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U. S. NAVAL TECHNICAL MISSION TO JAPAN
CARE OF FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

24 November 1945

RESTRICTED

From: Chief, Naval Technical Mission to Japan.
To : Chief of Naval Operations.

Subject: Target Report - Organization, Administration, and Facilities of the IJN Medical Corps.

Reference: (a)"Intelligence Targets Japan" (DNI) of Sept. 1945.

1. Subject report, dealing with material contained in addenda to Fascicle M-1, of reference (a), is submitted herewith.

2. The investigation of the target and the target report were accomplished by Comdr. P.B. Ayres (MC), USNR, assisted by Lieut. P.E. Ariole (MC), USNR, Lieut. W.W. Woodworth, USNR, Lt.(jg) F.J. Gilbert, USNR, Lt.(jg) R.M. Hendrickson, USNR, and PFC W.P. Costello, USMC.

C. G. GRIMES
Captain, USN

33477

RESTRICTED M-AA

ORGANIZATION, ADMINISTRATION, AND FACILITIES OF THE IJN MEDICAL CORPS

"INTELLIGENCE TARGETS JAPAN" (DNI) OF 4 SEPT. 1945

FASCICLE M-1, ADDENDUM M-AA

NOVEMBER 1945

U.S. NAVAL TECHNICAL MISSION TO JAPAN

SUMMARY

MEDICAL TARGETS

ORGANIZATION, ADMINISTRATION, AND FACILITIES
OF THE IJN MEDICAL CORPS

This report is a brief survey of the basic aspects of Japanese naval medicine. An examination of the structure of the Japanese Navy Medical Corps revealed certain similarities to the U. S. Navy Medical Corps, but these similarities did not extend to Japanese naval medical facilities. Shore facilities were, by U. S. Navy standards, both outmoded and inadequate. While many modern techniques were included in training, there was a wide disparity between training and practice. In addition, the wartime shortage of necessary medical supplies added to the difficulties.

These shortcomings also were present in shipboard installations, and were aggravated by limitations of space, refrigeration, and sanitary facilities as well as low sanitation standards. The Japanese, however, made some very good optical equipment, particularly microscope lenses.

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KURE Naval Hospital
YASUURA Naval Hospital
KAMO Naval Hospital
KAMO Corpsman School
IWAKUNI Naval Hospital
YOKOSUKA Naval Hospital
MAIZURU Naval Medical School
TOKYO Naval Hospital No. 1
Naval Research Institute, TOKYO
Destroyer HANAZUKI
Destroyer SUZUTSUKI
Submarine I-53
Carrier HAYATAKA
Carrier KATSURAGI

B. Japanese Personnel Who Assisted in Gathering Material and Documents:

Vice Adm. Yoshio ISHIGURO, Third Naval District Medical Officer
Vice Adm. Masato HOMMA, CO, URESHINO Naval Hospital
Vice Adm. I. YASUYAMA, CO, OMURA
Vice Adm. Nobutasu FUKUI, Second Naval District Medical Officer
Rear Adm. Shun ITAKURA, CO, IWAKUNI Naval Hospital
Rear Adm. Saburo SHINA, CO, KAMO Naval Hospital
Cmdr. Setsuo URA, CO, KAMO Corpsman School
Capt. Yoshimasa SHIMOBAYASHI, KURE Medical Hospital Liason Officer
Mr. Y. KANEKO, Director, Naval Research Institute, TOKYO

C. Japanese Personnel Interviewed:

All those mentioned in Reference B, above.
All those mentioned in Reference B of "Data Relative to Life in the Jungle and on Sea Islands and Data on Composition of Insecticides", NavTechJap Report, Index No. M-01.
Other subordinate and service personnel.

INTRODUCTION

In this report an attempt is made to illustrate in broad outline various Japanese naval medical policies and practices as observed and recorded during medical inspections of the various functioning units of the Japanese Navy Medical Corps.

THE REPORT

Part I

ORGANIZATION, ADMINISTRATION, DUTIES, QUALIFICATIONS, TRAINING OF THE IMPERIAL JAPANESE NAVY MEDICAL CORPS

A. Organization and Administration

The Bureau of Medicine in the Navy Ministry had complete authority over medical affairs (see Fig. 1 for diagram of chain of command). The Chief of the Bureau of Medicine was on the staff of the Minister of the Navy. Each naval district, guard district, and fleet had a senior medical officer, who had authority over the medical officers of his command. However, the chain of command was from the Minister of the Navy to the various naval district commandants, to the commanding officers of their command, to the medical officers of the respective commands of the latter. The authority which originated in the Chief of the Bureau of Medicine passing through the various commandants to the commanding officers in their respective commands to the district medical officers of the several naval districts (fleets or guard districts) did not extend outside the direct chain of command. That is to say, the various medical officers had command of their respective subordinates in accordance with the orders of their immediate superiors, and received orders through the chain of command originating in the Chief of the Bureau of Medicine.

The headquarters of each naval district and fleet had a district medical officer on the staff of the commandant. This officer was designated by the name of the naval district or fleet to which he was attached. Each had an assistant medical officer. In recent years, functions of naval district medical headquarters had been so augmented (as was the case with the Army) that it was thought necessary to increase the medical division to six or more doctors. Preparations for this were started in June 1945.

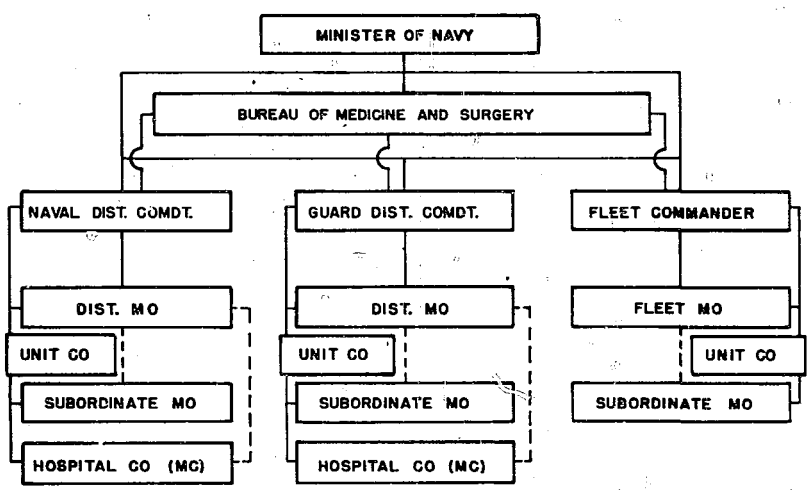


Figure 1
CHART OF CHAIN OF COMMAND IN THE IMPERIAL JAPANESE NAVY MEDICAL CORPS

The technical branches of the Bureau of Medicine were organized in four sections as follows:

Section 1

(1) General surgery
(2) Plastic surgery
(3) Urinology
(4) Otorhinology
(5) Opthalmology
(6) Physiotherapy
(7) Dentistry

Section 2

(1) General internal medicine
(2) Respiratory diseases
(3) Pulmonary tuberculosis
(4) Neuropsychiatry
(5) Infectious diseases
(6) Pathological examination

Section 3

(1) Diagnosis and treatment
(2) Sanitation
(3) Prophylactic medicine
(4) Induction examination

Section 4

(1) Medical supplies
(2) Testing
(3) Pharmacy

Note: Section 3 was found only in naval district hospitals and it was planned to expand it, as was done in the Army. These plans were terminated by the ending of the war.

B. Duties of Medical Officers, Nurses, and Hospital Corpsmen

1. District Medical Officers. District medical officers were assigned to the Yokosuka, Kure, Sasebo, and Maizuru Naval Districts and the Osaka, Takao, Chinkai, and Ominato Guard Districts.

District medical officers for the various naval districts had cognizance over the following:

Admission and treatment of patients
Medical matters having to do with pensions
Medical supplies and equipment
Preventive medicine
Recruiting (Medical aspects, examinations, etc.)
Hygiene and sanitation
Expeditionary preparations (Medical supplies)
Immunization
Training
Quarantine

Administrative duties of district medical officers, using the Second Naval District, KURE, as an example, were divided into five departments: surgery, medicine, preventive medicine, pharmacy (collecting and dispensing of medical supplies), and service (pay, food, clothing, etc.). The surgery and medicine departments were independent activities of each hospital within the district. Preventive medicine, pharmacy, and service departments were based at KURE and supervised all district units.

Vice Adm. N. FUKUI, Second Naval District Medical Officer, stated in an interview that most of his duties were in preventive medicine, as follows:

a. General hygienic improvement by specific recommendations, particularly as to food, clothing, quarters, water, etc. He commented at length on the polished rice question. He also said that the Japanese Navy ration was remarkably deficient in fats, proteins, and vitamins, pointing out that there were many articles which theoretically were part of the adequate diet but in reality were not given. The diet was as follows: 2000 grams white rice, 40 grams fish and pickled vegetables. Submariners paid the greatest penalties because of this inadequate diet, being physically fit only for a period of two weeks to a month. Submarine food was remarkable for the numerous vitamin supplements and the great amount of sugared water given the crew.

b. Quarantining of ships. All infectious cases were sent to an isolation hospital at MITSUKOSHIMA. The rest of the crew were physically examined and the entire ship swabbed with lysols or creosote. Where insect vectors were present, cyanide and chloropicrin gases were used.

c. Education of Naval personnel. All naval personnel were given weekly lectures on general hygiene which, as the Admiral phrased it, was "re-education".

2. Medical Officers, Nurses, and Hospital Corpsmen. For an outline of the duties of medical officers see "The Navy Medical School" pp 296-297 NavTechJap Document No. ND10-7501.9 (see Enclosure (C)). Nurses assisted medical officers in the treatment of sick and wounded. Hospital corpsmen took care of patients and assisted medical officers in the treatment of the sick and wounded, the prevention of infectious diseases, immunization, and in other general duties.

C. Qualifications and Training of Medical Officers, Nurses, and Hospital Corpsmen.

1. Qualifications. Standard qualification for appointment of naval medical officers are set forth on page 297 of "Naval Medicine" under the subject of training for appointees and registrants for the Navy Medical Corps (NavTechJap Document No. ND10-7501, Enclosure (C)).

Hospital Corpsmen were appointed from among suitable persons who passed the physical examination for induction. Specialized training was given those who, after a trial period, were to become hospital corpsmen.

Nurses who were provided by the Japanese Red Cross had completed the regulation Red Cross training.

Those taken from cities for employment in naval hospitals already possessed general qualifications as nurses and, in addition, had passed a simple examination. The wartime revision of qualifications resulted in a 30% reduction in overall standards due to shortening of the training period, simplification of service examinations, and lowering of service requirements.

Standard qualifications adopted by the Bureau of Medicine in the appointment and selection of officers and men, the wartime revision in qualifications, and the reasons therefore are to be found on pp 401-470 of NavTechJap Document No. ND10-7501.9, under the heading "Recruiting".

2. Outline of Training. For the training of doctors see "The Navy Medical School", NavTechJap Document No. ND10-7501.9, p. 298, under "Indoctrination of Naval Medical Officers"; pp. 299-312, under "Routine Duties of Naval Medical Officers"; and p. 313 "Special Duties of Naval Medical Officers".

Because nurses usually had completed the program of instruction of the Japanese Red Cross, they were not given any special training by the Navy.

Hospital corpsmen, selectees, and volunteers received two months of boot training in the naval barracks and later received six months specialized training in medicine at a corpsmen's school. Then, at about the time they received ratings, those who had outstanding records (about 30%) were given six months advanced training in a medical school. During that time they were given accelerated training in prophylactic X-ray examination and in assisting in dentistry and surgery.

Part II

MEDICAL FACILITIES OF THE IMPERIAL JAPANESE NAVY, AFLOAT AND ASHORE

A. Facilities Afloat

The following is a general outline of medical personnel and facilities afloat:

	MD	DMD	NCO	Corpsmen	Sick Bay Capacity	Rooms
Battleships	3-6	1	5-6	10	12-32	1 Treatment room 1 O. R. 1 X-ray 1 Pharmacy 1 Lab 1 General ward 1 Quiet room
Carriers	4-6	1	5-6	10-15	15-32	
Cruiser	2-4	1*		5-12	6	Same except for X-ray
Destroyer	1	0	0	1-2	0	1 Sick bay where corpsmen slept
Submarine	1	0	0	1	0	0

*on flagship

I-53, built a year ago, and reputed to be one of the newest submarines was inspected in KURE Harbor on 24 October 1945. It carried a crew of 95-105. No doctor was aboard.

Living space seemed adequate. There was one odorous galley with four electric stoves. Food consisted of rice and vegetable soup. No special food products other than cod-liver oil capsules were seen. There was one tripartite refrigeration box below decks, roughly 8x6x4 feet. Fresh food lasted about a week although most of the food was dried or canned.

The three Japanese squat-type heads were odorous and dirty. Clothes and bodies were washed on deck, when the ship surfaced.

Although a doctor was included in the complement, no surgical equipment was

carried. There were two boxes of medical gear fore and aft containing mainly stimulants, bandages, and a few lotions for skin infection. In spite of air-cooling machinery (which was located below decks) heat was severe when submerged. Skin infections (pyodermic and fungus) were rather common. No major diseases were noted, and there had been only one case of tuberculosis during the previous year. Chest plates were made before and after each cruise. No special clothing was issued. The corpsman stated that the only special training he received lasted but a few weeks at the submarine school.

A TERATSUKI class DD was inspected at AINOURA on 2 October 1945. There seemed to be fairly good provision for ventilation of the ship. Intakes with screens resembled those of the U.S. Navy. Rotor or centrifugal blowers were used for air flow. Air shafts were well distributed through the engine and boiler rooms, and officers' quarters. No forced draft ventilation was provided for bilges, lazarettes, and other closed below-deck spaces. The ship forward of the bridge, had been badly damaged and burned out from deck to keel. Hence, no estimate could be made of the provisions for ventilation in crew's quarters, mess hall, etc. Blowers were electrically driven.

The officers' bath on the first deck, housed in the starboard after superstructure, had a tile composition flooring with the typical large 8'x4'x3½' tub. Water was heated in a small oil burning heater of 10 gals. capacity, mounted beside the tub. The water was kept warm by a steam line which ran into the tub.

Urinals were porcelain, automatic-flush, standing compartment type. Toilets were bowl and seat (wood) type, with flush pedals. Two toilets were native squat-type, porcelain receptacle, flush action.

In the crew's head only the urinal survived the rocket and fire damage. It was a galvanized iron trough type located forward of the quarter deck on the starboard side of the first deck, under the bridge superstructure. From the composition flooring, a bath arrangement could be assumed to have been in the same compartment.

The officers' galley, located on the second deck, port side, just aft of the wardroom, was neat and compact. It had wooden cabinets and shelves for dishes etc., an aluminum electric hot water heater and a cookstove.

The crew's galley was forward, port side, opposite the bath-head space. It was plain and was equipped with a coal range. On the deck, port side abaft the bridge superstructure was a large aluminum rice kettle, 10 gals. capacity mounted in brick work, with an open hearth for coal or coke firing.

No sick bay, as such, could be identified. Interrogation revealed that DD personnel on the sick list were confined to bunks in their own quarters and treated there.

On the port side aft of the officers' galley on the second deck were the combined M.O's quarters and dispensary (see Fig. 2 for plan of dispensary). The diagram is self-explanatory. No instruments, drugs, or portable equipment of any kind remained on the ship. Although Japanese interrogated claimed that DD did not carry a M.O., the leather settee-bunk and finished wood interior would suggest that this was untrue.

Insulation was lacking throughout the ship. Inner wooden sheating was found in certain compartments which may have acted as insulation. No refrigerating mechanism, ice box, or chest was discovered.

The following observations were made on safety factors: there were no acid foam or CO_2 fire extinguishers, hose, or fire nozzles; compartmentation was by athwartships bulkheads abaft the bridge, with hatches to the deck; forward of the bridge in the crew's quarters, no deck access was available: all hands

had to pass aft to the bridge section to reach the first deck. This resulted in a high casualty list when the rocket hit, as it exploded and fired the ship just forward of the bridge.

The Japanese destroyer HANAZUKI was inspected at KURE Bay on 17 October 1945. The sick bay was a special cabin, aft on the deck below the main deck. It contained two bunks for corpsmen, a removable wooden shelf for operative work, a small electric instrument sterilizer, steam-vacuum sterilizer, water heater, and a wall of wooden cupboards containing drugs and supplies. The instruments for laparotomies, etc., were kept in a special metal box. In type and quality they were adequate, but by comparison with those used in the U.S. Navy, inferior and rickety. There were other loose instruments for various minor manipulations, for ear-cleansing, sinus-treatment, etc. Drugs were standardized in powder form. There were about a dozen one-quart sake bottles containing stock solutions of a cod-liver oil, water, acrinamine mixture for burns, acrinamine and water for prophylactic use, gargles, etc. Treatments of run-of-the-mill military diseases were similar to those used in the U.S. Navy, but with emphasis on coal-tar dye products. First-aid to war wounded comprised hemostasis, bandaging, glucose, and saline given intravenously, with the usual Japanese habit of varying I.V. cardiac stimulants. The only special feature for combat was a sterile bandage packet about the size of the U.S. Navy small battle dressing, which each man carried.

The galley was located on the main deck. Food for men and officers was cooked in two big cauldrons and several small pots. Coal was used as fuel. The galley looked like a pig pen, the pots were dirty, the deck was covered with slop and dirt, and the cooks bare to the waist and dripping with sweat. Lunch which was being prepared consisted of unpolished rice, a soup mixture of fish-paste and young white radish leaves, pickled daikon and tea. This was the daily ration, except for breakfast when shiro-miso was served. As to quantity, no seconds were permitted at any time. There was one bowl for rice and one for for meat-vegetable mixture. The amount of food in each was scant. Occasionally fruit was doled out, and two pellets of cod-liver oil (the size of a B.B. shot) were given weekly. (Beri-beri occurred quite frequently.)

There were two heads with urinals, and two separate ofuro style tubs, for officers and men. These facilities served a ship's company of nearly 400. The state of uncleanliness was appalling. Filth and dirt were everywhere and an odor was detected easily 15 feet away.

The crew quarters inspected was roughly 35'x 8'x 15' in size. 50 men slept on the deck on a small raised platform of wood and 50 in hammocks strung above the others. The men also ate there. During the inspection, gear and hammocks were piled around the bulkheads, since apparently no lockers had been provided.

Refrigeration facilities consisted of two tin-lined lockers with exposed coils, measuring roughly 7'x 6'x 3'. A doctor stated that their fresh food lasted roughly one month. Whatever biologicals needed refrigeration also were kept in these lockers.

In examining the medical stores several large bundles of a punk-like material were found. A doctor explained that these were used in psychopathic cases; that little pellets were placed on the skin, and then burned. Later, when asked about psychopathic cases during combat, he said he had none. As for tuberculosis, 20 cases recently had been discovered aboard. General procedure was to give all crew members a chest X-ray examination once a year. In addition to a recent epidemic of colds, there had developed two cases of pneumonia, three of gonorrhea, and one of syphilis. A microscope (Zeiss type) was carried aboard ship, but at the time of the inspection had been taken to the hospital. Patients were cared for in their bunks. Aside from the sickbay supplies, other supplies were kept in lockers just outside the wardroom during combat. The doctor shared a cabin with seven other officers. During combat he was stationed in the wardroom and his two corpsmen aft in the sick bay.

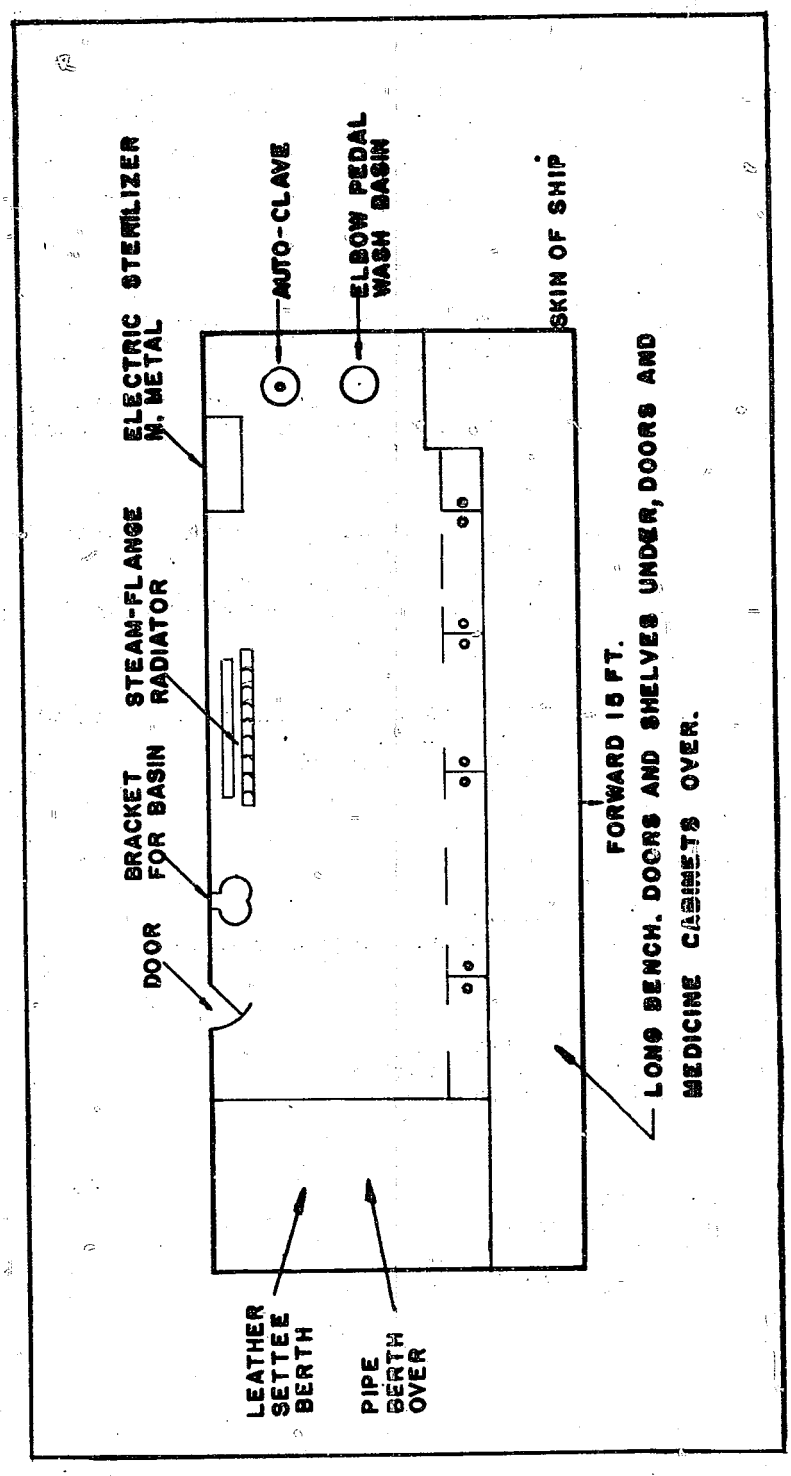


Figure 2

PLAN OF DISPENSARY ABOARD A JAPANESE DESTROYER TYPE VESSEL

Clothing for the tropics was khaki shorts and short sleeved shirts; for winter, wool and fur-lined jackets; for rain, a coat and hood.

For amusement, the men played cards. There were no movies. A ships store supplied candy, cigarettes and toilet articles. At the time of the inspection, "Service Girls" were aboard for the crew's use.

The following is a report on an inspection of the Japanese aircraft carrier KATSURAGI:

1. Crew's Sickbay

   a. Ventilation - ports and adequate ventilation.
   b. Overheads - low large wooden beds in tiers of two, total of eight in sickbay.
   c. Sanitation - head and bath attached, consisting of one large metal cauldron and two Japanese type heads.

2. Officers' Sickbay

   a. Ventilation - ports and adequate ventilation.
   b. Four large wooden beds.
   c. One folding wash basin with mirror.
   d. All other items identical but smaller than in crew's sickbay.

