJECT X
REQ FLT SURG INTERVIEW PILOT X EMPHASIZE NON DISPLNY
NATURE OF INTERVIEW X EXPLORE FULLY SOCIO DASH PSYCH
DASH PHYSIOLOGICAL AND HUMAN ENGR FACTORS THIS ACDT
X REQ INFO BE INCL IN MED OFF REPT BT

The purpose of such a dispatch is to obtain more information on a "pilot error" accident. Nearly 65% of all accidents are attributed to this cause. What is the meaning of "pilot error?" Various connotations are possible: (1) The pilot errs through lack of training and because of unfamiliarity with the aircraft; (2) An unusual event interrupts an habitual sequence of actions, as in landing a plane, the pilot "forgets" to put the wheels down; (3) A physiological stress incapacitates the pilot; (4) The pilot is psychologically unfit and reacts inadequately to an emergency or takes an unnecessary chance; (5) The pilot is overcome by a toxic agent or disease process; and (6) The performance of the aircraft outstrips the capabilities of the pilot. These are some of the underlying factors that mean "pilot error." Perhaps flight surgeons can think of others.

There is a great need to clarify this major category of accident causation. The sole purpose of all accident analysis is to accurately determine the cause of each accident in the interest of accident prevention. This is an important facet of aviation preventive medicine. This endeavor is distinct from that of design and utilization of protective equipment and other such areas of cognizance the flight surgeon has concerning the effects of an accident on the pilot.

For each of the six possible groupings of "pilot error" accidents listed above, there is a separate and distinct preventive approach. Just as there is an urgent need to know the accurate causes of aircraft accidents so there is a need to know the relative frequency of each cause so as to properly channel preventive effort. Only when the cause of an accident has been determined can the proper steps be taken to prevent further accidents of the same type. Thus far, the category of "pilot error" is a catch-all to which almost all accidents, not clearly attributed to material failure, are assigned. This has resulted in a vague impression that the pilot or the man-machine complex is somehow at fault.

The flight surgeon assigned to an Aircraft Accident Board is the specialist who is responsible for providing information required to clarify "pilot error" accidents. At the scene of a fatal accident, he will be outnumbered by at least three non-medical accident investigators. Investigating naval aviator members of the Aircraft Accident Board will go to great lengths ferreting out precise causes of an engine failure or malfunction of any aircraft part. All too often the tendency of the flight surgeon is to fill in his required report with "injuries multiple extreme" and let it go at that.

With the revision of the Medical Officers Report of Aircraft Accidents/Incidents and Ground Accidents in 1954, there resulted a considerable increase of information available for accident analysis. As these reports have accumulated, the Aeromedical Section of the Naval Aviation Safety Center, Naval Air Station, Norfolk, Va., has become increasingly interested in so-called "pilot error" accidents. The potential of the Safety Center for prevention of accidents in this category is limited only by the completeness and accuracy of the reports they receive. At the scene of an accident, each flight surgeon represents the Safety Center. His specialty of Aviation Medicine requires that he become an epidemiological detective par excellence.

The flight surgeon investigating an accident should keep the following considerations constantly in mind:

THE GREAT MAJORITY OF ACCIDENTS ARE ATTRIBUTED
TO PILOT ERROR, AND

IT IS THE RESPONSIBILITY OF THE FLIGHT SURGEON TO
DETERMINE THE SOURCE OF ERROR AS PRECISELY AS
POSSIBLE.

The latter applies when the pilot is available for questioning. It does not mean that the investigating medical officer is to arrive at conclusions based on his surmise or conjecture and report only these. Opinions may contribute to the ultimate analysis of the accident and are desirable in the Medical Officers Report. However, the validity of accident analysis rests primarily on facts. Frequently, facts surrounding a fatal accident may appear to be of little importance to the investigator. However small and apparently insignificant, all should be included in the Medical Officers Report. The flight surgeon must realize that the Safety Center has the responsibility to translate a few facts about a number of similar accidents from a variety of investigators into valid conclusions.

IT IS THE RESPONSIBILITY OF THE FLIGHT SURGEON TO
REPORT AS MANY FACTS AS POSSIBLE.

With more flight surgeons "getting the word," there will be fewer dispatches.

* * * * *

Reserve to Regular

Six Medical Service Corps officers associated with aviation medicine have been selected and recommended for permanent appointment in the Regular Establishment of the United States Navy through the Navy's augmentation program. The recommendation for these commissions must be approved by the U. S. Senate and signed by the President before these men are tendered commissions for their acceptance. This is a matter of routine, and it is expected that the below listed officers will soon be Regulars:

<u>Name and Rank</u>	<u>Specialty</u>	<u>Duty Station</u>
LTJG Harold R. Bower	Aviation Physiologist	NAS North Island
LT Kenneth R. Coburn	Aviation Physiologist	NAS Corpus Christi
LT Walter L. Goldenrath	Aviation Physiologist	Inactive Duty
LCDR Woodbury Johnson	Aviation Psychologist	Bureau of Aeronautics
LT William H. Nelson	Aviation Psychologist	USN SAM Pensacola
LT Paul W. Scrimshaw	Aviation Physiologist	NAS Atlantic City

* * * * *

Fact or Fancy

The following has been extracted from Commander, Air Force, U. S. Atlantic Fleet Instruction 6010.1, dated 25 March 1955. It is significant in that it points up the importance of flight surgeons' practicing the medical specialty for which they have been trained.