3. Pharmacy

   a. Usual pharmacy equipment not unlike that in the U.S. Navy but on a smaller scale.
   b. Most drugs previously removed.

4. Operating Room

   a. Two small overhead lights.
   b. One folding table.
   c. One small sterilizer.
   d. Lights over instrument tables were neon.

5. Dental Office

   a. All equipment removed.
   b. Small room with one port.
   c. One small sterilizer.

6. Medical Staff

   a. Three doctors.
   b. Eleven corpsmen.
   c. One dentist.
   d. One dental assistant.

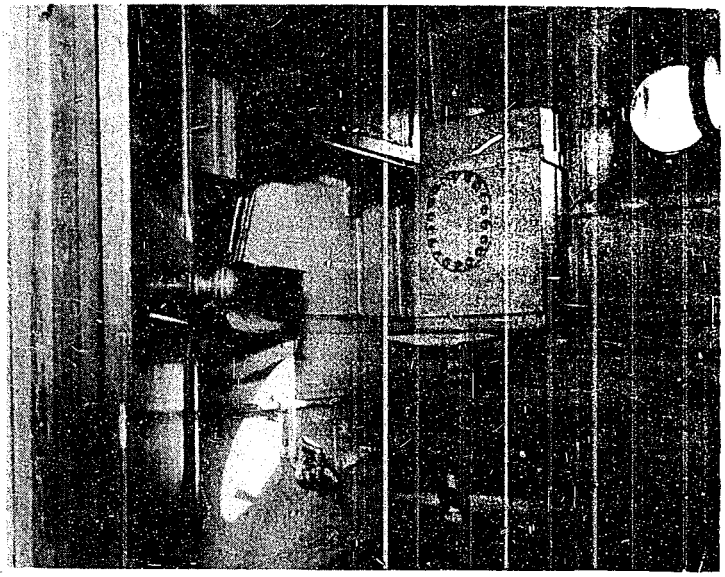


Figure 3
INTERIOR VIEW OF SICK BAY ABOARD A JAPANESE DESTROYER

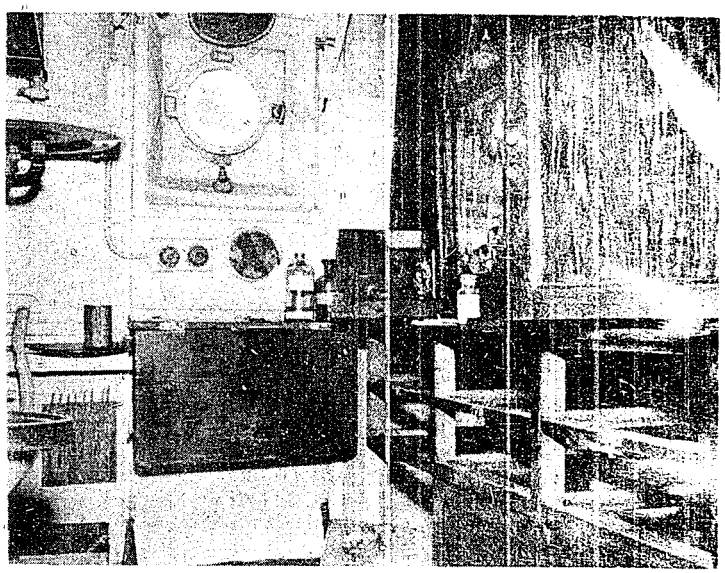


Figure 4
INTERIOR VIEW OF SICK BAY ABOARD A JAPANESE DESTROYER

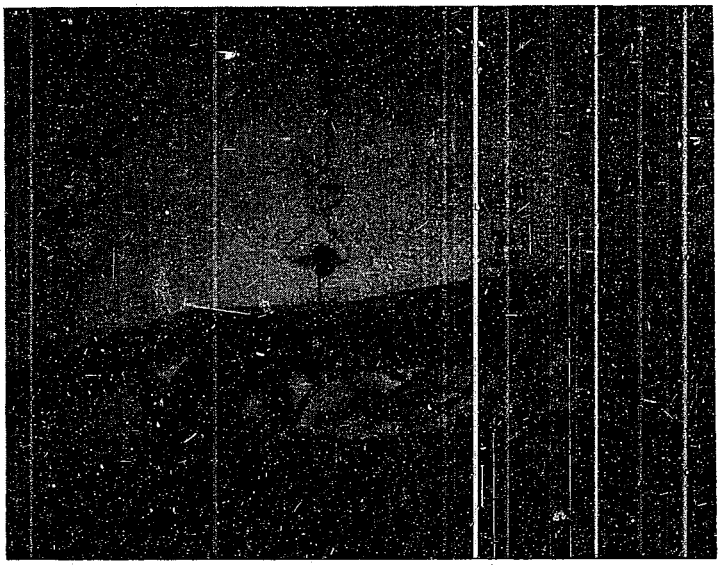


Figure 5
OPERATING AND EXAMINING TABLE ABOARD BATTLESHIP NAGATO

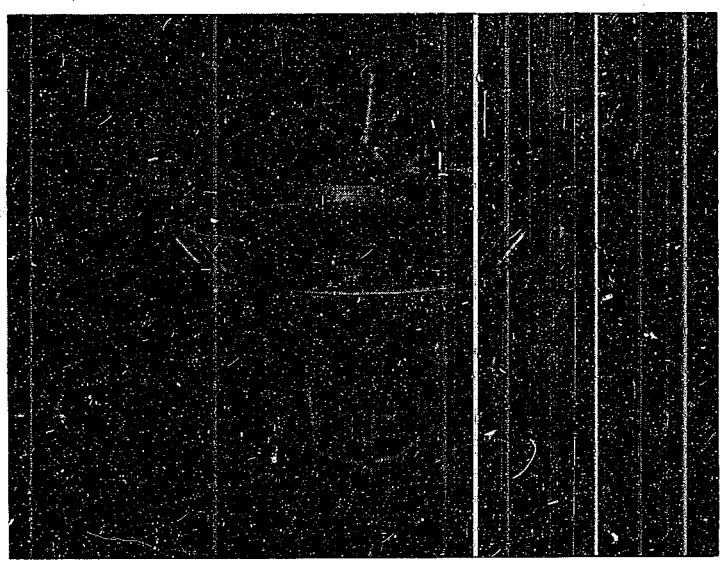


Figure 6
OPERATING LAMP ABOARD BATTLESHIP NAGATO

Figure 7
INTERIOR OF PHARMACY ABOARD BATTLESHIP NAGATO

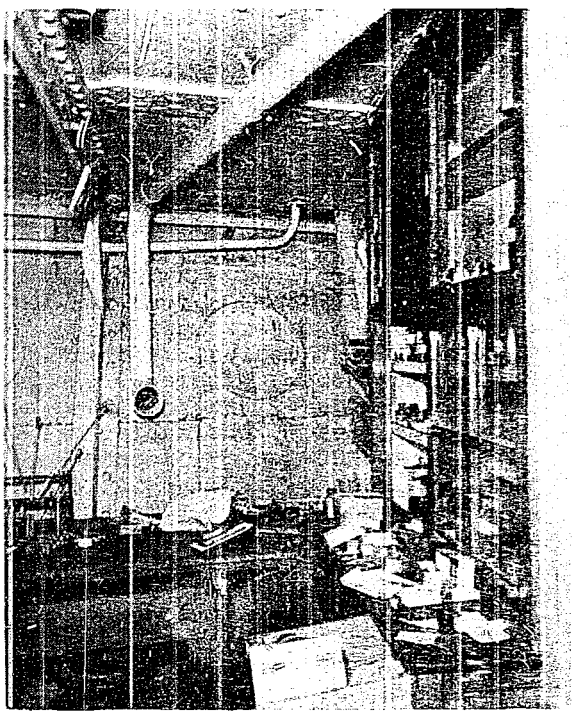


Figure 8
INTERIOR OF DISPENSARY ABOARD BATTLESHIP NAGATO

B. Facilities Ashore

The following is a general outline of medical personnel and facilities ashore.

Hospitals	Beds (Max)	Patients	MD's	Corpsmen	Nurses
YOKOSUKA	700	Evacuated			
KURE	2000				
KAMO	1000	150	10	100	70
IWAKUNI	2000	264	17	114	117
YASUURA	500	120	15	200	160
SASEBO	1500	Evacuated			
URESHINO	950	450	26	?	?
OMURA	1700	?	10	?	?
ISAHAYA	1000	atomic bomb patients, (civilian staff)			

Detailed information is presented on shore medical establishments according to location, as follows:

1. Medical Facilities at the YOKOSUKA Naval Base

The most important medical facility was the YOKOSUKA Naval Hospital which had a capacity of 700 beds. Its personnel were:

Doctors.....	40	Paymaster (Officer).....	1
Nurses (non-navy women)..	100	Medical Corpsmen.....	200
Medical Corps Officers...	12	Student Medical Corpsmen.	300
Pharmacist Officers.....	15	Other enlisted men.....	21
Dentists.....	5	Civilian employees.....	370

It covered some 80,000 sq. meters. Its top ranking personnel were one vice-admiral, four captains, six commanders, and 10 lieut. commanders.

The facilities of the hospital were in a number of separate buildings. Ten buildings housed the various wards. Each ward had a medical treatment or diagnosis room, but there was no general dispensary. One small building of seven rooms housed the testing laboratory in which specimens were analyzed. Its personnel were: one specialist in preventive medicine, one assistant medical officer, five nurses, one Medical Corps officer, and 10 corpsmen. There were a two-story pharmacy building and two medical stores buildings, one of three stories and one of one story, in which were employed 15 pharmacist officers, two Medical Corps officers, two NCO's, and 20 men. An operation laboratory building contained three operation rooms, two preparation rooms, one room for instruments, one disinfectant room for instruments and medical personnel, one disinfectant room for bandages, and one room and bath for the use of the doctors. The dentist laboratory had one room of five dentist chairs, one workroom for making teeth etc., and one room for the dentists. The administration building, of two stories and 26 rooms, contained the offices of the chief surgeon and hospital head, the Paymaster and Supply Officer; the staff-officer's office, the office of two assistant chief medical officers, the office of the head of civilian workers, two dining rooms, two statistical rooms, two reception rooms, one special reception room, two officers'

wardrooms, a food preparation and serving room, three bedrooms for night watch officers, one patients' admission room, one files room, one information room, one postal room, one Medical Corps officers' room, one room for the senior petty officer, and one waiters' room. Two barracks buildings had a capacity of 600. They housed 300 sailors training to become corpsmen as well as the corpsmen regularly attached to the hospital. In addition there were: a food preparation building where 40 civilians were employed under the direction of the paymaster, a warrant officer and 10 men; a two-story nurses' home of six big rooms accommodating 200 nurses; a one-story morgue; a one-story occupational therapy building; a patients' ammusement building accommodating 1000 people, at which movies were shown once or twice a week and where dancing girls were brought to perform for the patients; a building to keep and raise animals for use, not in research but for Wasserman tests etc.; a three-story supplies storage building; a clothing disinfecting and fumigating building; a ships service, barber shop and bath building; a laundry building; a boiler building; a garage; and a watchman's shed.

Across the road from the hospital was a network of four caves, plus one connecting cave in the rear, used as a storage place for medical supplies and foodstuffs and as an air-raid shelter for the entire hospital and staff. It contained 300 beds for patients. Under air-raid conditions, simple operations could be performed there.

Dispensaries were scattered among the various military units on the base in the form of sickbays. Each sickbay contained a medical diagnosis room for internal diseases, a surgical treatment room for external diseases, and a pharmacy for the issuance of medicines. A table of the sickbays and their facilities follows:

Unit	Beds	DND	X-Ray Room	Disinf. Room	Test Lab
YOKOSUKA Naval Engineering School	10	No	No	Yes	Yes
YOKOSUKA Naval Barracks	100	Yes	Yes	Yes	Yes
YOKOSUKA Naval Gunnery School	20	No	No	Yes	Yes
Naval Navigation School	20	No	No	Yes	Yes
YOKOSUKA Naval Arsenal		No	Yes	Yes	Yes
YOKOSUKA Naval Port Director	10	No	No	No	No
Naval Torpedo School	20	No	No	Yes	Yes
TAURA Naval Air Force	20	No	No	No	Yes
YOKOSUKA Naval Air Force	50	No	Yes	Yes	Yes
First Naval Technical Institute		No	Yes	Yes	Yes
First Naval Technical Institute Branch		No	Yes	Yes	Yes
Naval Anti-Submarine School	50	No	Yes	Yes	Yes
YOKOSUKA Naval Communication School	50	Yes	Yes	Yes	Yes
YOKOSUKA Naval Repair School	50	No	Yes	Yes	Yes
YOKOSUKA Naval Munitions Department		No	No	No	No
YOKOSUKA Defense Corps	15	No	No	Yes	Yes
YOKOSUKA Submarine Base	15	No	No	No	No

The following is a table of personnel at the various sickbays:

Unit	Doctors	Nurses	Med. Corps Officers	Corps-men
YOKOSUKA Naval Engineering School	3	10	1	30
YOKOSUKA Naval Barracks	7		2	70
YOKOSUKA Naval Gunnery	4	21	1	30
Naval Navigation School	3	21	1	30
YOKOSUKA Naval Arsenal	6		2	20
YOKOSUKA Naval Port Director	2			4
Naval Torpedo School	3		1	20
TAURA Naval Air Force	2			10
YOKOSUKA Naval Air Force	6		2	50
First Naval Technical Institute	3		1	5
First Naval Technical Institute Branch	2		1	2
Naval Anti-Submarine School	3	21	1	30
YOKOSUKA Naval Communication School	4	21	1	30
YOKOSUKA Naval Repair School	4	21	1	30
YOKOSUKA Naval Munitions Department	1			2
YOKOSUKA Defense Corps	2		1	20
YOKOSUKA Submarine Base	2			8

Just outside the boundaries of the YOKOSUKA Naval Base were two hospitals which were not under the jurisdiction of the naval authorities but which were to some extent connected therewith. One was the KAIJINKAI Hospital which ministered to the families of Naval Base personnel. It was a private corporation, but was headed by a naval doctor appointed by the Navy Ministry. Nominally he was on the staff of YOKOSUKA Naval Hosptial, but actually he worked exclusively at the KAIJINKAI Hospital. The rank of the last incumbent was Rear Admiral (HASEGAWA). Services rendered were paid for by the recipients, but at lower than ordinary rates. The other hospital was the KYOSAIKAI Hospital, servicing arsenal workers and their families. This, too, was a private corporation, but its head was the head of the YOKOSUKA Naval Arsenal dispensary mentioned above. Payment for services was partly from wages and partly from state health insurance.

There were also four naval hospitals some distance from YOKOSUKA Naval Base, but which were under the jurisdiction of the YOKOSUKA Naval District of which the Base was the administrative headquarters. These together with salient figures concerning their size, are presented below:

Unit	Corps men	Beds	Doctors	Pharm. Off.	Med. Corps Off.	Nurses	Dentists	Pay Off.	Men	Civilians
NOBI Nav. Hosp.	166	992	13	4	5	88	3	2	24	226
KASUMIGAURA Nav. Hosp.	70	600	28	4	4	154	3	2	20	140
TOTSUKA Nav. Hosp.	185	750	21	4	4	183	3	2	42	185
MINATO Nav. Hosp.	63	600	13	2	6	70	3	2	8	80

The above information was obtained by interrogation of the staff Medical Officer for the YOKOSUKA Naval District, Commander ABE, Masanosuke, and of the Assistant Staff Medical Officer for the YOKOSUKA Naval District, Naval Lieutenant TAKAHASHI, Yoshinobu. The information was oral, all the relevant documents having been burned in the middle of July, "getting ready for demobilization".

Since 1944, the YOKOSUKA Naval Hospital had rented hotels or blocks of hotel rooms at four hot springs resorts where, when feasible, patients were

sent for recuperation. At YUGAWARA, accommodations for 1500 were rented at 13 hotels; at ATAMI, accommodations for 1000 were rented at nine hotels; at KUSATSU, accommodations for 700 were available at nine hotels and at ITO, accommodations were available for 250. Patients on the road to recovery were sent there partly to relieve the congestion at the YOKOSUKA Naval Hospital. They were fed by the hotel staff, but were under medical supervision of members of the staff of the YOKOSUKA Naval Hospital. The facilities at ATAMI were for the relief of fatigue of airmen and submariners, rather than for sick people.

2. Medical Facilities of Second Naval District

The KURE Naval Hospital (1500-2000 beds) was the headquarters of the medical facilities of the Second Naval District. It was responsible for receiving patients from the fleet and supplying the fleet with medical supplies, and personnel. The BEPPU (3000 beds), IWAKUNI (1500 beds), KAMO (1000 beds), and YASUURA (500 beds) Hospitals received patients, supplies and personnel from the KURE Hospital, which also administered the affairs of the KURE Corpsmen School (now destroyed), the KAMO Corpsman School and the OTAKE Submarine Medical Research Unit.

a. Inspection of the KURE Hospital

The main buildings of administration, O.R., laboratories, pharmacy, wards, and barracks were still standing but they were antiquated wooden structures in poor repair. One building was of stone, four stories high and housed X-ray, physiotherapy and wards. It was of modern design and fit for use. One section of the wooden buildings used for corpsmen was burned to the ground. Plumbing for sewage, drinking and bath water was not working, having been destroyed by hurricane. It had been poorly designed. The boilers for heating the buildings were also in poor repair. The cooking facilities showed extensive deterioration. Though the buildings could be occupied, they were at that time unfit for American pation. As one of the most inportant Japanese naval hospitals, facilities could be compared only with a most antiquated Class C hospital in the United States. As for equipment, most of the drugs, biologicals and instruments with the exception of a few X-ray machines (later to be described) and some ancient physiotherapy equipment had been removed.

The operating rooms were located in a central building. Facilities were not remarkable: tiled floors and walls, old style over-head light, movable O.R. tables, space for 3 O.R. sections.

The laboratory and pharmacy were combined in the same building. There was nothing of interest except many laboratory desks and storage cabinets with scattered standard Japanese drugs. Although this was also the KURE Naval Drug Factory, it was actually only an assembly spot where collected drugs were diluted to desired strengths, sealed in ampules, and then distributed. In the X-ray and physiotherapy building, members of the 161 Hospital Staff commented that the remaining fixed X-ray equipment was excellent. The following is a description given by the Japanese X-ray technician:

Generally, the machine may be described as a 250 KV machine; 100 milliamperes; console type control panel; oil immersion tubes. The machine functioned both for diagnosis and therapy, as follows:

Diagnosis	Therapy
3 phase alternating current Vol. 90 KVP 3MA; 60 KVP 1000 MA 1 sec. Tube a. 10 KW (R) b. S.P. 10 KW Kenetron KR - 150	Direct current 117 KVP 7 MA a. S.P. 300 2MA b. S.P. 200 5 MA Kenetron RA - 260

The Manufacturer was the SHIMIZU K.K.

Also present was a standard type fluoroscope. Physiotherapy equipment consisted of an antiquated deep heat machine with two 6" pads, and an electric heating cabinet lined with leather.

b. Inspection of the KAMO Naval Hospital
(An example of one of the subordinate hospitals.)

An inspection of KAMO Naval Hospital (located half-way between SAIJO and KIRO) was made on 22 and 23 October 1945. Rear Admiral SHINA, Saburo, a graduate of the NIIGATA Medical School and in the naval service for 25 years, had been commanding medical officer of the hospital since its inauguration in May 1944. He spoke no English. He was most cooperative in answering questions on those subjects with which he was familiar, referring more technical medical and surgical questions to his chief heads. He expressed the hope that the KAMO Naval Hospital would be used as a collecting section for returning Japanese wounded.

The hospital was completed in May 1944 for surplus patients from the KURE Naval Hospital. During the war, the maximum number of patients cared for at one time was 2,000. They were brought from KURE by ambulance and truck. The buildings were two-storied, high-ceilinged wooden buildings, unconnected by ramps and with several incompleted wards. The location was excellent, on the slope of a mountain in a pine forest. At the time of the inspection, 10 M.D.'s, 70 nurses and 100 corpsmen comprised the staff.

The operating room was located in a separate building. There was space for two operating sections. The floors were concrete, window panes were broken, and conditions of cleanliness were poor. The overhead surgical light was of simple construction having side lights and an electric globe in an ordinary tin reflector. The operating table was of simple and rather crude iron construction, painted over. Surgical instruments were of poor steel and design, the hemostat type with ill fitting claws, surgical knives of the fixed blade type, etc. Surgical scrub was two minutes with soap and water, drying, then two minutes with a mercury-bichloride soak. Abdominal preparation was done similarly just before operating-room entry. Surgical gowns were ill-fitting, loose weave cloth garments, and open-sleeved. gloves were a poor quality rubber. Anesthesia was only of three types, local, spinal and open ether. The equipment for the latter was either an open mask, or a Japanese device for what was called "closed" anesthesia: a round metal hollow ball for raw ether, an attached gut-lung and a rubber tube with attached metal mouth piece. Orthopedic surgery, of which two post-operative cases were seen, featured the wiring of fractures and the use of piano wires fixed in plaster. Control of infected fractures was by plaster immobilization with continous Dakin solution irrigation. There were no endoscopic or electro-magnetic instruments. Alloys for surgery were of the stainless steel type. The I.V. sets were a metal container, hot-water warmed, with an attached syringe for immediate injection. Glucose and saline solutions were injected with ordinary syringes. Patients were carried in a litter to and from the operating room.

The laboratory and pharmacy were in a separate building. There were the usual chemical and biologicals, Zeiss-type microscopes, an electric refrigerator, centrifuges, culture cabinets, etc. Blood work was confined to counts, microscopic anatomical description, smears, sedimentation rates and a variation of the Wasserman called the MURATA. An occasional gross autopsy was done, but no microtone work. Drugs were remarkable only for the abundance of those in powder form (as contrasted with the numerous tablet forms in the U.S. Navy). No routine laboratory was done on patients except at the discretion of the doctor.

X-ray and physiotherapy were housed in a separate building. The X-ray machine was the oil-immersion tube and console controlled type. Fluoroscope was the same as that seen at KURE. Physiotherapy equipment consisted of a metal chamber for infra-red light, smaller individual lights for ultra-violet, and two pad-equipped "depth" heat diathermy machines.

Medical and surgical wards had individual wooden beds, closely set together. The wards were moderately clean, but drafty and chilly. All that could be noted as unusual was the remarkable discipline maintained for inspection: patients and attending corpsmen came to attention as though on the parade ground.

Although there was a boiler plant for central heating, it was not in use due to the coal shortage. There were washing machines, but because they were out of order laundry was being done by hand.

In the galleys there were cauldrons for rice and the vegetable-protein soup. Food for patients consisted of rice, vegetable-portein soup and a pickle (3 times a day and in no great quantity).

c. Inspection of the KAMO Corpsman School

The KAMO Corpsman School was completed in May 1945, and at the time of cessation of active hostilities had graduated 2,500 corpsmen. The buildings were located in a separate compound adjacent to the KAMO Naval Hospital, and were high ceilinged, two story wooden buildings. There are five separate buildings for study (the only buildings examined in detail), and others for living, supply, etc. The instructors were all commissioned staff officers of medicine, dentistry, and pharmacy, Students were selected by mass draft from among those who were physically unfit for line duty, although volunteers from this category were accepted also. Orthodox training consisted of six months schooling, but owing to pressure of war, it was cut down to four months. Corpsmen were trained in broad outline in: medical rationale; food, water, and sanitation measures; laboratory technique; operating technique; dentistry; physical culture and military courtesy. A separate building was devoted to each of the above mentioned subjects. Instruction was by lecture, demonstrations, and individual use, but not by movies. The equipment remaining for demonstration and individual use appeared more adequate than that actually used in the hospital. The visual charts of diseases and relationships (e.g. malaria, filariasis, worm infestations) were excellent. The collection of wax models on human pathology is unmatched even by some of the best U.S. medical schools. Injected dissections of anatomical (human and zoological) organs and bodies showed beautiful minutiae. Models in artificial material of systemic anatomy likewise were excellent. In hygiene, built models illustrated well correct and incorrect sanitary methods. Also, there were numerous boxes, such as are carried aboard all ships, for gas first aid, wound first aid, detection of spoiled food, water study and purification. Dentistry was complete with chair, drill, and

instruments. Here also the charts, plastic models and anatomical dissections were superior. The operating room was complete with instrument and aseptic facilities apparently much better than those observed in the adjacent hospital. Three corpsmen, one rated with five years duty and two unrated with six months duty, were questioned about first aid (a compound fracture of the femur), sickbay duty (abdominal pain of a day's duration) and ward duty (signs and symptoms of a change in a post-operative case). The answers they gave were satisfactory, both as to observation and rationale of treatment.

3. Medical Facilities of the Third Naval District

The OinC of the SASEBO Naval Hospital, was also District Medical Officer of the Third Naval District which had hospitals at OMURA, URAHINO, ISAHAYA, and NAGASAKI. However, as both the SASEBO and NAGASAKI hospitals had been destroyed, inspection was limited to the operating hospitals. The findings are included in the tables which follow.

MISCELLANEOUS

	Recreational Facilities	Sanitation Garbage Disposal	Kitchens	Remarks
SASEBO Naval Hospital	Theater-moving pictures. Library service. Occupational therapy.	City garbage collection. City sewer.	Empty	Most modern hospital in area. Stripped and equipment packed. Accurate evaluation difficult due to bomb, fire and typhoon damage.
URESHINO Naval Hospital	Swimming pool. Fish pond. Recreation hall with screen and stage, games, library.	Septic tanks. Incinerator at main power plant.	Large iron woodlid pressure cookers for rice, 300 meal capacity. Two ice boxes, one electric, one iced. Cement floor.	4 - 6 years old. Average for the area.
OMURA* Naval Hospital	Theater & screen. Library service. Occupational therapy. Games.			2 years since completion. Clean, well run, adequate.
ISAHAYA Naval Hospital				Fair
IWAKUNI Naval Hospital	Library. Chapel.	City garbage collection.	Iron cauldrons for rice & soup; no refrigeration; unclean.	Adequate by Japanese standards, but hygiene & sanitation poor.
KURE Naval Hospital	None	None		Evacuated, but installation showed gross disrepair.
KAMO Naval Hospital	None	Local incineration		An outlet for KURE; planned as a convalescent center; well kept.
YASUURA Naval Hospital	None	Local incineration.		Planned as a KURE outlet; incomplete, but occupied when KURE Naval Hospital evacuated.

*Kitchens-clean, neat, no odors.

TABLE I

DETAILS OF JAPANESE NAVAL HOSPITAL CONSTRUCTION

	Buildings	Stories	Lighting	Flooring	Heating	Plumbing	Insulation	Roofing	Power Plant
SASEBO Naval Hospital	Modern flat roof utilitarian; self contained units; stucco lathe; cement and steel frame.	4	Electric city power. Semi-modern overhead direct and indirect lighting with floor night lamps.	Linoleum in wards. Polished cement-stone composition halls.	Central steam heat.	Hot and cold city running water. Taps and showers in large tubs. Flush lavatories.	Air space between inner and outer walls.	Roofing tar paper and composition paper.	Central steam.
URESHINO, OMURA, and ISAHAYA Naval Hospitals	Japanese peaked roof type inter-connected runways, wood frame and wood siding.	2	Electric city power. Porcelain shade with drop cord lights.	Bare wood plank flooring thruout.	Self-contained central steam heat.	Local water piped in. Hot and cold. Large sunken tile baths. Squat toilets and and tile urinals.. Septic tank unit.	None	Heavy regular Japanese tile.	Central unit steam power plant.
IWAKUNI Naval Hospital	Completed 1942, semi-temporary, high ceilinged wood buildings. Ramp connected.	2	Electric city power, exposed drop lights.	Bare wood planking.	Central steam heat.	Cold local water piped in, functioning.	None	Japanese tile.	Central steam (coal).
KURE Naval Hospital	Mother hospital for area; only one 5 story modern stone building, remainder antiquated wooden buildings. Ramp connected.	2 - 5	Electric city power, exposed drop lights..	Linoleum bare wood, composition concrete.	Central steam heat.	Local cold water, not functioning.	None	Japanese tile.	Central steam (not functioning).
KAMO Naval Hospital	Completed 1944, high ceilinged wooden building. No ramp connections.	2	Local electric plant.	Bare wood.	Central steam heat (not functioning).	Cold water (hospital reservoir).	None	Japanese tile.	Not functioning.
YASUURA Naval Hospital	Incomplete, high ceilinged wooden building.	2	Electric city power.	Bare wood.	Central heating.	City cold water.	None	Japanese tile.	None

Table II

HOSPITAL SERVICES, FACILITIES, DIVISIONS

	Staff Quarters	Bed Capacity	Ward Divisions	Laboratory Divisions	Operating Rooms	X-ray	Physiotherapy	Out Patients	Pharmacy
SASEBO Naval Hospital	Detached houses. Individual and multiple. Quarters on 4th floor also.	1500	Medical. Surgical. Infectious diseases. Venereal. Tuberculosis.	1. Central Bacterial and Diagnostic Lab. 2. Chemical Lab. (Water & milk analysis). 3. Small Lab. in each ward for diagnosis.	Central, large, well lighted, tile walls & floor. Good lights. Sterilizing instruments, and scrub rooms adjoining.	Therapy 237000V. Average photo machines, tubes in oil, fluoroscope.	Instruments removed and stored.	Yes. Naval personnel dependents hospital separate.	Stock removed.
URESHINO Naval Hospital	Detached on grounds. J.O.Q. barracks on grounds.	950			Central, next to "A" surg. ward. Poor light. Half tile walls. Small & poorly equipped.		Ultra-violet and infra-red cabinet. Exercise machine. Hot water baths. Massage.	Yes. Naval personnel and dependents.	Poorly stocked. Scarcity standard drugs.
OMURA Naval Hospital		1700			Central on "A". Surg. ward well lighted, large and adequate.		Massage. No machines. Diathermy.		
ISAHAYA Naval Hospital		1500							
IWAKUNI Naval Hospital	Detached quarters.	2000		Usual blood & tissure fluid analysis equipment, microtome.	Central, concrete floor unclean, adjacent sterilizing, scrub & store rooms in poor repair.	Console type, oil immersion tubes; portables (all being dismantled)	Ultra-violet and infra-red lamps, heat cabinet, deep heat diathermy machine.	Naval dependents.	Well stocked; numerous infusions being prepared.
KURE Naval Hospital	Detached barracks	2000		Evacuated.	Evacuated. Tile floors & walls.	250 KV machine 100 M.A., console type panel, immersion tubes.		None	Evacuated.
KAMO Naval Hospital	Adjacent barracks	1000	Medical. Surgical. Infectious diseases.	Simple blood, urine, & fluid analysis.	Concrete floor; broken panes.			None	Well stocked.
YASUURA Naval Hospital		500		Microscopic & simple urine exams.	Concrete floor; incomplete.	Portable	None	None	Scant supplies.

Figure 9

URESHINO NAVAL HOSPITAL COMMANDING OFFICER - ADM. HOMMA

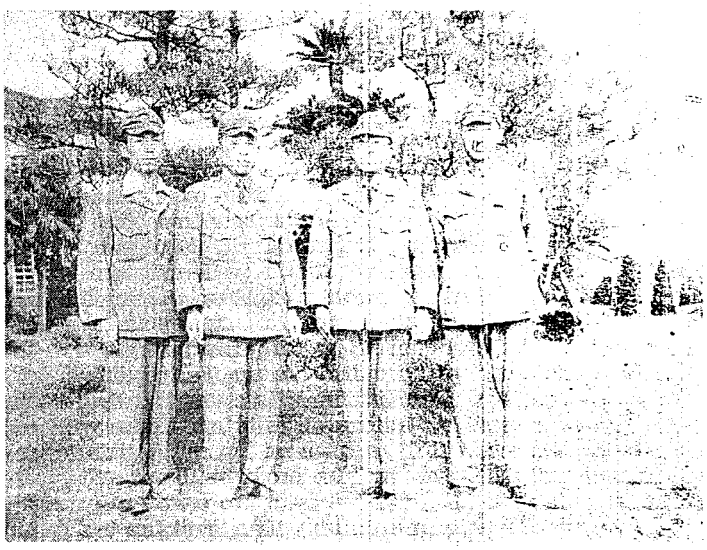


Figure 10

URESHINO NAVAL HOSPITAL STAFF - EXECUTIVE, CHIEF OF MEDICINE, COMMANDING OFFICER, CHIEF OF SURGERY

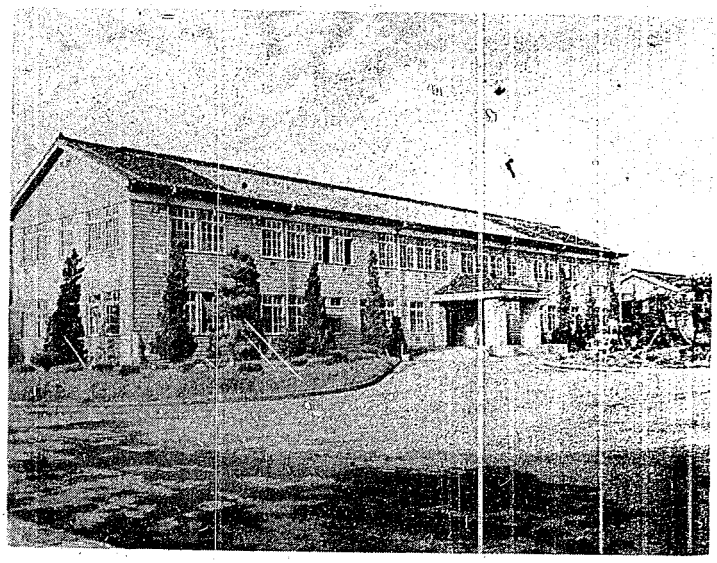


Figure 11
OMURA NAVAL HOSPITAL ADMINISTRATION BUILDING

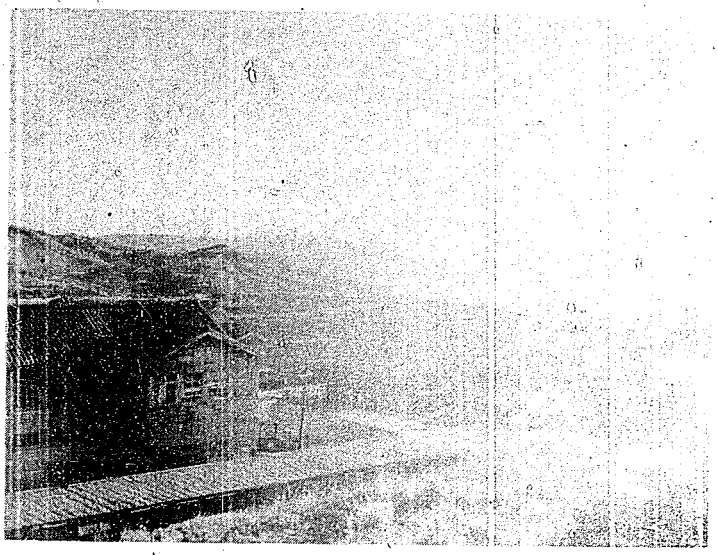


Figure 12
OMURA NAVAL HOSPITAL - AERIAL VIEW

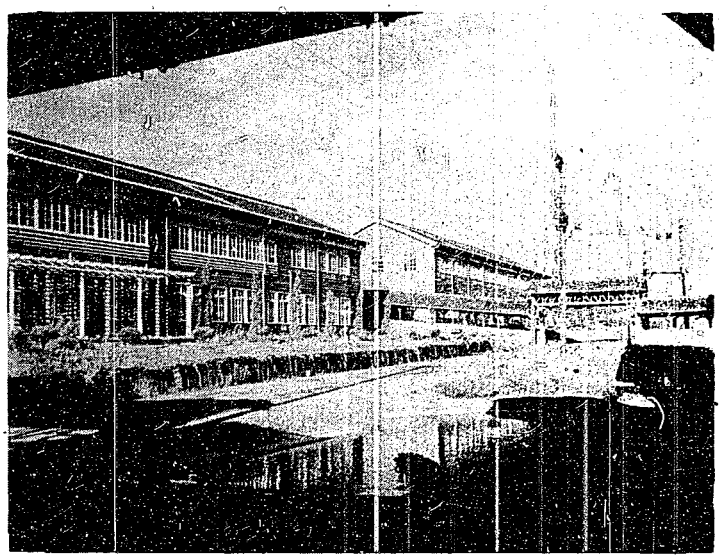


Figure 13
OMURA NAVAL HOSPITAL WARDS WITH AJOINING WALKS

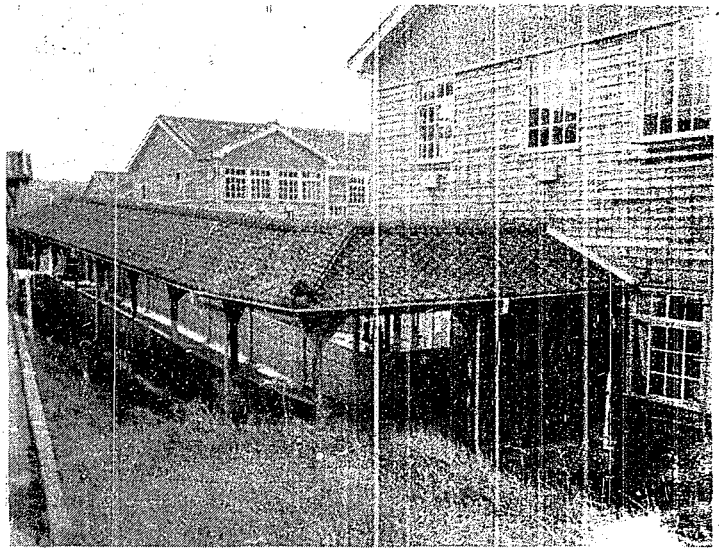


Figure 14
OMURA NAVAL HOSPITAL - TILE ROOF WALKS, CEMENT FLOORS, INTERCONNECTING BUILDINGS

Figure 15
OMURA NAVAL HOSPITAL - AERIAL VIEW OF CONNECTING WALKS

Figure 16
OMURA NAVAL HOSPITAL - COVERED WALKS CONNECTING WARDS

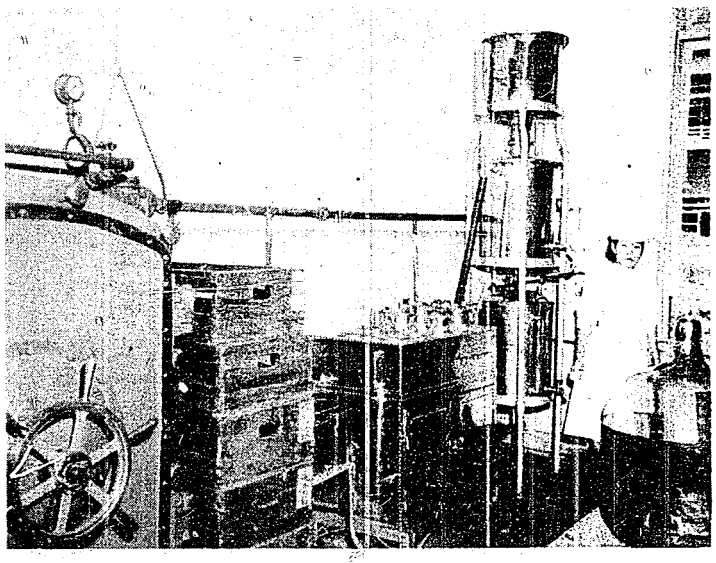


Figure 17
URESHINO NAVAL HOSPITAL STERILIZING ROOM - DISTILLER

Figure 18
URESHINO NAVAL HOSPITAL WARD OFFICE AND EXAMINING ROOM

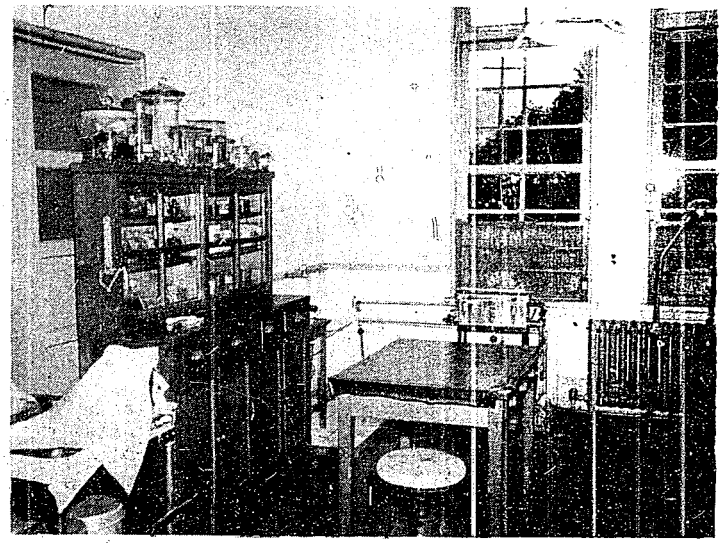


Figure 19

URESHINO NAVAL HOSPITAL DRESSING ROOM - SURGICAL WARD

Figure 20

URESHINO NAVAL HOSPITAL WARD SURGICAL STOREROOM

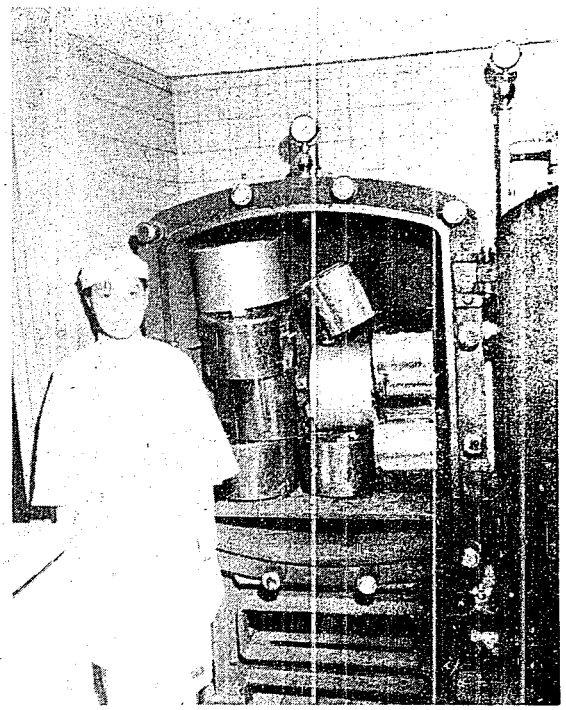


Figure 21
URESHINO NAVAL HOSPITAL STERILIZING CHEST (Steam)

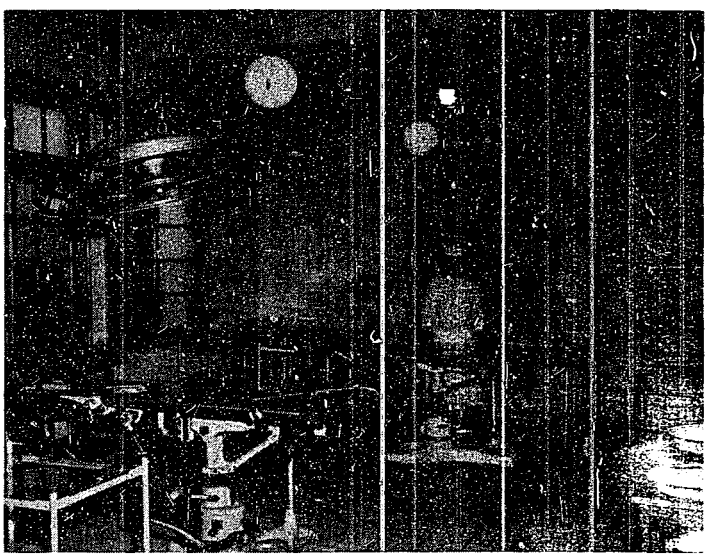


Figure 22
URESHINO NAVAL HOSPITAL MAIN OPERATING ROOM AND EQUIPMENT

Figure 23
URESHINO NAVAL HOSPITAL MAIN OPERATING TABLE

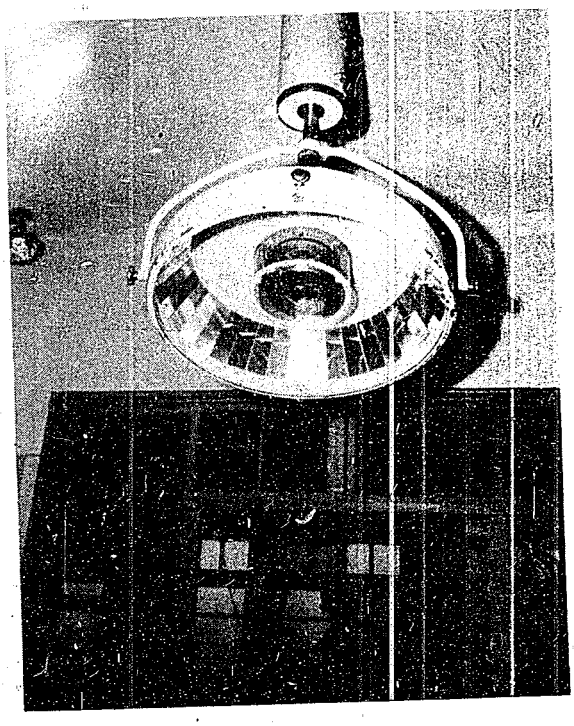


Figure 24
URESHINO NAVAL HOSPITAL AUXILIARY OPERATING LAMP

Figure 25
URESHINO NAVAL HOSPITAL AUTOCLAVE AND STERILIZERS

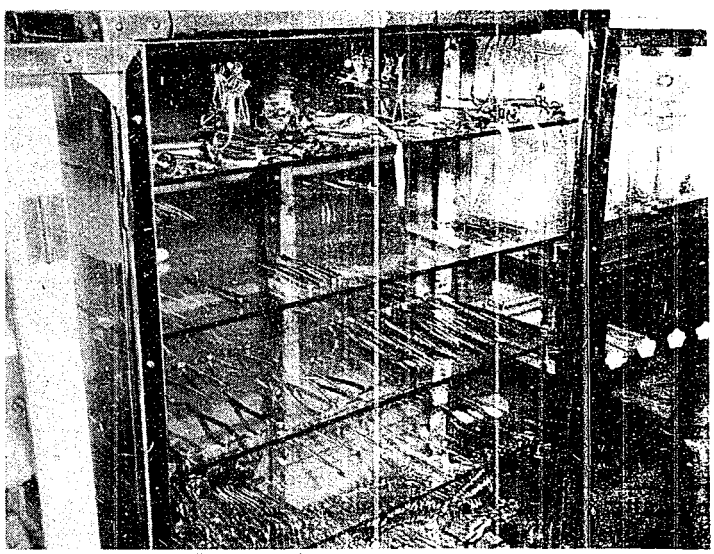


Figure 26
URESHINO NAVAL HOSPITAL SURGICAL INSTRUMENTS
(Total Available)

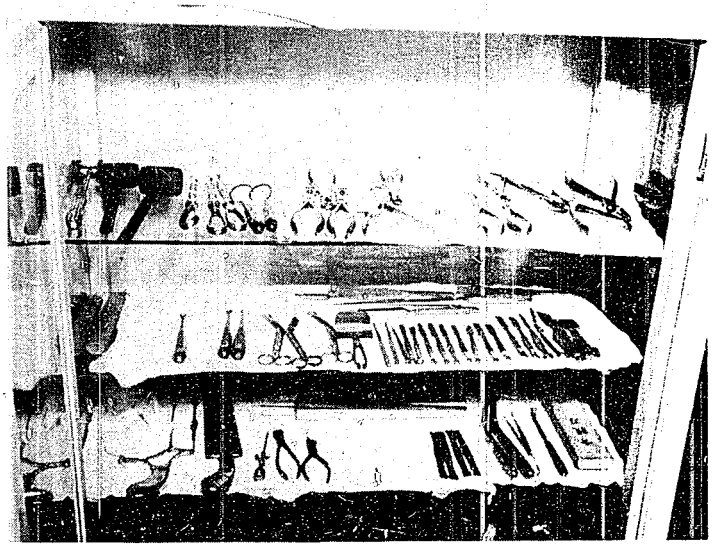


Figure 27
URESHINO NAVAL HOSPITAL ORTHOPEDIC INSTRUMENTS
(Total Available)

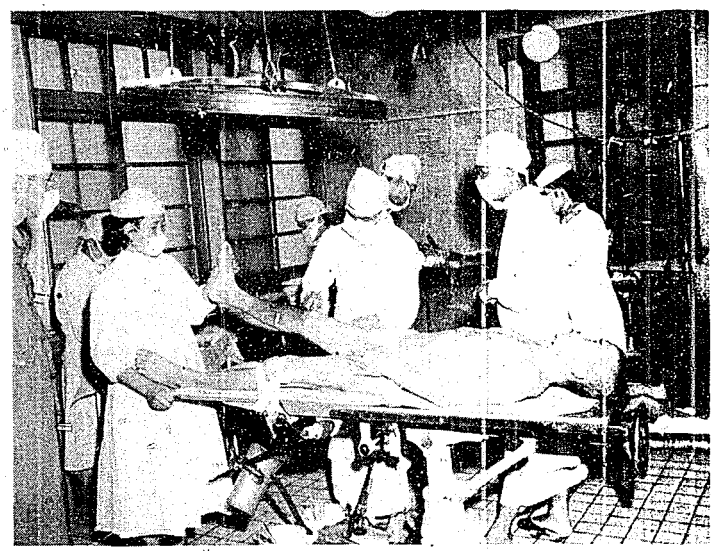


Figure 28
URESHINO NAVAL HOSPITAL MAIN OPERATION ROOM
(Preparation for removal sequestra from comminuted fracture of tibia due to battle wound 2½ months previously. Poor original reduction - extreme angulation with lateral displacement - allowed bridging over in plaster with window for dressing.)