"b. The paramount duty of the flight surgeon shall be to concern himself with the medical problems of his squadron. Such problems include routine medical care as well as specialized matters related to aviation medicine. Since the physical facilities needed by the flight surgeon for proper performance of clinical duties are available only at the ship's sick bay or station infirmary or dispensary, it is necessary that a degree of cooperation, amounting in effect to a merging of medical efforts, be required in order to attain the greatest over-all efficiency and secure the best service for squadron personnel. Ordinarily, flight surgeons and general service medical officers attached to Air Force, U. S. Atlantic Fleet units and activities are expected to report to the senior medical officer of the ship, infirmary or dispensary concerned for coordination of his duties with other units. Unless other wise required under unusual

circumstances, air group and squadron flight surgeons and general service medical officers based ashore shall be assigned part-time duty in the station medical department. When so serving, they shall be subject to the orders and directions of the senior medical officer of the station. The specific amount of time which each Air Force, U.S. Atlantic Fleet medical officer should spend with the supporting station or ship medical department will vary with operating conditions. This problem will ordinarily be resolved by a working agreement of the two medical officers concerned and the verbal approval of the commanding officers concerned

"c. When one or more squadrons are operating away from their base and there is at the point of operations sufficient medical equipment to permit a physician's skill to be properly utilized, such squadrons will, if practicable, be accompanied by the group flight surgeon. However, when an air group is split and operating from more than one base, the flight surgeon attached shall be detailed with the squadron engaged in the most hazardous type of operation or where the lesser medical coverage is available.

"d. Pilots and flight surgeons shall be mutually encouraged in the development of confident interdependence. To this end, flight surgeons should devote a part of each day to the pilots. Physiology, hygiene, survival, and safety equipment form the common denominator which would lead to contact with the pilots on a friendly level and finally to the ability of the flight surgeon to detect at an early stage any problem which might affect the pilots' efficiency."

It is easy for the flight surgeon to fall into the habit of remaining in the station dispensary or infirmary doing clinical medicine all day from week to week, thereby depriving the large bulk of his squadron pilots and aircrewmembers of his presence, advice, and observations.

Spend time with the men of the unit you are assigned to as the flight surgeon. Practice aviation medicine as a "fact" and not as a "fancy."

* * * * *

Book Review

"Tea, A Symposium on the Pharmacology and the Physiologic and Psychologic Effects of Tea"

"TEA, A Symposium on the Pharmacology and the Physiologic and Psychologic Effects of Tea," is a collection of seven professional papers

all dealing with different aspects of tea when utilized as a beverage. Henry J. Klaunberg, Ph. D., is the editor of the collection, and the volume was sponsored by the Biological Sciences Foundation, Ltd., Washington, D. C., of which Dr. Klaunberg is the Executive Director.

The first five papers are those presented by five of the foremost recognized authorities in their fields at a conference of the New York Academy of Sciences, 16 May 1955. They are preceded by an introduction to the subject by S. O. Waife, M. D., F. A. C. P., Editor-in-Chief of the American Journal of Clinical Nutrition, who briefly covered the historical, statistical, and medicinal attributes of tea drinking.

The first paper, "Tea--Its Pharmacology," was presented by John C. Krantz, Jr., Ph. D., D. Sc., Professor of Pharmacology, University of Maryland, School of Medicine. Dr. Krantz thoroughly explores the complete chemical composition of the beverage tea and discusses at length the resultant pharmacological responses evoked by the ingestion of infused tea. The emphasis of the discussion centers on caffeine and its effects, although Dr. Krantz does cover the other xanthines present as well as the tannins and vitamins found in the infusion.

I. Phillips Frohman, Ph. G., M. D., Vice Chairman, Section on General Practice of the American Medical Association, presented "Beverage and Dietary Aspects of Tea." Here Dr. Frohman refutes the time-wearied contraindications to tea, and discusses the usefulness of the infusion as an adjunct to practically every prescribable diet. He points out that the physiological and psychological results from including tea in diets are all beneficial. It is noted that tea is non-caloric, salt-free, and is a mild stimulant that creates a sense of well-being. These features make it almost universally acceptable to every dietary problem whether the individual is well or ill, young or aged.

The third paper is entitled, "A Medical Appraisal of Tea," by Henry J. L. Marriott, M. A., B. M., Associate Professor of Medicine, University of Maryland, School of Medicine. He discusses at length the effects of varied concentrations of infusion of tea upon the human gastrointestinal tract, cardiovascular and renal systems, and the metabolic rate. Dr. Marriott concludes that tea is a relatively harmless beverage in all sorts of conditions of health and disease and that there is little doubt of its virtues as a "pick-me-up."