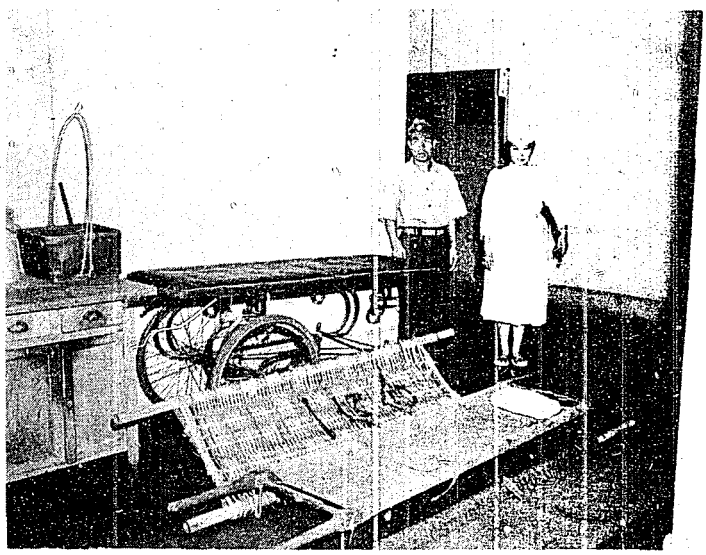


Figure 29
URESHINO NAVAL HOSPITAL STRETCHERS
(Note burlap and bamboo substitutions)

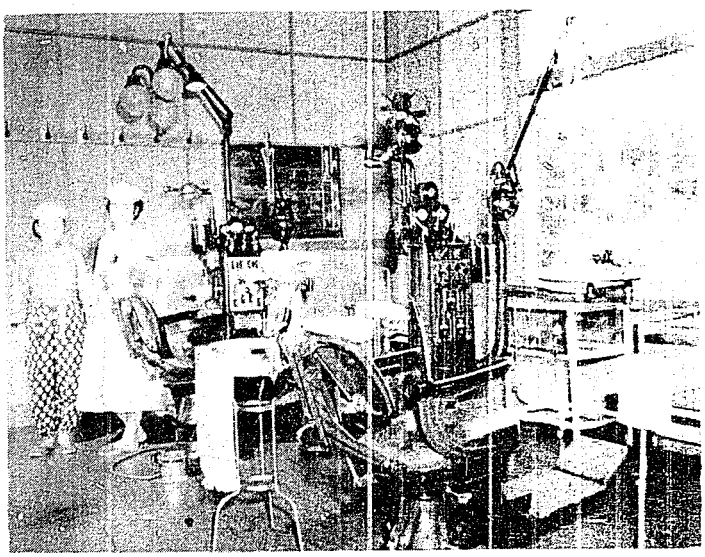


Figure 30
URESHINO NAVAL HOSPITAL DENTAL ROOM

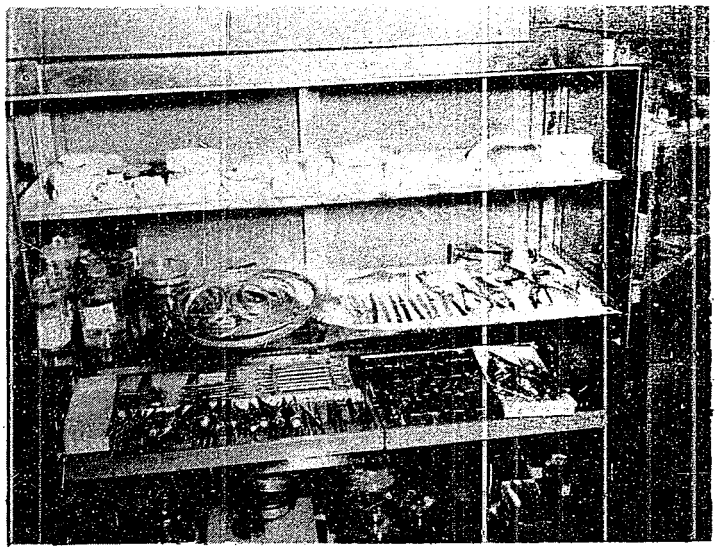


Figure 31
URESHINO NAVAL HOSPITAL DENTAL INSTRUMENTS
(Drills and small instruments in standard shallow tray cabinet)

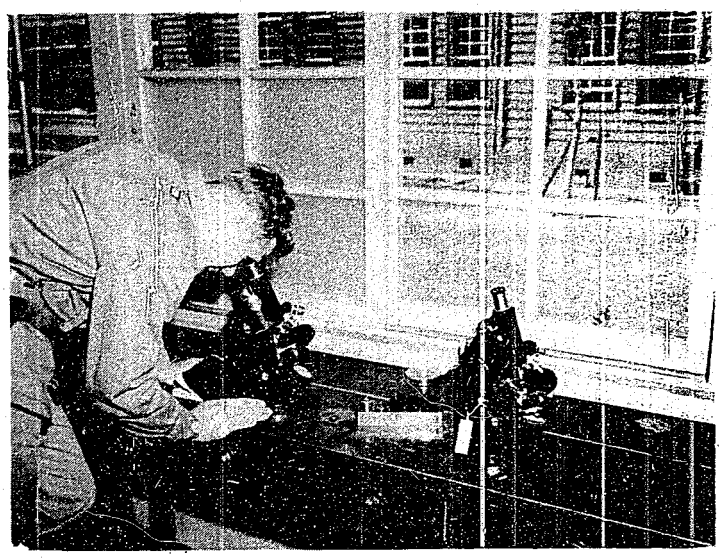


Figure 32
URESHINO NAVAL HOSPITAL LAB. MICROSCOPES

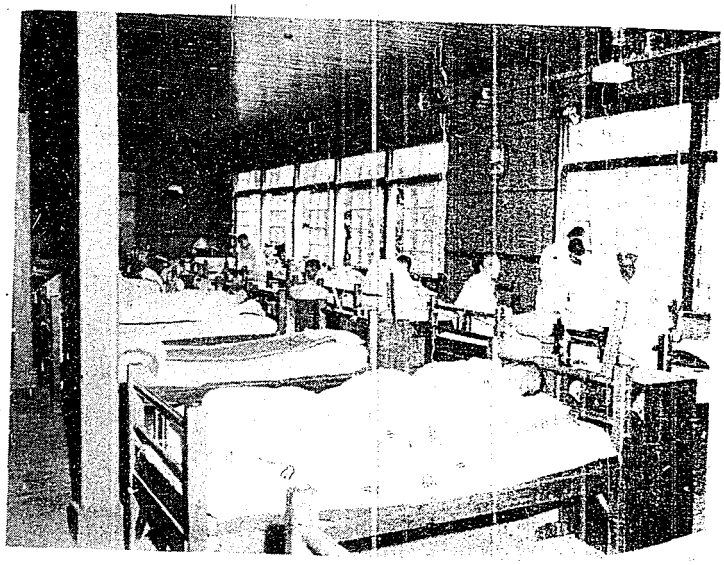


Figure 33
URESHINO NAVAL HOSPITAL ATOMIC BOMB WARD

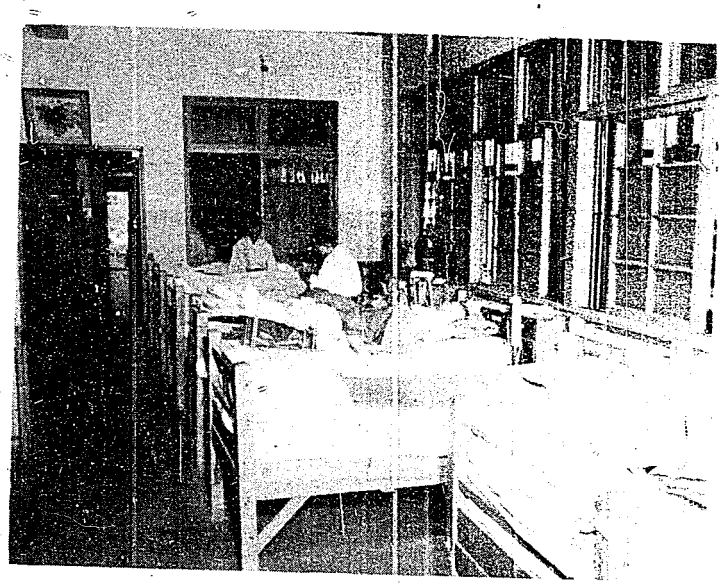


Figure 34
URESHINO NAVAL HOSPITAL SURGICAL WARD

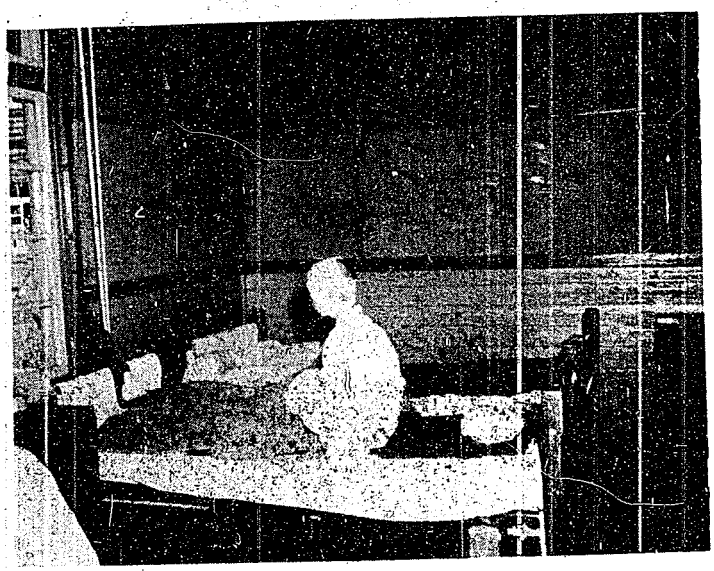


Figure 35

URESHINO NAVAL HOSPITAL ATOMIC BOMB VICTIM

(Burn victim. Notice epilation from "radiation effect")

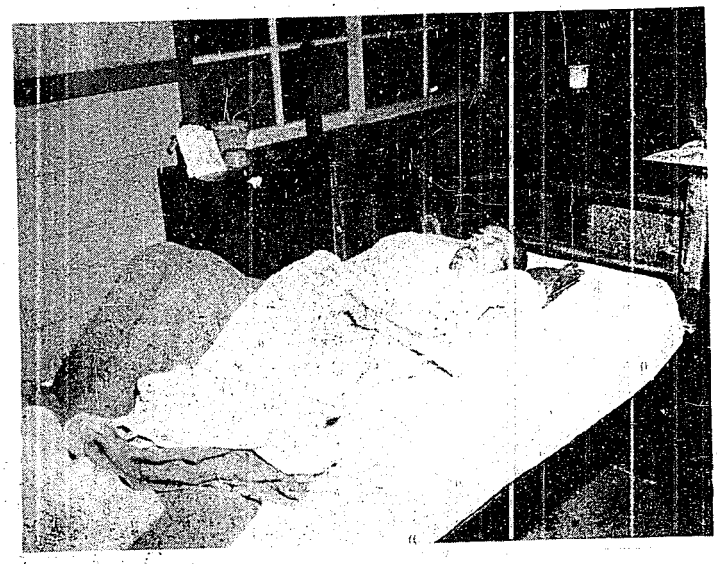


Figure 36

URESHINO NAVAL HOSPITAL ATOMIC BOMB VICTIM

(Burns - radiation leukopenia, haemorrage. Debility and anemia)

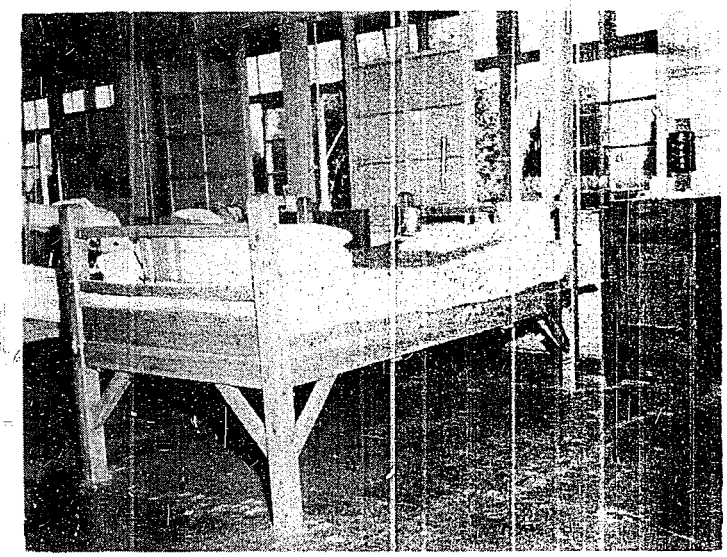


Figure 37
URESHINO NAVAL HOSPITAL BED AND CABINET

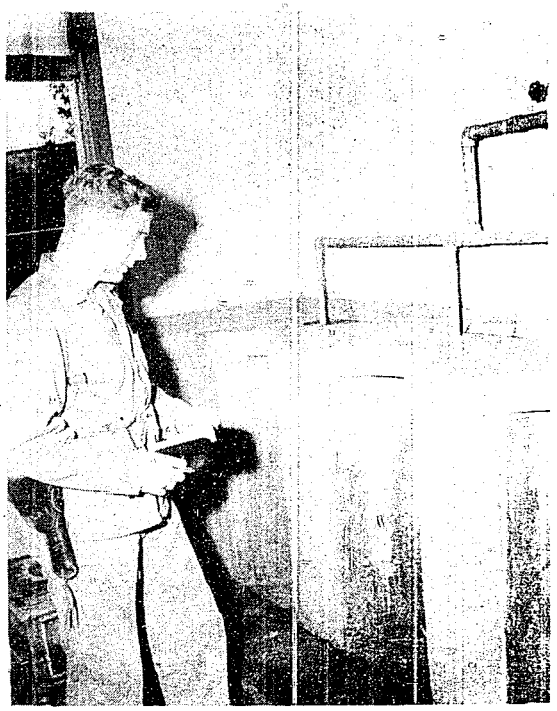


Figure 38
URESHICO NAVAL HOSPITAL URINALS

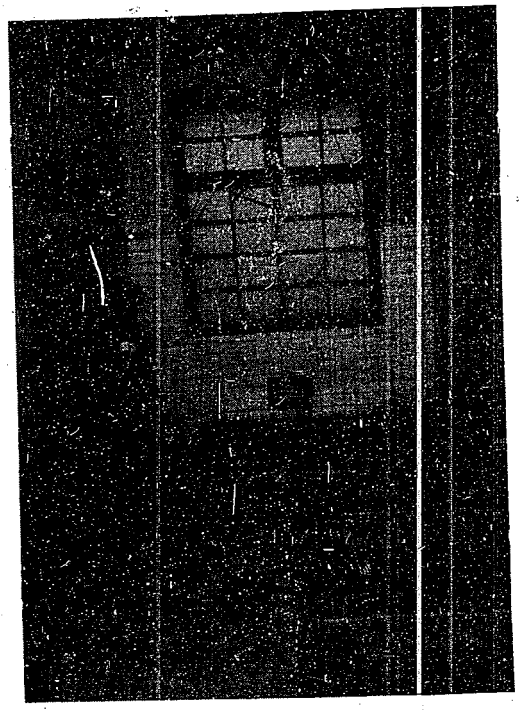


Figure 39
URESHINO NAVAL HOSPITAL PATIENTS' BATH AND SHOWER

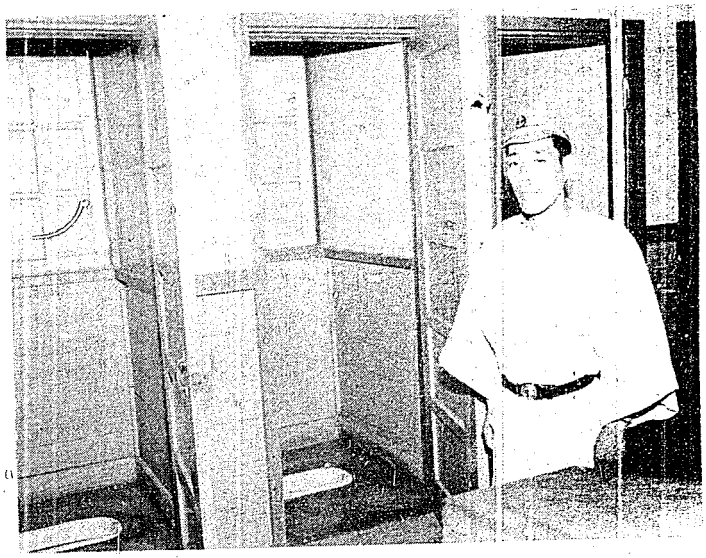


Figure 40
URESHINO NAVAL HOSPITAL PATIENTS' TOILETS

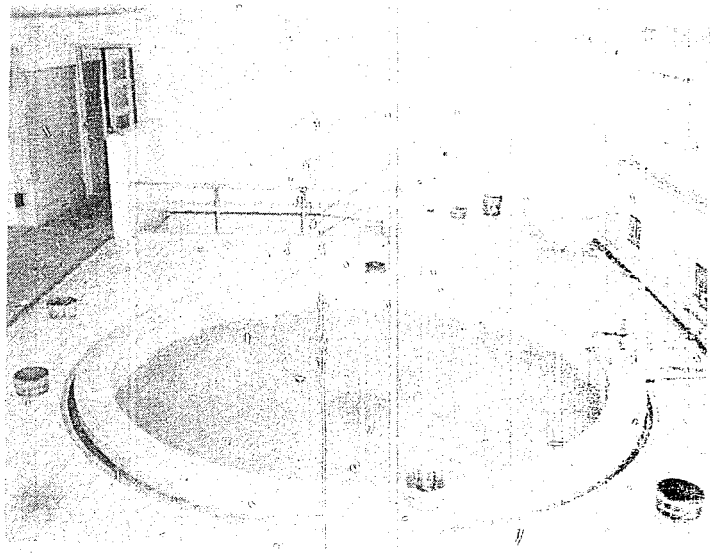


Figure 41
URESHINO NAVAL HOSPITAL HYDROTHERAPY

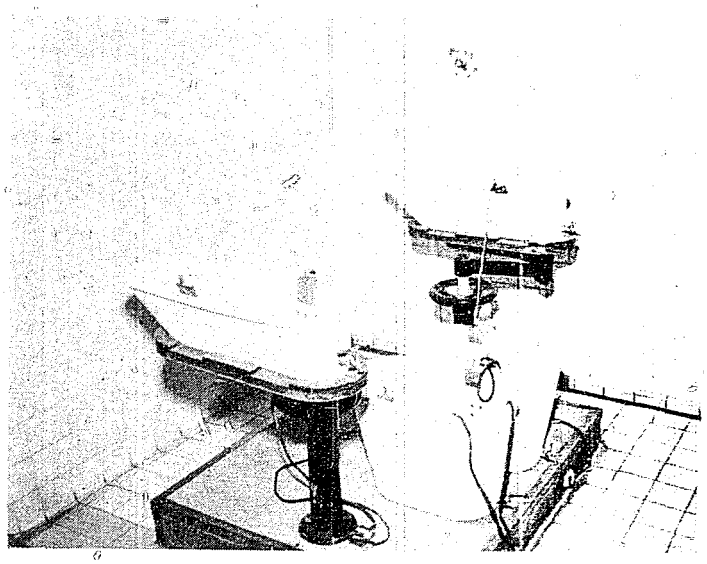


Figure 42
URESHINO NAVAL HOSPITAL HYDROTHERAPY - UPPER EXTREMITY: GALVANIC CURRENT HOT ELECTROLYTE

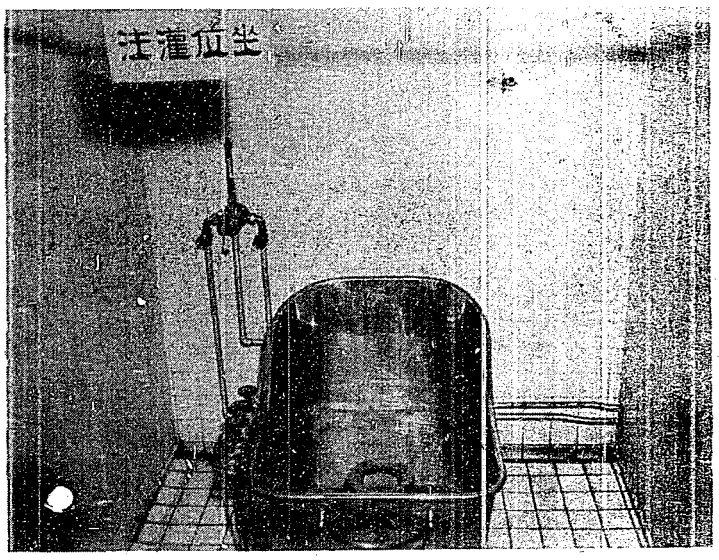


Figure 43
URESHINO NAVAL HOSPITAL PERINEAL NEEDLE SPRAY
(Sitz bath)

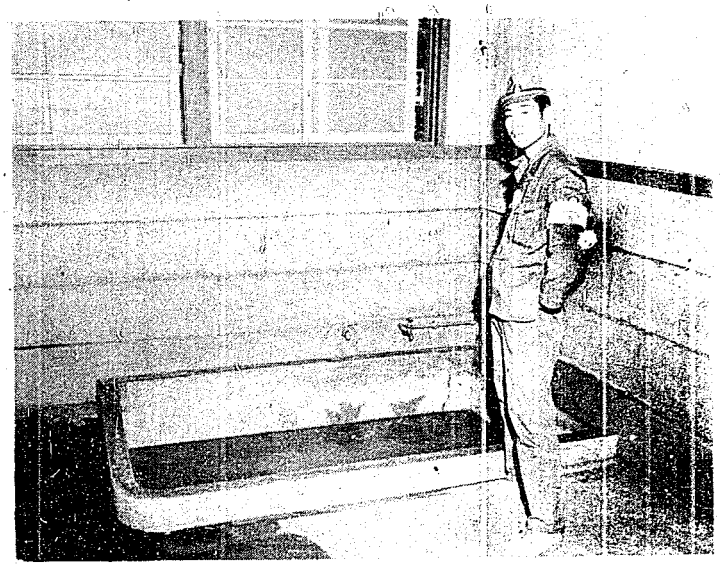


Figure 44
URESHINO NAVAL HOSPITAL ATOMIC BOMB WARD BATH

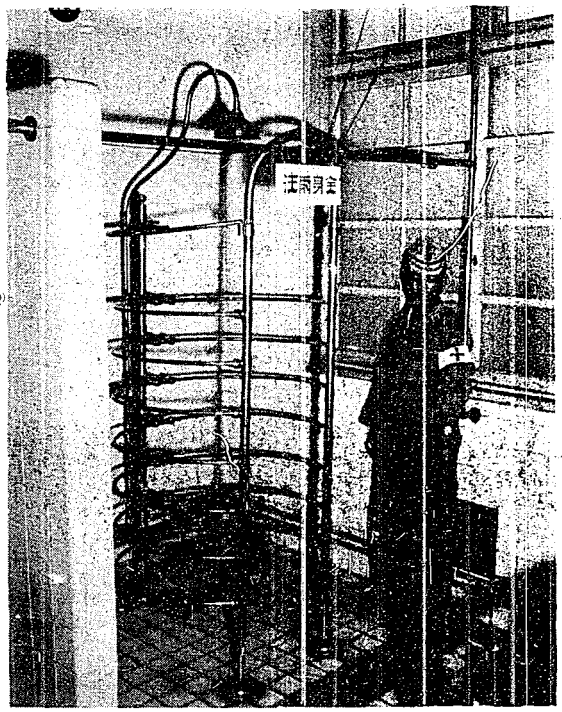


Figure 45
URESHINO NAVAL HOSPITAL PHYSIOTHERAPY AND HYDROTHERAPY NEEDLE SHOWER

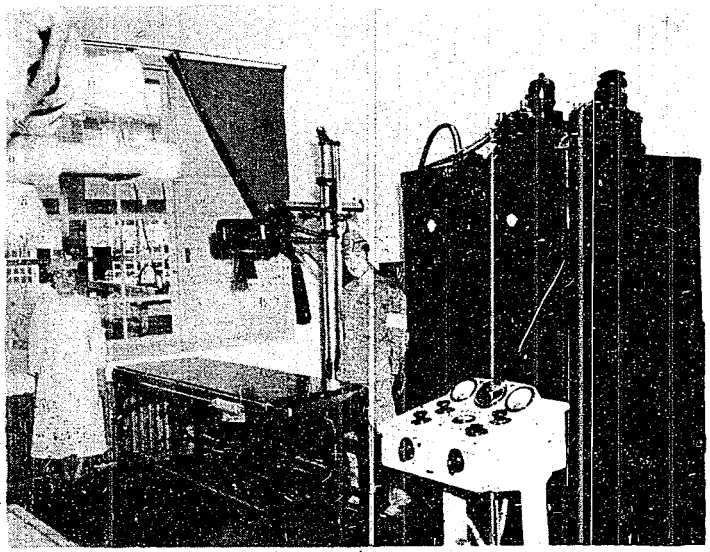


Figure 46
URESHINO NAVAL HOSPITAL PHOTO X-RAY MACHINE

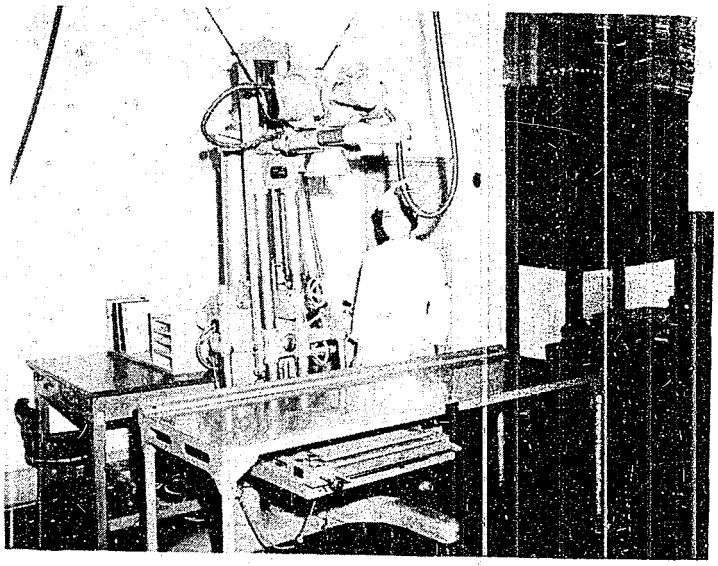


Figure 47
URESHINO NAVAL HOSPITAL PHOTO X-RAY MACHINE

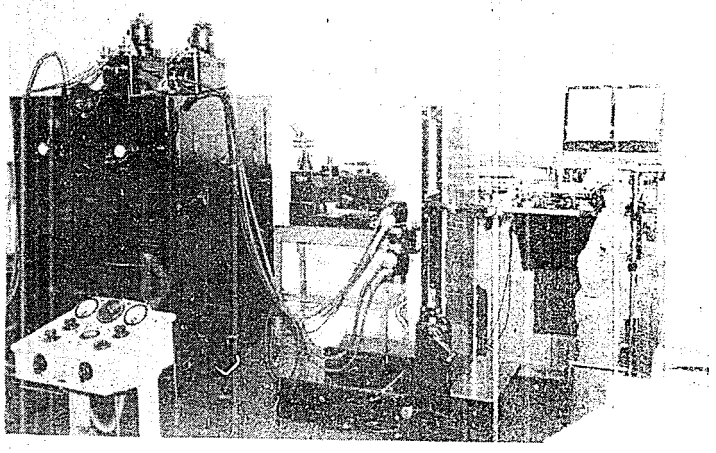


Figure 48
URESHINO NAVAL HOSPITAL CHEST X-RAY MACHINE

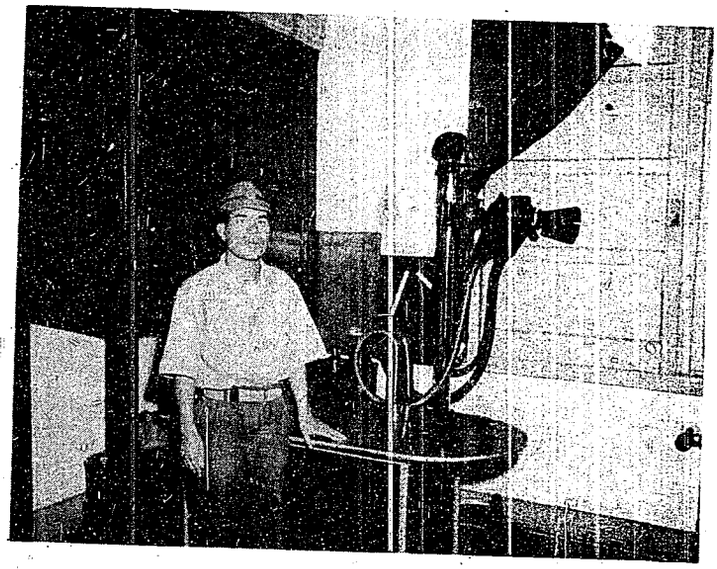


Figure 49
URESHINO NAVAL HOSPITAL PHOTO X-RAY MACHINE

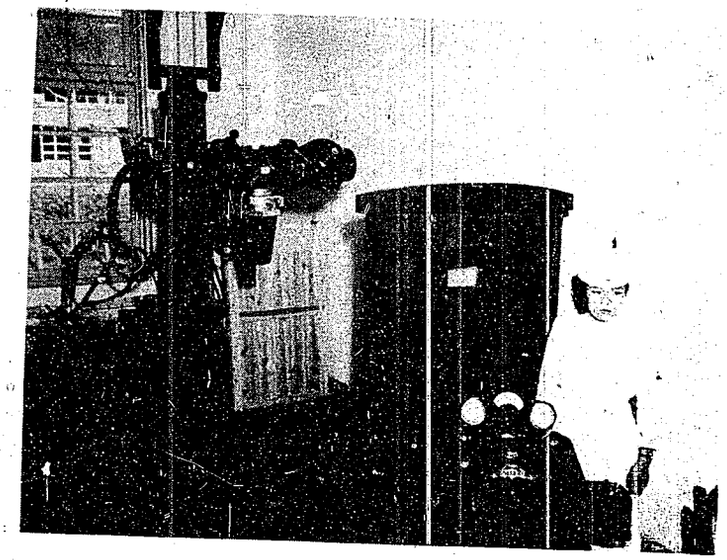


Figure 50
URESHINO NAVAL HOSPITAL X-RAY THERAPATHY MACHINE

Figure 51

URESHINO NAVAL HOSPITAL. CLOSE-UP OF X-RAY THERAPATHY MACHINE HEAD

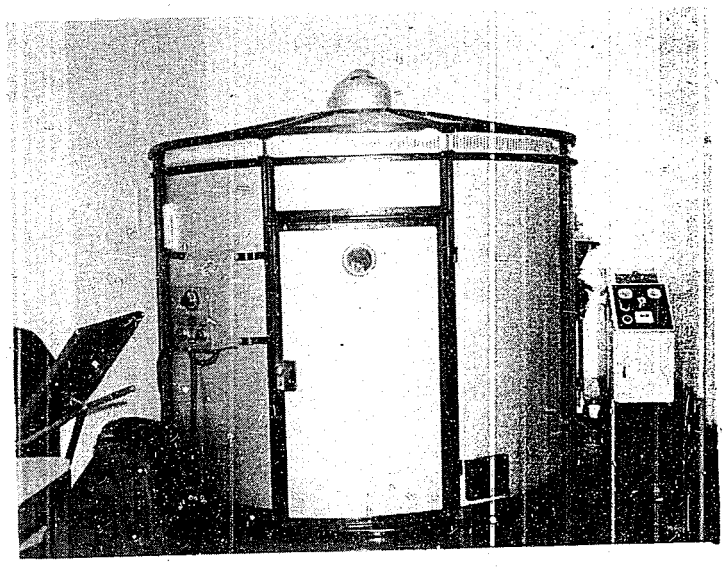


Figure 52

URESHINO NAVAL HOSPITAL PHYSIOTHERAPATHY TANK USING ULTRA-VIOLET AND INFRA-RED LIGHTS

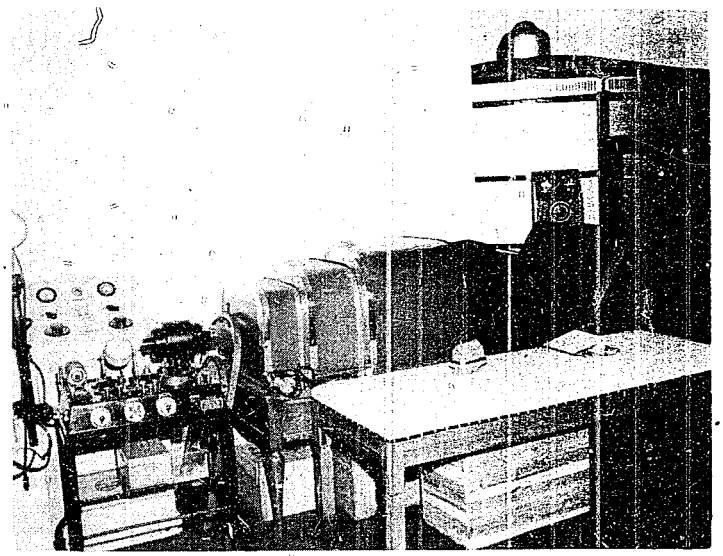


Figure 53
URESHINO NAVAL HOSPITAL PHYSIOTHERAPY ROOM.
ARTIFICIAL HEAT (BULB) MACHINE FOR EXTREMITIES - DIATHERMY

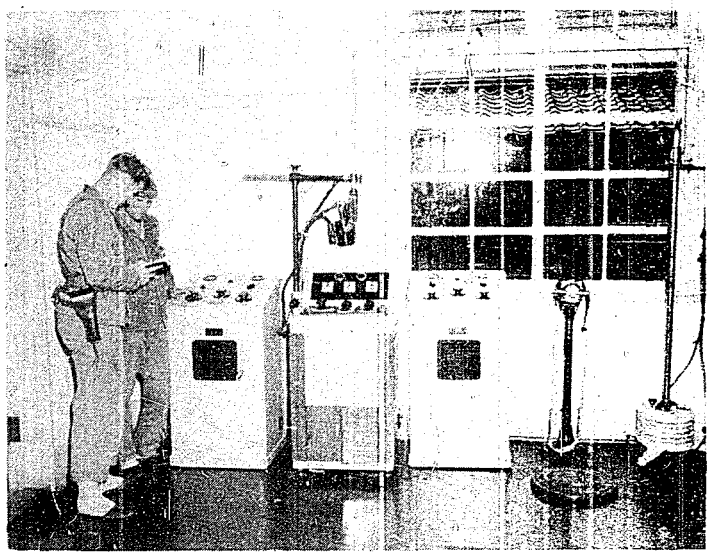


Figure 54
URESHINO NAVAL HOSPITAL DIATHERMY CONTROL BOXES

Figure 55
URESHINO NAVAL HOSPITAL EXERCISING APPARATUS - PHYSIOTHERAPY DEPT.

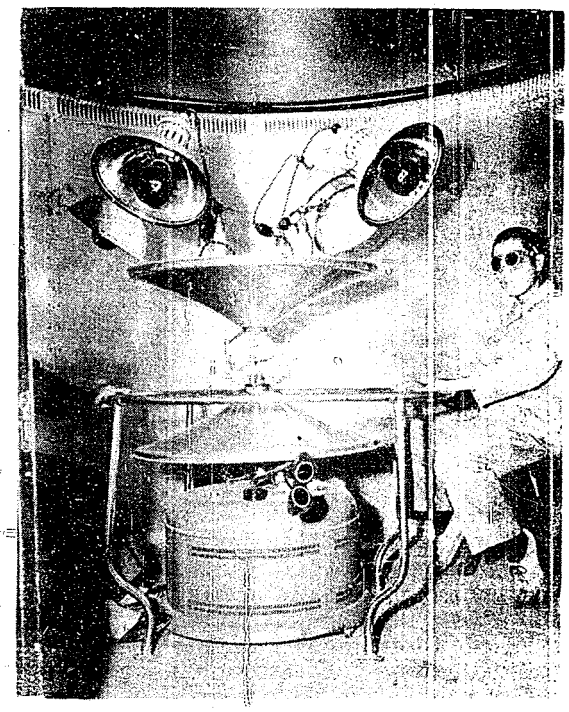


Figure 56
URESHINO NAVAL HOSPITAL - INTERIOR OF INFRA-RED, ULTRA-VIOLET CABINET - PHYSIOTHERAPY

Figure 57
URESHINO NAVAL HOSPITAL PHYSIOTHERAPY EQUIPMENT

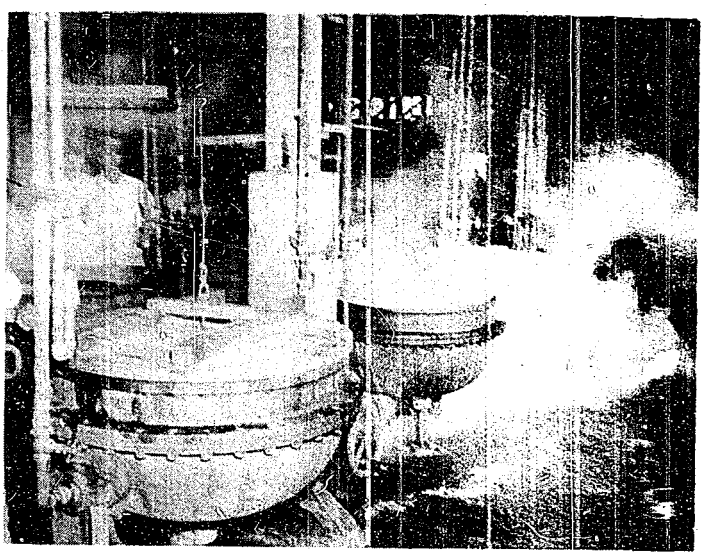


Figure 58
URESHINO NAVAL HOSPITAL COOKING POTS IN KITCHENS
(Steam operated. Notice ribs of beef in second pot.)

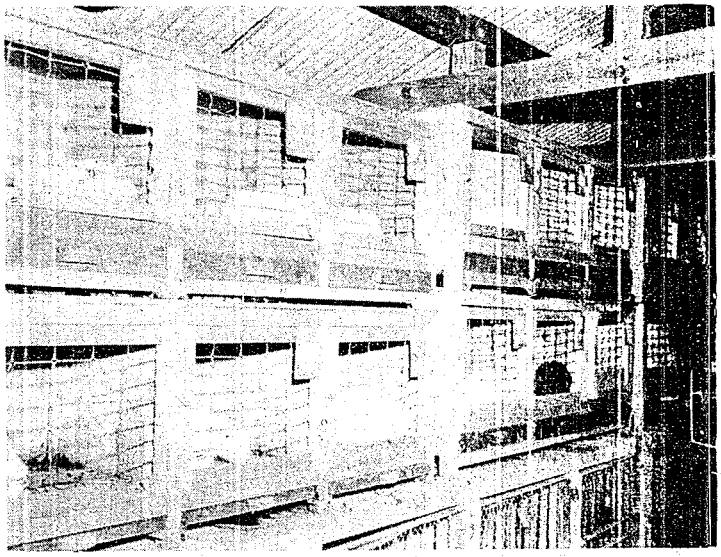


Figure 59
URESHINO NAVAL HOSPITAL LABORATORY ANIMALS USED FOR TESTS AND EXPERIMENTS

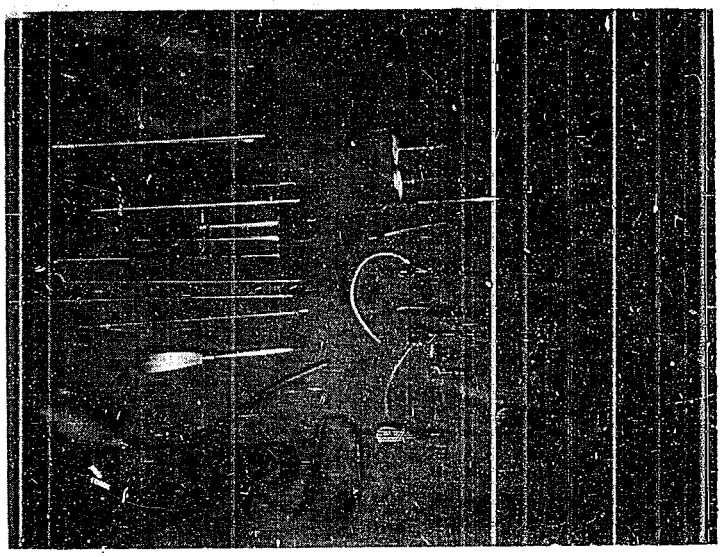


Figure 60
STANDARD TAKEI THORASCOPE AND ATTACHMENTS

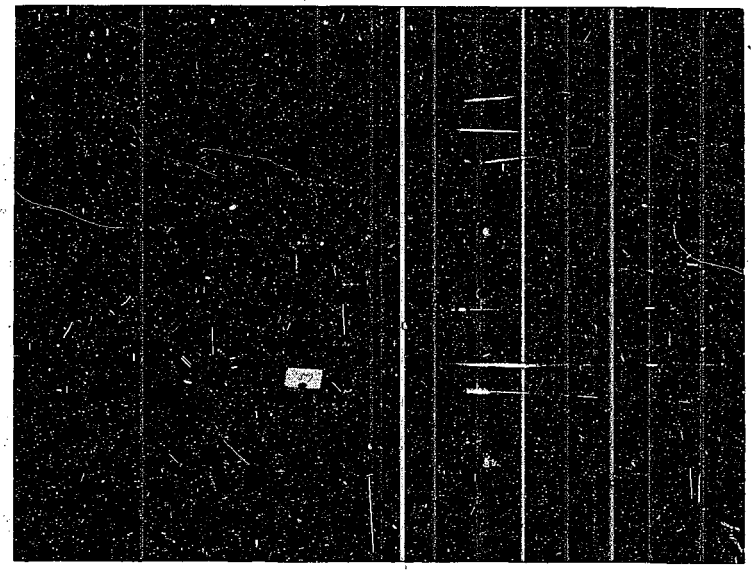


Figure 61
STANDARD TAKEI CYSTOSCOPE AND ATTACHMENTS

4. The Naval Medical School, TOKYO

The Naval Medical School and Hospital were housed in modern concrete steel reinforced structures with adequate light, heat, and ventilation. Ward and service facilities were adequate and sanitation was good.

The course of instruction at the school was divided into three groups: beginners, juniors, and specialists. Beginners and juniors were given six month courses, and specialists a two year course. In general the training had these objectives: indoctrination with the military spirit, acquisition of those scientific techniques connected with medicine, dentistry and pharmacy, and adequate training of personnel for the discharge of duties in accordance with their respective ranks.

The junior group studied matters emphasizing the responsibilities of a ship's surgeon. Because of the need for doctors, the education of the latter two groups was stopped in 1944. The beginners class was removed to TOTSUKA and reduced to three months. Research was begun as late as August 1943, with emphasis on tropical, infectious, and parasitic diseases, prevention and treatment of tuberculosis, battle wounds, aviation and submarine hygiene.

Training in elective courses was given after the completion of the beginners and advanced training. Specialized work in specified fields was then given with the object of enabling students to grasp the fundamentals of each field. The director of the school provided appropriate school facilities for study and carried out the program with the approval of the Minister of the Navy. The training period was from one to two years.

The training of advanced students had as its object the teaching of advanced medicine and techniques necessary for a naval medical officer. The prescribed curriculum over a six months period was as follows:

Basic Courses

Subject	Training Methods
Combat medical duties	Combat med. records; setting up a (combat) sickbay aboard ship; fitting out hospital ships; planning, construction & utilization of field hospitals & combat medical facilities; combat med. equip. & its use; drills in medical duties aboard ship & ashore.
Dressing wounds in the Navy	Study of combat & non-combat wounds.
Dressing wounds from special weapons	Dressing wounds from chem. warfare weapons and other special weapons.
Naval immunization	Wartime & peacetime immunization methods for the fleet, including essential microbiology & serology.
Naval pathology	The study of both common & exotic diseases in the Navy.
Naval sanitation	Sanitation in billeting, clothing, food and working conditions; advancement of health in naval forces in peace or war; fitting out warships; other sanitary facilities; keeping records of naval sick & wounded.
Special naval sanitation	Sanitation in aviation & underwater operations. (Submarines & divers.)
Naval medical chemistry	Medical chemistry concerned with billeting, clothing, and food; detection of poison gases, gas decontamination and methods of detection.
Endemic diseases in the Navy	Study of domestic and foreign endemic diseases, particularly those found in ports.
Study of field diseases	Pathology of battle wounds and diseases due to special weapons, flight, diving, etc., surgery and histology of the same.
Clinical diagnosis	Various types of testing methods required in clinical diagnosis
Practical clinical work	Methods of scientific treatment in surgery, plastic surgery, medicine, otorhinolaryngology, ophthalmology, dermatology, and genito-urology.