Alfred H. Lawton, M. D., Ph. D., Medical Research Advisor, U. S. Air Force, Washington, D. C., presented the following paper, "Tea for the Relief of Fatigue, Anxiety and Tension States," in which he reveals the practical aspects for the use of tea as a beverage. Dr. Lawton surely presents a strong case for tea as a means of combating present-day fatigue and for relief from tension states. He feels that tea is an ideal relief for fatigue, producing a feeling of well-being in physical laborers and brain workers alike. It is a pick-up beverage that does not result in a noticeable let-down period.

The fifth paper entitled, "Psychological Effects of Tea Drinking," by Richard L. Jenkins, M. D., Chief, Psychiatric Research, Psychiatry and Neurology Service, Veterans Administration, Washington, D. C. It deals with the various beverages used by man and the psychological resultant effects. Dr. Jenkins feels that, of all the beverages, tea alone contributes to the being relaxed while fully conscious, and contributes to the enjoyable experience of finding oneself socially accepted by people who are quite sober. He feels that tea encourages courteous and lively discussions in an atmosphere of social respect that results in social and mental hygiene values not to be underestimated.

The sixth article, "Effect of Tea on Gastric Secretions and Motility," by C. Wilmer Wirts, M. D., Martin E. Rehfuss, M. D., William J. Snape, M. D., and Paul C. Swenson, M. D., Philadelphia, is a reprint with additions from the Journal of the American Medical Association, 19 June 1954, Volume 155, pp. 725-729. The authors report "in vitro" studies of gastric motility, emptying times, secretion, etc., under varied conditions with the ingestion of tea and with hot water. They find that tea will increase the rate of gastric emptying, that iced beverages have a more pronounced gastric effect than hot, that tea stimulates gastric motility and does not change gastric secretory output any more than equal amounts of water, and conclude that tea is not contraindicated in the treatment of most gastrointestinal conditions.

The last article, "The Psychophysiological Effects of Tea," by Walter C. Stanley and Harold Schlosberg, Department of Psychology, Brown University, reports the results of studies done on a number of tea drinkers. These studies cover strength of grip, hand steadiness, attention, simple reaction time to auditory stimuli, complex reaction time to visual stimuli, subjective ratings of fatigue and tension, and long division. The results and conclusions were all favorable to tea as a beverage.

As can be deduced by preceding paragraphs, the editor has collected seven distinctly relevant scientific papers and reproduced them within the 64 pages of this volume. Each paper attacks the subject of tea as a beverage from a scientifically different aspect, each being complete in its field and in all completely covering the subject. This reviewer did not fully realize the virtues of tea before reading this collection of articles.

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Residency Training Program

The Ohio State University has a residency training program designed to train men in the fields of Industrial Medicine, Aviation Medicine, and Atomic Medicine. The Aviation Medicine program has been approved in

principle by the Aero Medical Association and will be presented in the not distant future to the American Board of Preventive Medicine for approval. A course in Occupational Medicine is under advisement for Board certification at the present time. The training program for each of the above listed specialty fields is of three years' duration; however, the basic science training for all three begins together. There is one opening available for 1 July 1955. Interested candidates on inactive duty are requested to address inquiries to:

William F. Ashe, M.D., Chairman
 Department of Preventive Medicine
 The Medical Center
 Ohio State University
 Columbus 10, Ohio

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Defects Noted on SF-88's and SF-89's Submitted to BuMed for
 April and May 1955

Excess copies	5
Item 1 Error in name	1
Item 6 Date of examination omitted	1
Item 12 Date of birth omitted	3
Item 15 Examining facility omitted	1
Item 17 Aviators flight time omitted	41
Item 45 Urinalysis omitted	6
Item 51 Obvious errors in height	3
Item 57 Blood pressure omitted	2
Item 58 Pulse omitted	3
Item 59 Distant vision omitted	5
Item 60 Refraction not properly recorded	8
Item 60 Refraction omitted on NavCad applicants	10
Item 62 Heterophoria omitted in full	32
Item 62 Left or right hyperphoria omitted	1
Item 62 P. D. at 13" omitted	15
Item 62. P. D. at 20' omitted	31
Item 62 P. C. and P. D. omitted	6
Item 63 Accommodation omitted	33
Item 65 Depth perception omitted	37
Item 66 Field of vision omitted	7
Item 68 Red lens test indicated but omitted	2
Item 69 Intraocular tension omitted	8
Item 70 Hearing omitted	2

Item 71 Audiometer omitted on NavCad applicants 24
 Item 73 No reason given for hospitalization 3
 Item 73 Not leaving space for BuMed endorsement 12
 Item 73 Not enough detail on physical defects 7
 Item 77 Failure to state aviator's service group 10
 Items 79 through 82. No signatures 1

Failure to evaluate on SF-89 12
 Failure to complete item 21 on SF-89 11

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Change of Address

Please forward requests for change of address for the News Letter to: Commanding Officer, U. S. Naval medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

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DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY

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