Supplementary Courses

Practical clinical work	Alienism and dentistry
Medical jurisprudence	
Military science	Essentials of strategy & tactics

Subject	Training Methods
Practical psychology	
Medical legislation	
Foreign language	English, German, French
Athletics	Fencing, judo, swimming
Gymnastics	
Other studies required for military duty	

The instruction of ordinary trainees aimed to foster in them the military spirit and the dignity of a naval officer. Also they were provided with the techniques and practical experience necessary for carrying out their duties as junior naval medical officers; pharmacists, or dentists. The objective was to enable them to make practical application of such techniques and experience. To these ends, the courses assigned were as follows:

ORDINARY TRAINEES WHO WERE MEDICAL OFFICERS

Basic Courses

Subject	Training Methods
Combat medical duties	
Dressing wounds in the Navy	
Dressing wounds from special weapons	
Naval immunization	Outline of subjects prescribed for advanced course trainees
Naval pathology	
Naval sanitation	
Special naval sanitation	
Naval medical chemistry	
Endemic diseases in the Navy	
Medical practice concerning inductees	Theory of inducting men, physical exams, and detection of feigned illness.
Regulations in regard to naval medical duties.	Various regulations pertaining to sanitation, regulations of importance to Navy medical officers, regulations regarding pension; outline of international laws pertaining to Red Cross convention & medical affairs.

Supplementary Courses

Subject	Training Methods
Clinical diagnosis	Outline of subjects prescribed for advanced course trainees
Practical clinical	Surgery, plastic surgery, medicine, otorhinolaryngology opthalmology, dermatology and genito-urology.
Study of engines and shipbuilding	Data regarding the construction of airplanes a planes and ships necessary to naval medicine.
Practical clinical work	Dental surgery
Military training	Outline of nacessary information pertaining to naval organization, such as uniform regulations, flag etiquette, ceremonies; ship ordnance, engineering duties etc. Close order drills (with and without arms). Boat handling.
Naval medical stores	Medical stores and their use.
Foreign languages	English, German, French.
Athletics	Fencing, judo and swimming.
Gymnastics	
Other studies required for military duty	

ORDINARY TRAINEES FOR PHARMACY CORPS OFFICERS

Basic Courses

Subject	Training Methods
Combat medical duties	Outline of courses required by pharmacy corps officer from among subjects prescribed for advance course trainees.
Naval medical chemistry	Medical chemistry related to billeting, clothing and food; outline of naval immunization.
Chemical ordnance	Outline of chemical ordnance; poison gas detection and decontamination.
Regulations relating to naval medical duties	Various regulations pertaining to sanitation; regulations of importance to pharmacy corps officers.
Naval pharmaceutical manufacturing	Special naval pharmaceutical manufacturing reagents and their use.
Naval drugs	Naval drugs; comparative pharmacopoeia.
Naval medical stores	Naval authorized medical stores and their uses.

Subject	Training Methods
Naval medical instruments	Naval authorized medical instruments and their uses.
Detection of poisons	Physical chemical analysis of principal poisons & products of metabolism.
Naval sanitation	Gist of those courses assigned medical corps officer trainees which are essential for pharmacy corps officers.
Accounting	Outline of accounting & bookkeeping methods.
Study of engines	Same as those prescribed for medical corps officer trainees.
Dressing wounds from weapons	Same as those prescribed for ordinary trainees for medical corps officers.
Military training	Same as those prescribed for ordinary trainees for medical corps officers.
Foreign language	Same as above.
Athletics	Same as above.
Gymnastics	
Other studies required for military duty	

ORDINARY TRAINEES FOR DENTAL CORPS OFFICERS

Basic Course

Subject	Training Methods
Combat medical duties	Outline of courses required by dental corps officers from among subjects prescribed for advance course trainees.
Naval combat dental wounds	Study of maxillary and mandibular fractures incurred in and out of combat.
Chemical ordnance	Outline of chemical ordnance; detection and decontamination of poison gases.
Naval immunization	Outline of subjects prescribed for advance course trainees.
Naval sanitation	Same as above.
Medical practice related to induction	Courses required by dental officers from among subjects prescribed for ordinary trainees who are medical officers.
Regulations concerning naval medical duties	Regulations and courses required by dental officers from among subjects prescribed for ordinary trainees for medical officers.
Naval medical stores (dental)	Naval dental instruments, dental supplies and drugs.

Subject	Training Methods
General medicine related to dental surgery.	Diseases with definite oral symptoms and diseases which directly affect the teeth.
Clinical dental diagnosis	Various examinations required in clinical dental diagnosis.
Practical work in clinics	Therapy, dental surgery, orthopedics.
Study of engines and shipbuilding	Same as those prescribed for ordinary trainees for medical corps officers.

Supplementary Courses

Subject	Training Methods
Military training	Same as those prescribed for ordinary trainees for medical corps officers.
Foreign language	Same as above.
Athletics	Same as above.
Gymnastics	
Other studies required for military duty.	

5. Naval Corpsman School

There were two training establishments for hospital corpsmen, one at TOTSUKA and one at KAMO (the latter was formed from the earlier school at KURE). TOTSUKA had been demobilized, but KAMO still retained a number of corpsmen and a few officers.

The curriculum for trainees of TOTSUKA was divided into ordinary, advanced, and specialized courses. Instruction for all medical trainees, on one hand was designed to promote the military spirit of the trainee, and on the other hand, to aid him in executing his duties and in acquiring skill as a medical specialist.

Instruction for ordinary corpsmen trainees was designed to give basic knowledge and skill necessary for the execution of their duties as corpsmen. The following were the prescribed six month courses.

Basic Courses

Subject	Training Methods
Anatomy & physiology	Outline of anatomy & physiology.
Pharmacology & pharmacy	Outline of the methods of manufacturing and compounding principal drugs specified by the Navy.
Hospital corps regulations	Outline of pertinent regulations; regulations on the handling and storage of medical equipment; nomenclature and requisitioning of medical equipment; regulation on physics examinations; usages of the medical profession; setting up dispensaries and field training.

Subject	Training Methods
Nursing	General introduction, nursing, massage, elementary clinical exams.
Sanitation	General introduction, outline of naval sanitation, testing methods.
First aid	General introduction, wounds which require require first aid, hemostasis, disinfection, gas victims
Disinfection	General introduction, methods of disinfection & application of methods..
Dressing	General introduction, dressing, splints.
Transporting invalids	Carrying invalids and use of equipment for carrying.
Assisting at surgery	General outline, methods of asepsis & antisepsis, preparation for operating, anesthesis, assisting at operations, post operational treatment.
Assisting at dentistry	General outline, simple dental technique.
Practice nursing	Rotational duty in wards, operating room, physiotherapy room, dental office, prescription lab., testing lab., pathological lab.; disinfecting, cleansing techniques.

Supplementary Course.

Subject	Training Methods
Diagnostic terms	Romanization of commonly used technical terms.
Elementary education	Reading, arithmetic, composition, abacus.
Firearms	Manual of arms, drill;in handling arms, rifle and pistol firing.
Signalling	Semaphore.
Military arts	Fencing, judo, swimming, bayonet drill.
Gymnastics	

The training of the advanced corpsmen was closely coordinated with that of ordinary corpsmen. Its object was to enable trainees to acquire knowledge and techniques necessary for carrying out their principal assigned duties. To these ends, the following courses were given:

Regular Course

Subject	Training Methods
Naval medical duties	Various regs. pertaining to duties; procedure in storage, maintenance, requisitioning & handling of med. supplies & equipment; important aspects of duties; establishment of dispensaries; and field training.

Subject	Training Methods
The essence of naval medicine	Sanitation pertaining to quarters, clothing, food, and other special duties (flight, underwater operations, submarine & land operations, etc.); and other matters necessarily related to sanitation.
Outline of diseases & wounds in the Navy	General introduction, infectious diseases lacerations, combat wounds, gas injuries, tubercular cases, common diseases & other principal diseases.
Essentials of naval immunology	General introduction, regs. pertaining to general immunology, epidemology, endemology.
Pathological tests	General introduction, bacteriological & blood testing methods, clinical testing methods.
Rise of physiotherapeutic equipment	Essentials of electricity, use of X-ray equipment, and of other physiotherapeutic apparatus.
Testing methods used in naval sanitation	General introduction, fundamentals of chemical methods of compounding reagents; qualitative & quantitative analysis; rotational practice in sanitation & pathological testing and in disinfection.
Practice nursing	Rotational practice in wards, operating room, physiotherapy room, dental office pharmacy, sanitation testing, pathological testing, and disinfection.

Supplementary Courses

Subject	Training Methods
Diagnostic terms	Commonly used terminology.
Elementary	Reading, mathematics (beginning algebra) composition, abacus.
Foreign languages	German or beginning English.
Handling firearms	Manual of arms, drill with arms, firing rifles and pistols.
Signalling	Semaphore.
Military arts	Fencing, judo, swimming, bayonet drill.
Gymnastics	

The education of trainees in special fields and in sanitation techniques was given in close co-ordination with that of the advanced medical corps trainees to enable the former to acquire the techniques necessary for carrying out the principal duties assigned them in the field, pathological tests, physiotherapy, sanitation tests, and the handling of medical supplies. The prescribed courses were as follows:

a. Pathological Testing Section

Basic Course

Subject	Training Methods
Naval immunology	Training methods, fundamentals of bacteriology, serology, parasitology.
Endemology in the navy	General outline of domestic & foreign endemic diseases.
Pathological testing	Bacteriological & blood testing, testing pathological organization.
Prevention of infectious diseases	Various regulations pertaining to prevention of infectious diseases, preventive procedures.

Supplementary Arts

Subject	Training Methods
Military arts	Fencing, judo, swimming, bayonet drill.
Gymnastics	

b. Physiodiagnosis and Physiotherapy

Basic Course

Subject	Training Method
Medical electricity	Theory of medical electricity, training period 6 months.
X-ray	Essentials of X-ray, handling X-ray equipment.
Physiotherapy	Fundamentals of therapy, parabolic ray water therapy, heat therapy.

Supplementary Course

Subject	Training Method
Military arts	Fencing, judo, swimming, bayonet drill.
Gymnastics	

6. First Naval Technical Research Institute

The following material is based upon a report, "Answers to Questionnaire on Experimental Psychological Research", prepared at the First Naval Technical Research Institute, TOKYO, by H. KANEKO, who was the director of the psychological research experiments.

a. Psychological Studies of Auditory Function

(1) A comparison of screw noises was made by the use of phonograph records. The set comprised twelve records with the following simulations:

(a) The standard noises of a submarine engine, piston engine, diesel engine, and a coal-fed engine which permitted comparison of noises.
(b) Gradual instruction in how to judge the specific noise types when masked with various noises.
(c) Separation of specific submarine noises masked by two or three noises.

(2) Sound localization studies on the spacial separation of two noises differing in direction (by free hearing). Results: (experimentally) two similar noises from different directions fuse into one noise whose direction is the resultant vector of the two. When the noise type of one is changed, the noises separate into two components. Three tests were used as follows:

(a) According to the degree of similarity between two noises, and to the degree of distinction achieved by listening, the directions of the two noises gradually differentiate themselves until their actual directions can be determined.
(b) If a man has good hearing confusing noises have little affect on his localization and separation of noises. Test (see Fig. 62 and 63): one noise is fixed at 30° from the trainee; the other noise, such as an object noise, is moved toward the center of the trainee's face and he is expected to locate the center.
(c) The confusing noise is fixed in the center before the trainee. The object noise is then moved towards the center, the trainee being expected to locate the accurate center. (If this could be done, the principle would be applied to the aero-audiophone.)

(3) Aptitude tests for the hydrophone operator

(a) Trial memory - Record #PE-434 (not found)
(b) Masked noises - Record #PE-397 (not found)
(c) I.Q. test - same as for all volunteers for the armed forces (see instruction books and examination papers listed in Enclosure D). Results of examinations given have been lost.

b. Studies on the coordinate motion of both hands. (See tool figures in Fig. 64.)

c. Training methods for improvement of night vision (Fig. 65 and 66).

(1) Students sit before the bright adaptation plate (B A P) and look at its white surface (illuminated by two 250 watt lamps) for five minutes. Then the lights are put out. The first exercise is to learn how the subjective auto movement characteristics of a faint object occur in the dark. A faint light spot on the dark adaptation plate (DAP) (made by using a rod tipped with a faint light spot) is lighted for 1-3 seconds, and then after 1-3 seconds darkness, is lit again. Each student must determine the relative positions of the two (the latter with respect to the former: whether in the same position, to the right or to the left). After the student's answer is given, the correct position is given. This training continues for 10 minutes. Then the faint light is lit for (0.05) lux on the (DAP). The student must determine the kind of ship's figure placed on the DAP: the upper figure is easy, the lower one takes a longer adaptation time. The student's time for distinguishing is

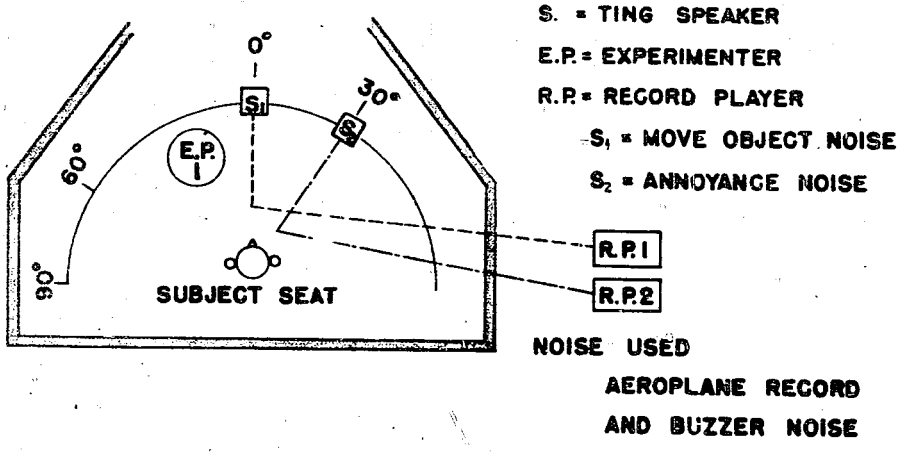


Figure. 62
EXPERIMENT ON THE LOCALIZATION OF TWO NOISES

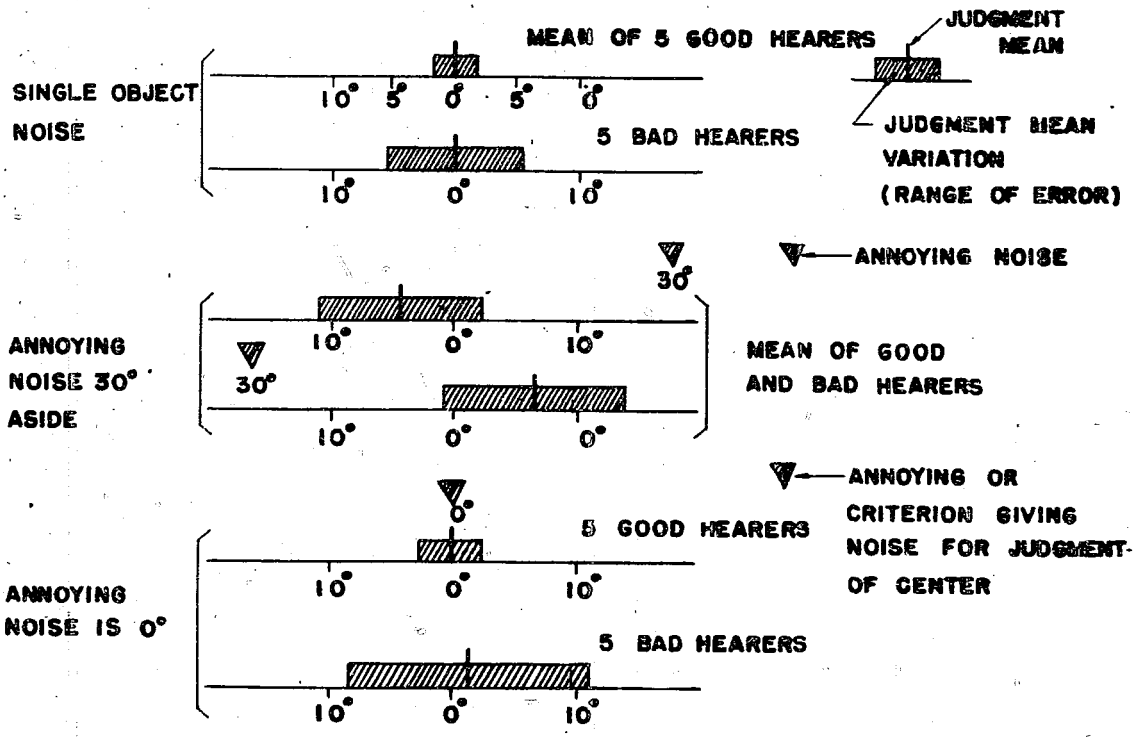


Figure 63
SKETCH OF RESULT

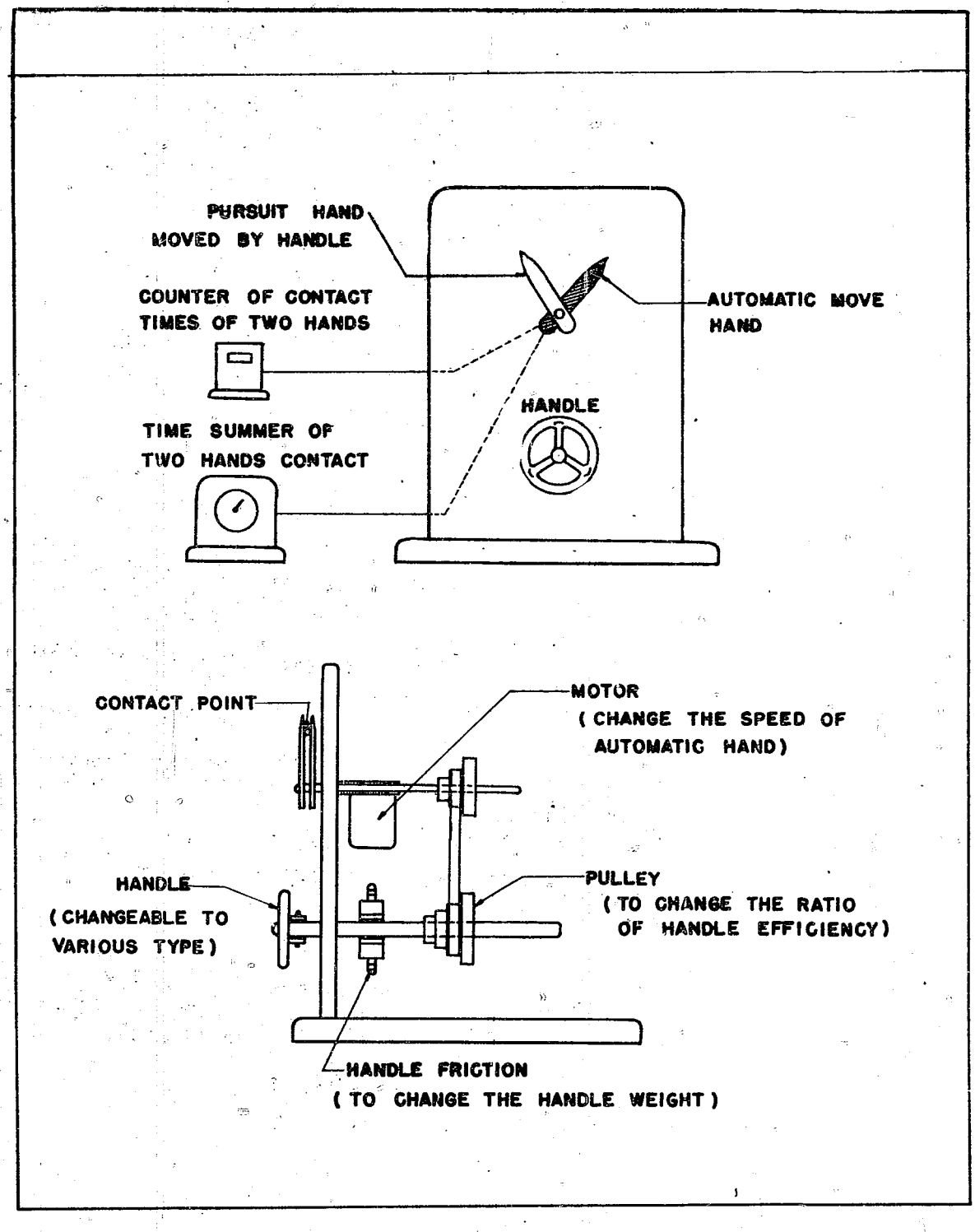


Figure 64
SKETCH OF ARRANGEMENT FOR HANDLE EXPERIMENT

TRAINING OF NIGHT VISION

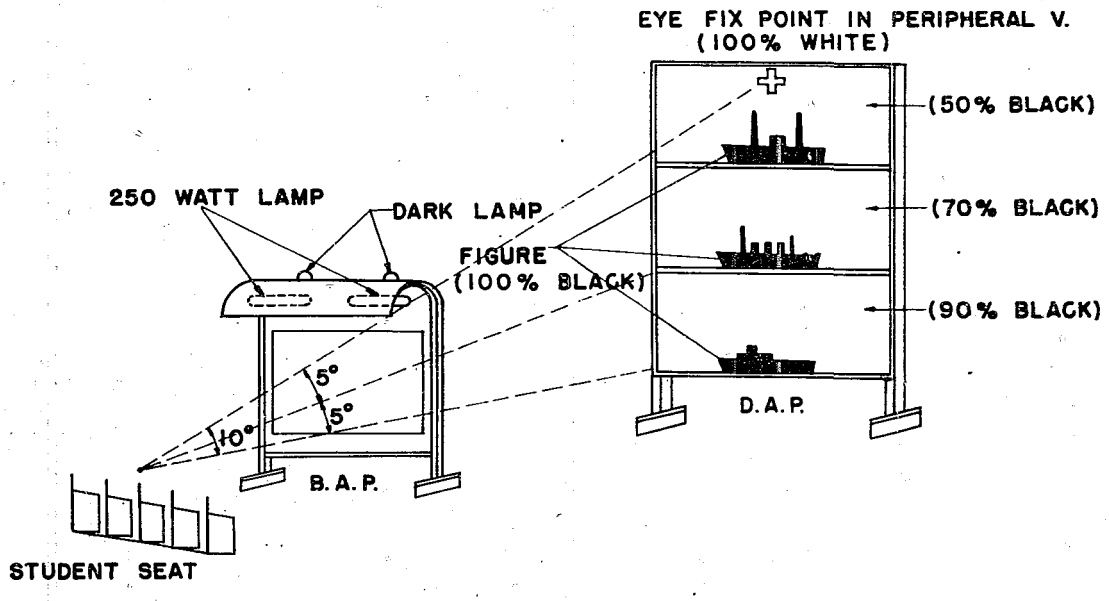


Figure 65
SKETCH OF ARRANGEMENT

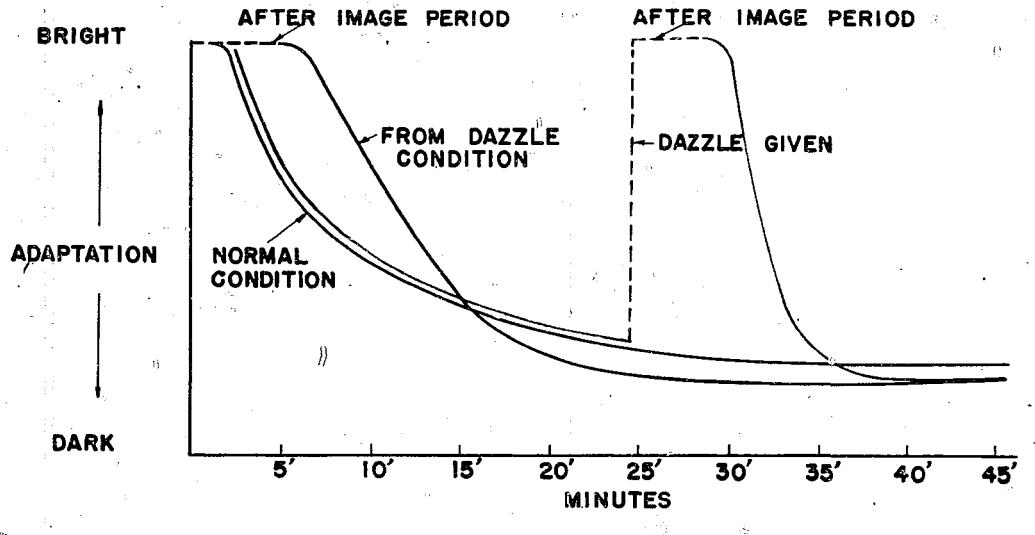


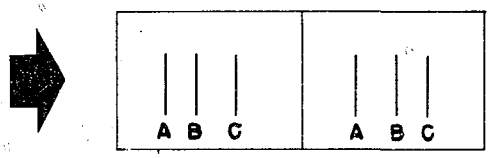
Figure 66
DARK ADAPTATION PROGRESS CURVE

examined and recorded for three trials. After five minutes, the light is diminished to 0.01 lux to determine the student's ability to distinguish with peripheral vision the configuration of the ship. The eye fixation point is determined by the instructor. The ship's figure is changed several times. This training continues about 10 minutes, then the B A P is lit, the students are dazzled for two minutes, and training with 0.01 lux is begun again immediately. This bright and dark adaptation is repeated 2-3 times and comprises one training period. Both the naked eye and the eye covered with glass are trained by this method. For peripheral vision training, field training on a dark night is also used.

(2) Results

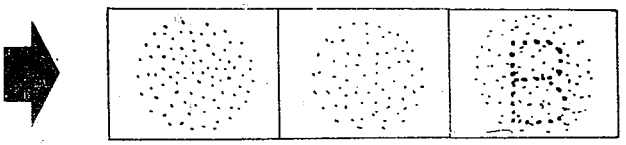
(a) The dark adaptation time of the eye can be hastened very effectively by the above training method. (1/3 improved in 15 days training.)
(b) The degree of adaptation is greater when adapting from the dazzled eye condition, than from the normal condition.
(c) In peripheral vision, depending on the degree of darkness, the most effective peripheral angle is a large one; in 0.01 lux, the most effective angle does not exceed 10 degrees. It was found that beyond 10 degrees, the eye lost the ability to distinguish shapes.
(d) Sterescopic vision tests: (Fig. 67-71 inclusive). All test data were sent to the Yokosuka Artillery School. They comprised nine stimulus figure plates divided into three groups and graded accordingly.
(1) First group (those who could not fuse these figures were rejected).
(a) A scene with natural perspective
(b) Single three stripe figures

Figure 67
STEREOSCOPIC VISION TEST



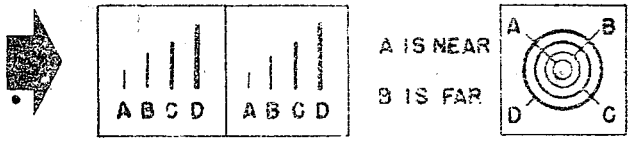
(c) Single geometric figure
(2) Middle group (depth perceptions which contradict a natural phenomena)
(a) After stereo-fusion, a letter is formed

Figure 68
STEREOSCOPIC VISION TEST



(b) 4 stripe figure: small and faint when near; long and thick when far.

Figure 69
STEREOSCOPIC VISION TEST



(c) Same as (b) in circular form

(3) Advanced group (the subject who fuses these figures well is considered good material for stereoscopic range-finder operator). These have strong contradictions in perspective structure and in parallax depth.

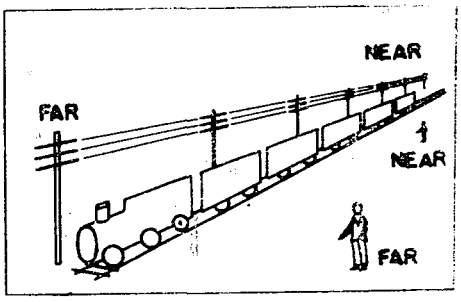


Figure 70
STEREOSCOPIC VISION TEST

(4) Conclusions: The aptitude for being a stereoscopic range-finder operator is dependent on the individual perception type "which is not influenced easily in his depth judgment by the experience factors such as size, brightness, or perspective structure of the sight but is dependent only on the parallax of the eyes".

d. Aptitude tests for naval factory workers (see tests for 1941-44 and instruction book of 1944, NavTechJap Documents No. ND21-7511.23 to .27 and ND21-7511.18).

e. Character examination for "accident proneness" (no conclusion yet reached):

(1) See test Paper (factory workers).

(2) Doubled work examination (distribution by attention) while occupied with "serial addition work", the subject must count the bell strokes (8-15 in one minute). Criteria decided by working curve and error count.

(3) Careful behaviour test. Fill a teacup and carry it to the examiner (examiner judges by observation).

(4) Simple reaction times test.

f. Analysis of character by reference to vocabulary use. Vocabulary relating to emotions - 400 words culled from 1000. Relation to temperament types at present only in a theoretical stage. (See Enclosure F.)

g. Photos for Job Specification Tests (NavTechJap Document No. ND21-7511.21).

h. Life guidance problems - not known.

i. Aptitude tests for specialized seamen.

(1) Instruction books of 1939, 41, and 44 used for general recruits (NavTechJap Document No. ND21-7521.3, 7521.4, 7521.6).

(2) Aptitude instruction books and tests for radio telegram, hydrophone and signal operators and the naval band. (NavTechJap Document No. ND21-7511.12, 7511.13, 7511.14, 7511.15).

(3) Instruction books for aptitude test for Naval Artillery School Cadets (NavTechJap Document No. ND21-7511.22).

Part III

STANDARDS OF PRACTICE OF THE IMPERIAL JAPANESE NAVY MEDICAL CORPS

Owing to food rationing and the lack of adequate supplies of necessary imports, the quantity, quality, and appeal of the hospital diets was poor even by Japanese standards. Vitamin products were necessary to supplement the ration, and every hospital was supplementing its ration from gardens tended by the staff and patients, in order to supply more than the allowed 1200 cal. per person per day. Proteins, fats, and salts were particularly lacking.
Pharmaceuticals showed a wide range, from locally produced herbs to a variety of proprietary drugs. The former were used for the preparation of infusions, extracts, and tinctures due to the scarcity of drugs, while the latter showed the recent German influence markedly, both in formulary and nomenclature. Both the KURE Drug Factory and the Central Medical Supply Depot in Meguro-Ku, TOKYO were more occupied with capsule and tablet packaging and sealing than with the actual preparation of drugs. The drugs were purchased in bulk from the chemical houses and put up for distribution at these depots.

Prescription therapeusis was followed to a very great degree, empiric and symptomatic treatment playing a major role. Specific treatment was recognized and followed where possible (if the drugs were available). Injection therapy was a favorite mode of treatment, and in therapy was almost always intra-arterial. This was an accepted and directed practice in the Naval Medical Corps, springing from research performed in TOKYO at the CHIBA University Medical School. It was claimed that a greater tissue concentration of the drug was achieved, while using a smaller dose than required to reach and maintain the adequate blood levels necessary to produce the same effect. In this connection it may be stated that a more homeopathic dose tendency existed in all drug therapeusis. Sulfa blood level determinations were not made at any naval hospital owing to a lack of equipment, time, and trained personnel. The sulfa drug best known and used was sulfa pyridine. The specific value of the sulfa drugs against the various micro-organisms was not adequately realized, except in the use of sulfa-guanadine.

The level of theoretical and instructional technique was surgically adequate, but far above the level of actual practice. For surgery, the following was recommended:

1. Scrub with soap and water for three minutes.
2. Rinse.
3. Scrub for another three minutes.
4. Wipe with dry gauze.
5. Wipe from hands to elbows with alcohol sponge.
6. Don gown and gloves (rubber).
7. In infected operative cases or when the gown becomes soiled, it should be changed between operations. Gloves are always to be changed with a scrub and alcohol rinse between cases.
8. The nurse shall do likewise.
9. Freshly sterilized instruments, tables and drapes shall be used for each case.
10. The skin shall be prepared with iodine (or cresol solution) which shall be removed with alcohol or sodium hypochlorite.

In actual practice, in the various operating rooms visited, the following procedures were observed:

1. A two to four minute scrub, ordinary soap.
2. Rinse.
3. Dip in 0.1% mercuric Hydrocyanide aqueous solution.
4. Wipe dry.
5. Don gown and white coarse cotton gloves, leaving two to three inches of bare skin between sleeve and wrist exposed.
6. Gown not changed between five consecutive operative cases, including osteomeglites, open reduction, and forearm amputation.
7. Nurse did not change either gown or gloves during the morning.
8. Instruments for consecutive removal of sequestra were wiped, dipped in mercuric hydrocyanide solution and re-used.
9. Instrument table covers and basin covers were not changed.
10. Surgeon removed gloves, took prepared spinal anaesthia syringe from hand of unsterile nurse, gave spinal anaesthesia, donned fresh gloves, and sat down to operate again. Caps and masks were worn. Floors were flooded periodically to wash blood and debris off into scuppers along the wall during the course of surgery.

All patients physically able, walked to the table in a loin cloth and after being operated upon got up and walked back to their own beds.

Nurses were more ward helpers and maids than nurses. Scrub nurses were few. Sponge counts were kept during operations, and all medications and doses of anaesthesia were recorded.

Local anaesthesia nerve blocks (plexus and paravertebral) and spinals were used exclusively. No blood pressure or pulse records were kept during surgery. Drugs employed were novocaine and various derivatives.

Routine blood counts and sedimentation rates were taken and urinalyses and bacteriological smears and cultures were prepared. Various diagnostic serological tests for lues were made, such as the "Murata" and "Ide". No blood chemistries were done during the war and bacteriology was of the simplest, for diagnosis of contagious diseases culture media was limited as to types and quantity. No research could be carried out owing to the shortage of technicians, the pressure of routine work and the lack of equipment.

A few hospital laboratories prepared pathological slides. Autopsies were few.

Equipment was barely adequate; glassware, centrifuges, bunsen burners, etc., were all old and shabby. Microscopes, however, were excellent.

On the whole the amounts of intravenous fluids given were small. No special shock therapy had been developed. The use of opiates to relieve pain and to prevent shock was not standard precedure. An infusion of 250cc was considered adequate, and the method was either by direct syringe injection or by a home-made glass two-way syringe from solution bottle to patient. There was "no time" for slow continuous-drip techniques, nor was there equipment therefor.

Whole blood transfusions were given "in extremis" only, for hemorrhage or "very grave conditions"; and cardiac stimulants, such as the camphor derivatives were freely used.

From these observations the relatively retarded standards of practice are apparent.

Intravenous fluids were prepared in the hospitals and consisted of:

1. Saline solution - normal 250cc
2. Ringers Locke's - solution 250cc
3. 25% glucose (50cc)
4. Plasma - produced in limited quantities at the Central Medical Supply Depot where the listed biologicals were made also. The maximum plasma production was 10 vials daily (samples have been forwarded to the United States).
5. Vaccines:
   a. Typhoid - the usual triple typhoid.
   b. Diptheria
   c. Dysentery (Consisting of shiga, Flexner, and the "Y" strain)
   d. Meningitis epidemic.
   e. Cholera
6. Serums: Tetanus and anti-gas gangrene serum were purchased from the Institute for Infectious Diseases in TOKYO.

ENCLOSURE (A)

INVENTORY, JAPANESE NAVAL MEDICAL COLLEGE
Tsukiji, Kyobashi Ku, TOKYO

(Including Hospital at Ohara Cho, Meguro Ku, TOKYO)

BUILDINGS

Site: Ohara Cho, Meguro Ku

DIVISION	BUILDING AREA (Tsubo)	TOTAL AREA (Tsubo)	REMARKS
Infirmary I	234.00	460.00	Wood, two story.
Infirmary II	234.00	454.00	Wood, two story.
Infirmary III	235.75	468.85	Wood, two story.
Boarding house	117.00	235.00	Wood, two story.
Cooking room	110.00		Wood, one story.
Bath room	3.75		Wood, one story.
Food storehouse I	16.25		Wood, one story.
Food storehouse II	22.50		Wood, one story.
Medical storehouse	70.00		Wood, one story.
Impurities storehouse	50.00		Wood, one story.
Rest room	17.50		Wood, one story.
Recreation room	20.00		
Guard house	5.25		
Passage	166.75		

Capacity.....300 beds
Lighting.....Electric
Water.....Aqueduct, Well #2
Water closet...Purification system

GENERAL EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Japanese typewriters	2	Pumps	1
Beds*	356	Radio receivers	18
Bedding	732	Covers	943
Blankets	1,728	Shirts	366
Bicycles	9	Drawers	246
Stoves	38	Clothes	1,226
Clocks**	31	Bed sheets	192
Tents	2	Tables	151
		Chairs	305

SURGICAL CLINIC EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
General surgical apparatus	1	Electric operating apparatus	1
Eye-operating apparatus	1	Apparatus to be used for fracture of lower extremity***	2

*Wood
**Electric
***Smith-Peterson and Osaga

ENCLOSURE (A), continued

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Lumbar-vertebra operating apparatus	1	Operating tables (of simple design)	4
Brain-operating apparatus	1	JINNAKA operating tables	1
Apparatus for abdominal operation	1	Charitic lamps (for operating room)	1
Operating tables	1	Romano-scopes	1

OTORHINOLARYNGOLOGICAL EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Kneaders for drum-membrane	2	Instruments for operation	1(set)
Otorhinolaryngological specimen	1	Can for dirt	1
Closet for instruments	1	Barkhausen's apparatus to measure noise	1
Tables	1	Sturuyeken's Monochord	1
Transportable lamp	1	Alternating current motor	1
Table for operating machine	1	Rolling chair	1
Apparatus for hot-air bath	1	Goniometor	1
Microscope	1	File cabinets	1
Schimmerbusch disinfector	1	Chair for treatment	1
Instruments for diagnosis	1(set)	Gauze pans	3

CHEMISTRY LABORATORY EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Centrifugal settling tool	2	Carbonic acid gas quantative apparatus	1
Chemistry balance	3	Ozone generator	1
Rotary pump	1	Orsat meter (gas analytical apparatus)	2
Electric dryers	3	High compress filter	1
Hydrostatic balance	1	Hydrogen Ion Density Measuring Apparatus	1
Dust tester	1	Vitamin "B" tester	1
Butter meter	1	Catalysis reduction apparatus	
Arsenic distiller	1	Elementary sample	1
Electric oven	1	Organic compound sample	1
Carbonic Acid Gas Quantitative Apparatus of ISHIZAKA Method	1	High frequency treatment apparatus	1
Food testers	5		
Poison tester	1		
Water tester	2		
Air tester	1		

X-RAY EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Fixed X-Ray apparatus	4	Lysholm-blende	2
Bucky stand	1	Dreliblende	1
Leader's statin for photograph of X-Ray	1	Kimograph	1
		Schaukasten	5

ENCLOSURE (A), continued

DESCRIPTION	NUMBER
Protective aprons	3
Protective gloves	4
Protective screens	2
Protective goggles	11
Apparatus for indirect photograph	2
Show cases for indirect photograph	2
Film cassette	30
Film holders	15
Film hangers	30
Case for dry plate	2
Enlarger	1
Quicksilver lamp	2

DESCRIPTION	NUMBER
Infra red lamp	1
Ultra violet lamp therapy	4
Apparatus for radio thermie	3
Galvano-farade apparatus	1
Galvano apparatus	1
Heater	1
Stereoscope	1
Projectors	2
Cine projector	2
Cine camera	1
Cameras	3
Voltmeter	1
Safe	1
Portable apparatus for X-ray	4

RADIUM

DESCRIPTION	AMOUNT	RADIUM-ELEMENT
20 mg. platinum	1.	20.31 mg.
10 mg. platinum	7.	71.11 mg.
1 mg. platinum	4.	3.83 mg.
5 mg. platinum	2.	9.94 mg.
5 mg. platinum	2.	9.86 mg.
Total	16.	115.05 mg.

DESCRIPTION	AMOUNT	RADIUM-BROM.
3 mg. platinum needle	8.	45.08 mg.
1 mg. platinum cell	6.	11.12 mg.
Total	14.	56.20 mg.

Grand Total — 30 Radium Element-115.05 mg.
Brom. Radium - 11.12 mg.

DENTAL EQUIPMENT

DESCRIPTION	NUMBER
Dental chairs	5
Dental units	4
X-Ray apparatus	1
Dental cabinets	5
Air-compressors	3
Instrument desks	25

DESCRIPTION	NUMBER
Tooth extraction instruments	1 set
Operation instruments	1 set
Instrument for dental plate and crown	1

OPHTHALMOLOGIC DEPARTMENT EQUIPMENT

DESCRIPTION	NUMBER
Lens-meter	1
Large magnet	1
Campimeter	1

DESCRIPTION	NUMBER
Operating table	1
Electric skiascope	1
Operating instruments	1 set

ENCLOSURE (A), continued

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Testing instruments	1 set	Anomaroscope	1
Lux-meter (Macbeth)	1		

PATHOLOGY EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Microscopes	38	Microtome	2
Illuminating apparatus for microscope	56	Incubator	1
		CO_2-vessel	1

DERMATO-UROLOGICAL EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Electric centrifugator	1	Cystoscopia for katheterism	3
Table for operating machines	1	Cystoscopia for radium treatment	1
Microscope	1	Apparatus to cut urethra from inside	1
Cauterizing apparatus for bicarbonate	1	Cystoscopia to destroy bladder stone	1
Mercury arc lamp	1	Photographing apparatus for bladder	1
Table for washing urethra	1	Urethroscopia	1
Table for washing bladder	1		
Transformer for cystoscopia	1		
Cystoscopia	4		

HYGIENE EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Electric desiccator	1	Chemical balance	1
Psychological text book	1	Balance	1
Ventilating desiccator	1	Gas analyzer (Of no use)	1
Torsion balance	1	Transformer	1
Instrument for measuring back muscle force	3	Switchboard	1
Colorimeter	2	Hydrometer	1
Instrument for measuring length of body	1	Instrument for measuring carbon dioxide	1
Rotary pump	1	Japanese typewriter	1
Centrifugal precipitator	2	Copy board	1
		Cooler tube	1

GALLEY EQUIPMENT

DESCRIPTION	NUMBER	DESCRIPTION	NUMBER
Steam kettles	5	Disinfecting apparatus for tableware	1
Cooking stoves	2	Cooking machine (Universal)	1
Fish baker	1	Icebox	1

ENCLOSURE (A), continued

EQUIPMENT TRANSPORTED TO MATSUMOTO CITY

BACTERIOLOGICAL EQUIPMENT

DESCRIPTION	NUMBER
Microscopes	15
Incubators	5
Microtome	1
Centrifugal machine	2
Disinfecting machine*	2
Disinfecting machine (dry)	1
Typewriter (English letters)	1
Typewriter (Japanese)	1
Miscellaneous chemical equipment made of glass	

PATHOLOGICAL LABORATORY EQUIPMENT

DESCRIPTION	NUMBER
Microscopes	15
Micro-projection apparatus	1
Micro-photographic apparatus	1

HYGIENE EQUIPMENT

DESCRIPTION	NUMBER
Centrifugal precipitator	7
Ventilating desiccator	1
Electric desiccator	2
Pulflid's photometer**	1

*High pressure
**Of no use

ENCLOSURE (B)

LIST OF MEDICAL STOCKS

Typical Naval Hospital Inventory as Taken From the Medical Bureau of Yokosuka Naval Hospital

NavTechJap Document No. ND21-7520

(Translated Into English by the Hospital Authorities.)

21 Sept. 1945

DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY
Hand dynamometer	1	Crucible forceps	70
Tongue presser	2,500	Forceps for pulling teeth	157
Irrigator	2	Sequestrum forceps	8
Coat (suit)	20	Bullet forceps	5
Spirometer	5	Stomach forceps	24
Metal katheter	32	Caecum forceps	4
Eustachian tube katheter	120	Placenta forceps	4
Rubber katheter	1,080	Obstetrics forceps	1
No. 2 ophthalmological tool	5	Amputating forceps	1
Gauze forceps	8	Womb forceps	1
Hemostasis forceps	200	Tympanic bone forceps	1
Binding string forceps	200	Blind tract forceps	2
Larynx forceps	50	Peritoneum forceps	8
Chisel shaped forceps	3	Plastic operation forceps	13
Hemorrhoids forceps	8	Sterilizer for apparatus	7
Kidney forceps	1	Rectal speculum	200
Forceps for surgical treatment	20	Nasal speculum	15
Bullet picker	8	Rectum speculum	2
Intestine forceps	8	Reflex mirror	60
Wheat-grain forceps	130	Ear speculum	110
Lion forceps	27	Sharp hook	179
Machinery forceps	6	Binding hook	150
Sharp-spoon typed forceps	120	Round hook	85
Ozocna forceps	70	Glass spool	5
Larynx spectrum	8,000	Bowl for sterilization	2
Womb spectrum	1	Eye-washer bowl	2
Ophthalmoscope	4	Cutting straight knife	515
Portable lamp	428	Cutting curve knife	381
Kettle	157	Curbable knife	3
Spatula for plaster	300	Turbinate knife	30
Ice pillow	12	Cutting peritoneum knife	5
Round rubber seat	78	Corkscrew	240
Metal spoon	845	Clinical thermometer	2,560
Buffalo spoon	615	Plexor	200
Scissors for various business	4	Spool	185
Stop bleeding belt	110	Wultzmann injector	5
Operating glove	11	Hydrargyrum injector	2
Operating cap	1,100	Venous injector	5
Ribs forceps	1	Tuberculin injector	20
Pressing forceps	30	Hypodermal injector	70
Hooked forceps	53	Gramm scale	294
Canvas forceps	1	Vial holder	114
		Stethoscope	83
		Pus bowl	286

ENCLOSURE (B), continued

DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY
Medical bottle	40	Silver probe	359
Pin set	5,550	Thyroid gland probe	10
Nail scissors	100	Rupture probe	15
Gips knife	150	Periosteum excoriator	11
Cranium knife	1,150	Calculus destroyer	400
Straight knife	210	Plugger	383
Mucous membrane knife	3	Plugger fork	6
Hernia knife	100	Crowner fork	29
Curved knife	25	Tuning fork	153
Cutting eyelashes knife	9	Mouth opener	61
Excision knife	6	Eyelid opener	2
Cutting knife	5	Automatic plugger	21
Razor	8	Training plugger	41
Streak knife	4	Square board	7
Lachrymal duct knife	11	B nose, ear & throat instrument	1
Spear-shaped knife	514	C nose, ear & throat instrument	15
Cutting tonsil knife	18	No. 1 injector	1
Crystalline lens knife	4	Tooth-drawer	15
Sharp bladed knife	50	Brain operating machine	2
Sharp bladed knife	50	Blood transfusion machine	1
Hand-saw	40	Stomach and intestine sewing machine	1
Throny saw	250	Sphygmometer	1
Bandsaw	60	Sewing machine	23
Reciprocating saw	100	Emergency medicine box A	1
Gips saw	80	Emergency medicine box B	6
Bone screw	2	Emergency medicine box C	3
Bone planer	2	Small medicine box D	1
Bougic metre	3	Oxygen inhaler	1
Curved pin	14	Vapour inhaler	1
Tympanum boring pin	114	Vaccinator	28
Restorn pin	13	No. 1 surgical instrument	1
Ear pick	89	No. 2 surgical instrument	1
Abdominal wall fixer	2	Portable surgical instrument	1
Stretcher	30	Polisher	1
Huckle-bone injector	1	Chest measurer	90
Abdominal wall hook	4	Pill maker	2
Plain hook	39	Dental surgical instrument	16
Retractor	214	No. 2 dental surgical instrument	3
Hook	201	Blood spiter	8
Sharpless hook	2	Flask (For the prevention of epidemic)	141
Vaginal hook	2	Watering pot	27
Squint hook	14	Formaline sterilizer	320
Sharp spoon	112	Bandage (roll)	8,465
Double-headed hook	4	No. 1 bandage roll (package)	2,079
Bone chisel	200	No. 2 bandage roll (package)	777
Bone hammer	29	No. 3 bandage roll (package)	92
Bone scissors	2		
Bone file	5		
Pin holder	190		
Intestinal line	6		
Bone sweeper	61		
Bone lifter	75		
Cartilage lifter	200		
Lachrymal duct probe	350		
Channelled probe	450		

ENCLOSURE (B), continued

DESCRIPTION	QUANTITY
No. 4 bandage roll (package)	439
Three cornered bandage (sheet)	1,321
Cotton (roll)	870
Vermiform appendix operating machine	1
Stomach & intestine operating machine	1
No. 3 surgical instrument	1
Medicine box appendix	2
Trachea cannula	159
Tape measure	6
Eye-wash receiver	2
Flag of Red Cross (For the test)	1
Centrifugal machine	15
Air inspecting apparatus	1
Fixed quantity of carbonic acid gas apparatus	2
Blood corpuscle measuring apparatus	147
Measuring apparatus for the colour of blood	27
Blood sink meter	60
Microscope	1
Food analysis machine	1
Syphilis examining machine	5
Intestinal string	3,528
Medical paper	770
Bag for tablet	30,000
Medicine label (sheet)	6,000
Blotting paper (bundle)	67
Dry cell (piece)	4,916
Finger sack (piece)	60
Injector pin (piece)	12,600
Injector tube (piece)	8,593
Pipette (piece)	1,600
Liquid measurer (1000 cc 30) (else 2)	32
Absorbent cotton (package)	1,037
White peony absorbent cotton (package)	496
Absorbent reclaimed cotton (package)	86
Small package of absorbent cotton	1,200
Raw cotton (package)	459
Small package of cotton	60
Silk thread (bundle)	786
Gauze (roll)	319
Small package of gauze	1,929
Package for emergency medicine	5
Emergency supplementary medicine (package)	37
Sticking plaster (roll)	353
Splice-piece	500
Water proof paper (sheet)	4,750
Match (package of small box) (Medicine)	10
Liquor kalu arsenicosi (gr.)	17,500
Alcohol (gr.)	1,813,900
Injection of opium alkaloid (piece)	134,265
Aspirin (gr.)	6,075
Aspirin tablet (piece)	359,000
Azole (piece)	835
Injection of opium Alkaloid scopolaminum (piece)	4,930
Anilinum (gr.)	11,650
Medicine of alsenobenzol (piece)	11,800
Acrinole (gr.)	3,500
Liquor acrinole (piece)	5,000
Colvaine (1000 cc 20) (else 5)	25
Sharley (1000 cc 20) (else 5)	724
Cap	216
Glassy spit-box	454
Bottle	15
Ovect glass (box)	200
Deck glass (box)	51
Ice bag (piece)	172
Sanitary sack (piece)	10,000
Rubber tube	1,500
Illustration of the wounded A (sheet)	500
Illustration of the wounded B (sheet)	1,800
Medical paper (sheet)	7,000
Sensitive paper (dozen)	600
Uva vris liquor extracta (gr.)	20,000
Injection of calcium chloride (piece)	4,000
Ointment Estimon (gr.)	45,000
Evanin (gr.)	8,000
Ether	10,000
Injection of procanine chlorate (piece)	6,700
Ebios (gr.)	180,000
Eval (gr.)	30,000
Tropacocanum hydrochlori (gr.)	2,000
Ephedilin powder (gr.)	12,000

ENCLOSURE (B), continued

DESCRIPTION	QUANTITY
Chininum hydrochloricum (gr.)	7,500
Pastilli morphini hydrochlorici (piece)	3,000
Pastilli chininum hydrochloricum (piece)	2,000
Acidum arsenicosum (gr.)	4,000
Injection of acriflavin (piece)	50
Coffeinum natrium benzoicum (gr.)	5,000
Allohilin (piece)	2,000
Zincum oxydatum (gr.)	25,500
Tincture oil (piece)	1,000
Sodium hydrocarbonate (piece)	320
Igrosine (piece)	8,020
Inosit (gr.)	1,000
Unguentun acidi borici (piece)	300
Ammonium sulfoiethyolicum (gr.)	20,000
Uvamanine (gr.)	125,000
Oil for burn & scald (gr.)	72,000
Pastilu hydrargyri chlorati (piece)	12,000
Hydrargyri chlorati (gr.)	36,000
Strong bagnon (piece)	1,000
Quinine (piece)	20,000
Kinofen (gr.)	10,000
Medicine of absorbent silicicum (gr.)	15,000
Xylolum (gr.)	35,000
Clesoli pro desinfectione (kg.)	756
Clesoli for treatment (gr.)	90,500
Glicetine (gr.)	46,000
Glinogen (gr.)	23,000
Soda acidum citricum (gr.)	47,000
Injection of soda Acidum citricum (piece)	7,050
Salutio kalu chromici (gr.)	184,500
Kalium acidi sulphuricum (gr.)	44,000
Stomachic tablet (piece)	189,000
Omnadine (piece)	1,000
Pastilu osuan	14,000
O pisote (piece)	3,000
Oxydole (gr.)	52,000
Injection of camphor medicine (piece)	190,000
(piece)	9,900
Kalium permanganioum (gr.)	56,000
Sapo kalinus (gr.)	141,000
Pepsinum saccharatum (gr.)	15,000
Dried blood-plasma (piece)	10
Serum broken by gas (piece)	10
Camphor (gr.)	3,000
Clesoli solidum (piece)	72
Pastilu natru bicarbonici (piece)	364,000
Injection of un-bloody viscela medicine (piece)	11,000
Pure alcohole (gr.)	15,000
Hydrargyrum bichloratum (gr.)	3,000
Acidum salicylicum (gr.)	6,000
Strychninum nitricum (gr.)	700
Quinine salicylicum (gr.)	2,000
Salt (gr.)	230,000
Digestion medicine (piece)	5,000
Syrup (gr.)	93,000
Sterilizing cream (piece)	900
Medicine for drowsiness (piece)	105,000
Pastilu natrium salicylicum (piece)	50,000
Injection of Natrium salicylicum (piece)	31,000
Amylum	45,000
Medicine of pancreas (piece)	6,300
Injection of synthetic malaria medicine B (piece)	6,000
Pastilu of synthetic malaria medicine B (piece)	27,900
Injection of synthetic malaria medicine A (piece)	900
Pastilu of synthetic malaria medicine A (piece)	1,000
Collodion (gr.)	6,000
Injection of gonometon (piece)	26,000
Codeinic acid (piece)	6,000
Pastilu codeini phosphorici (piece)	7,550

ENCLOSURE (B), continued

DESCRIPTION	QUANTITY
Pastilu of aphalatine (piece)	747,000
Gelatina elba (gr.)	11,000
Red wine (bottle)	1,400
Injection of bismuth (piece)	480
Injection of bismuth (case)	6,904
Acidum tamricum (gr.)	5,000
Tar paster (gr.)	15,000
Injection of sodium sulphurate (piece)	9,000
Digitalis medicine (gr.)	94,000
Thymolum (gr.)	5,000
Tiantole (gr.)	40,000
Digitamine powder (gr.)	10,000
Reagentia pro diazo-reactione (piece)	90
Reagentia pro diazo-reactione (piece)	6,000
Injection of digitalis medicine (piece)	3,000
Tink oil (gr.)	24,000
Liquor digitamine (gr.)	27,000
Injection of saccharum (piece)	19,900
Cream for frost-bite (gr.)	5,000
Dolmine (gr.)	4,800
Radix ipecacuanhae (gr.)	6,000
Injection of strophon-tinun (piece)	52,400
Medicine of sulphamine No. 1 (gr.)	193,000
Medicine of sulphamine No. 2 (gr.)	10,700
Injection of sulpha-mine (piece)	13,200
Sulphaganidine (gr.)	32,000
Scarlet (gr.)	200
Scarlet B (gr.)	5,700
Scarlet powder (gr.)	2,500
Liquor Ringeri steril-ization (piece)	1,000
Injection of nickaine (piece)	2,000
Neomophine (piece)	3,400
Injection of neohih-loton (piece)	3,400
Injection of neoge-lison (piece)	400
Barbitar (gr.)	6,000
Biliform (gr.)	8,000
Liquor pikrinsaure (piece)	180
Injection of bagnon (piece)	14,000
Pastilu pasiceptine (case)	20
Serum antitetanicum (piece)	60
Bagnon (gr.)	2,000
Liquor mel (gr.)	800
Oleum ricini (gr.)	587,000
Injection of vitamin B (piece)	135,000
Vitamin B powder (gr.)	41,000
Biophermine (gr.)	6,000
Biocark (gr.)	6,000
Hiphole (gr.)	38,000
Pulvis doveri (gr.)	55,000
Nanpole (piece)	100
Injection of vitamin C (piece)	500
Bisamsen (piece)	3,000
Calcium bromatum (gr.)	15,000
Phenoval bital (gr.)	34,800
Phenceetine (gr.)	10,000
Argentum proteinicum (gr.)	33,500
Saccharum amylaceum (gr.)	55,000
Kalium bromatum (gr.)	18,000
Plemyne (gr.)	10,000
Bromdiaethylacetylurea (gr.)	20,500
Brovalin (gr.)	15,000
Brain paster (gr.)	12,000
Phatosine powder (gr.)	22,000
Percamine (piece)	190
Acidum boricum (gr.)	54,000
Pepton (for test) (gr.)	1,000
Pepton (gr.)	40,000
Percamine (piece)	1,000
Insect-destroyer (gr.)	44,000
Insect-destroyer (bottle)	70
Formaline (gr.)	7,000
Liquor acidum boricum (gr.)	7,000
Politamine (gr.)	3,000
Phydrocodein phospho-ricum (gr.)	500
Chininum sulphuricum (gr.)	104,500
Pastilu of phosphoric ash (piece)	50,000
Calcariae phosphoricum (kg.)	75
Powder of codeine phosphoricum (gr.)	7,000
Pityrolum (gr.)	5,000
Injection of vitamin B	15,000

ENCLOSURE (B), continued

DESCRIPTION	QUANTITY
Rivloton (piece)	700
Magnesium sulphuricum (gr.)	1,000
Injection of revanalin (piece)	4,000
Pastilu extracti scopoliae (piece)	138,000
Crystaline vitamin C (gr.)	25,000
Bioform (gr.)	12,000
Vomica extracta (gr.)	15,000
Magnecia (gr.)	11,000
Magloyd (gr.)	67,000
Liquor mandol (piece)	5,030
Mannitum (gr.)	6,000
Mercurochrome (gr.)	40
Chloroformium pro narcosi (gr.)	24,000
Ether pro narcosi (gr.)	14,000
Alumen (gr.)	25,000
Ointment for the wound (gr.)	27,000
Aqua destillata sterilization (piece)	750
Pastilu metapolin (gr.)	61,400
Injection of metapolin (gr.)	24,000
Alcohol methylicus (gr.)	64,000
Pix liquida (gr.)	5,000
Ointment of wooden wax (gr.)	61,200
Tincture jodi (gr.)	141,500
Oleum jodatum (piece)	22,200
Jodium (gr.)	4,000
Natrium jodatum	2,500
Pastilu chininum sulphate (piece)	186,000
Injection of ringers rock (piece)	50
Roto suppository (piece)	8,000
Injection of wagostypmin (piece)	2,000
Yellow vaseline (gr.)	12,000
Hydrargyrum oxydatum flavum (gr.)	12,000

APPARATUS FOR DENTIST

NO.	DESCRIPTION	QUANTITY
1	Pin set (curved long)	195
2	Pin set (straight long)	10
3	Pin set (short)	30
4	Spatula	50
5	Synthetic spatula	20
	Synthetic plugstop	60
6	Gauge board	3
7	Round file (for rubber)	9
8	Plugstop	170
9	Knife of plaster of paris	2
10	Stone-destroyer	
11	Lever for gum	109
12	Chisel	184
13	Forceps	182
14	Bone chisel	6
15	Kohel	10
16	Dental apparatus A	6
17	Dental kettle	52
18	Bottle holder	77
19	Roller	11
20	Electric lathe	10
21	Alcohol lamp	48
22	Staturated can	8
23	Bar stand	186
24	Dental boiling pan	64
25	Gum knife	35
26	Tooth puller	4
27	Gum plugstop	25
28	Gouge	672
29	Four headed anvil lid	2
30	Pressuring lid	1
31	Dental tool A	13
32		743
33		25
34	Forceps	176
35	Automatic plugstop hammer	6
36	Plate for kneading cement	428
37	Contra	32
38	Dental mirror	60
39	Fork for gold crown	10

ENCLOSURE (B), continued

ARTICLES OF CONSUMPTION

NO.	DESCRIPTION	QUANTITY	NO.	DESCRIPTION	QUANTITY
1	Wheel	331	24	Violedin (piece)	62
2	Binding string (for reform)	712	25	Carbolandum wheel (piece)	203
3	Sunder luck	235	26	Engine bar (case)	944
4	Cement	116	27	Comulgum alloys (piece)	8
5	Bosmin	21	28	Plate for kneading cement (piece)	146
6	Dental mercury	113	29	Carbolite disk (dozen)	13
7	Liquor cynbalenin chlorate	134	30	Carbolandum point (dozen)	687
8	Pesta acidi arsen-icosi	52	31	Earthenwared tooth (piece)	708
9	Cresoli form	85	32	Binding iron string (piece)	442
10	Stopping	686	33	Splint	178
11	Melt metal	27	34	Rusin (for gold)	40
12	Paraphin wax (case)	10	35	Tori cresolirm (gr.)	3
13	Injector tube for dent (piece)	2,648	36	Paraporm (pair)	10
14	Sand paper streaks (case)	80	37	Biting paper (piece)	120
15	Saturation rubber (case)	199	38	Earthenwared teeth with rubber bed (front tooth) (pair)	16
16	Bees wax (case)	58	39	Milosilver	50
17	Canfenic (piece)	51	40	Silver wax	303
18	Sampler wax (case)	240	41	Carbon brush (piece)	80
19	Wipler half circled string (case)	164	42	Silk paper with smeared wax (roll)	90
20	Celluloid streaks (case)	600	43	Sampler wax	96
21	Seat wax (case)	80	44	Rubber ball cup (piece)	60
22	Modelling compound (case)	191	45	Bicar paper disk (piece)	720
23	Paper disk (dozen)	149	46	Asbest plate (piece)	10
			47	Samplar borax (piece)	96

ENCLOSURE (C)

LIST OF DOCUMENTS FORWARDED TO NMRI, BETHESDA, MD.

NavTechJap No.	Date	Subject
ND10-7501.3		Annex #1 on Training
	2 Feb. 1945	Medical #122 "Items Relating to Physical Examinations of Trainees at Time of Withdrawal from Ship or Unit, or at Time of Induction into School or Unit"
	12 Mar. 1945	Medical #231 "Standards for Detecting Unusual Variations in Tests for Color Blindness"
	12 Feb. 1945	Medical #167 "Monthly Physical Examination and Bodily Weights and Measures of Non-Commissioned Officers"
	1 April 1945	Medical Affairs II #4 "Handling of Medical Documents in Special Medical Cases"
	23 July 1945	Medical Affairs II Secret #14 "Treatment of Sick and Wounded Naval Personnel"
	20 July 1945	Medical Affairs Secret #168 "Medical Treatment of Crews of Japanese Ships"
ND10-7501.4		"Navy Medical Corps Regulations"
ND10-7501.5		"Medical Supply Intendance Regulations"
ND10-7501.6		"Textbook for Hospital Corpsmen 2nd Class"
ND10-7501.7		"Textbook for Navy Nursing Corps"
ND10-7501.9		"The Navy Medical School"

ENCLOSURE (D)

LIST OF DOCUMENTS FORWARDED TO WASHINGTON DOCUMENT CENTER THROUGH ATIS

NavTechJap No.	Title	ATIS No.
ND21-7503.10	"Naval Trainee Corpsmen Text Book" Vol. 1	3109
ND21-7503.11	"Naval Trainee Corpsmen Text Book" Vol. 2	3109
ND21-7503.12	"Naval Trainee Corpsmen Text Book" Vol. 3	3109
ND21-7503.13	"Naval Trainee Corpsmen Text Book" Special Text	3109
ND21-7503.14	"Naval Corpsmen Basic Training Manual"	3109
ND21-7503.15	"Navy Nursing Manual Advanced Training"	3109
ND21-7503.16	"Navy Nursing Manual" Book 1	3109
ND21-7503.17	"Medical Duties" (from Kure Naval Hospital)	3109
ND21-7503.18	"Guide for Nursing Practice and Morbid Examination"	3109
ND21-7503.19	"KAMO Corpsmen School Regulations"	3109
ND21-7503.20	"KAMO Corpsmen School Regulations"	3109
ND21-7503.21	"KAMO Naval Hospital Training Department Education Regulations"	3109
ND21-7503.22	"Corpsmen's General Practice Guide"	3109
ND21-7503.23	"Special Training Guide"	3109
ND21-7511.10	"Special Examination for Hydrophone Operator, Instruction Book, 1944"	3115
ND21-7511.11	"Special Examination for Hydrophone Operator"	3115
ND21-7511.12	"Instruction Book, Special Aptitude Test for Naval Band"	3115
ND21-7511.13	"Instruction Book, Special Aptitude Test for Radio Operator"	3115
ND21-7511.14	"Special Aptitude Test for Radio Operator"	3115
ND21-7511.15	"Instruction Book, Special Aptitude Test for Signal Operator, 1944 & 1943"	3115
ND21-7511.16	"Examination for Signal Operator at the Naval School of Navigation"	3115
ND21-7511.17	"Instruction Book, Special Aptitude Test for Naval Technical Seamen 1944"	3115

ENCLOSURE (D), continued

NavTechJap No.	Title	ATIS No.
ND21-7511.18	"Instruction Book for Aptitude Test Used in Classifying Workmen in Naval Factories"	3115
ND21-7511.19	"Explanation of Aptitude Test for Workmen in Naval Factories"	3115
ND21-7511.20	"Report on the Practical Effect of the Aptitude Test for Naval Factories 1940"	3115
ND21-7511.21	"Photos of Aptitude Test for Non-Professional Workers in Naval Factories"	3115
ND21-7511.22	"Instruction Book for Aptitude Test for Naval Artillery School Cadets"	3115
ND21-7511.23	"Test for Naval Factory Workmen 1944"	3115
ND21-7511.24	"Test for Naval Factory Workmen 1943"	3115
ND21-7511.25	"Test for Naval Factory Workmen 1942"	3115
ND21-7511.26	"Test for Naval Factory Workmen 1941"	3115
ND21-7511.27	"Test for Naval Factory Workmen 1940"	3115
ND21-7509	"Tokei Medical Supply Co. Catalogue of Medical Equipment"	3125
ND21-7521.1	"Examination for the Selection of Naval Airmen"	3128
ND21-7521.2	"Navy Mental Examination"	3128
ND21-7521.3	"Examination of All Volunteers for Specialized Seamen, 1939"	3128
ND21-7521.4	"Examination for All Volunteers for Specialized Seamen, 1939"	3128
ND21-7521.5	"Instruction Book for Intelligence Test for the Selection of Workmen in Naval Factories, 1944"	3128
ND21-7521.6	"Examination for All Volunteers for Specialized Seamen, 1944"	3128
ND21-7522.1	"Intelligence Test for Seamen"	3129
ND21-7522.2	"Communicators Test"	3129

NavTechJap No.	Title	Date	ATIS No.
ND21-7515.10	"The National Hygiene"	June 1943	3111
ND21-7515.11		Aug. 1943	3111
ND21-7515.12		Oct. 1943	3111

ENCLOSURE (D), continued

NavTechJap No.	Title	Date	ATIS No.
ND21-7515.13	"The National Hygiene"	Feb. 1944	3111
ND21-7515.14	"Naval Medical Ass'n Journal"	Jan. 1943	3111
ND21-7515.15		Feb. 1943	3111
ND21-7515.16		Mar. 1943	3111
ND21-7515.17		May 1943	3111
ND21-7515.18		July 1943	3111
ND21-7515.19		Aug. 1943	3111
ND21-7515.20		Oct. 1943	3111
ND21-7515.21		Nov. 1943	3111
ND21-7515.22		Dec. 1943	3111
ND21-7515.23		Jan. 1944	3111
ND21-7515.24		Feb. 1944	3111
ND21-7515.25		Mar. 1944	3111
ND21-7515.26		Apr. 1944	3111
ND21-7515.27		May 1944	3111
ND21-7515.28		June 1944	3111
ND21-7515.29		July 1944	3111
ND21-7515.30		Aug. 1944	3111
ND21-7515.31		Sept. 1944	3111
ND21-7515.32		Oct. 1944	3111
ND21-7515.33		Nov. 1944	3111
ND21-7515.34		Dec. 1944	3111
ND21-7515.35		Jan. 1945	3111
ND21-7515.36		Feb. 1945	3111
ND21-7524	"Regs. for Physical Exams. Used in Recruiting"	Feb. 1945	3118
ND21-7527	"Reports of the Research Dept., Naval Medical College"	Feb. 1945	3119

ENCLOSURE (E)

LIST OF EQUIPMENT FORWARDED TO NMRI, BETHESDA, MD.

NavTechJap No.	Item
JE21-7505	Blood Withdrawal Tubes Reflex Testing Hammer Testing Lenses Lid from Tropical-pack "Tar Paste" Eyeglass Frame
JE21-7511	Chiyoda Microscope, Medium
JE21-7512	Surgical Instruments Type 99, Mark 1
JE21-7513	Artificial Respiration Equipment
JE21-7514	Surgical Instruments Mark 1
JE21-7515	Surgical Instruments (Newest Type)
JE21-7516	Surgical Instruments Mark 2
JE21-7517	Cystoscope
JE21-7518	Cystoscope Transformer
JE21-7520	Chiyoda Microscope, Small
JE21-7520.3	Surgical Kits (2 pocket field kits)
JE21-7521	Olympus Microscope, Large Size
JE21-7522	Chiyoda Microscope, Large Size
JE21-7524	Combination Gastroscope and Bronchoscope
JE21-7528	Medical Field Chest #1
JE21-7529	Medical Field Chest #3

ENCLOSURE (F)

RESEARCH PROJECTS OF THE PSYCHOLOGICAL DIVISION
OF THE NAVAL TECHNICAL RESEARCH INSTITUTE
MEGURO, TOKYO

1. Research on Vocabulary Analysis as a Character Indexing Process

This project was undertaken with the dual purpose of establishing categories for the classification of character attributes and of determining these attributes in the individual. Four hundred words were chosen: nouns, verbs, adjectives, and adverbs, each relating to the human character or temperament. Each of 10 university graduates in psychology then made numerical evaluations of the words in terms of the 13 criteria shown in the accompanying table. It was then sought to group the words on the basis of a mathematical relationship derived from the average evaluations. (See accompanying data.) This work was not completed, but the inter-relation of averages in the 13 criteria columns is shown on the accompanying chart.

No plan had been formulated for the application of this expected correlation to personality testing.

List of Words

Words		13 judgement criteria												
Kanji	Romanji	No.	1	2	3	4	5	6	7	8	9	10	11	12	13
愛情	Aijo アイジョウ	111	1	1	2	-2	0	0	0	-1	1	0	1	1	-1
垢抜	Akanuke アカヌケ	211	1	0	2	-1	0	0	0	0	0	0	1	0	0
あっさり	Assari	311	1	1	1	0	1	0	0	0	0	-1	0	0	0
飽性	Akisho アキショウ	1413	-1	1	2	-1	0	-1	-1	0	0	-2	0	1	1
あさましさ	Asamashi	4612	-1	0	1	0	0	0	0	0	0	0	-1	0	0
あけっぱなし	Akkopanashi	11017	0	0	1	-1	2	0	0	1	0	0	1	0	-1
あてがはし	At sukasashi	14212	-1	1	1	0	1	0	0	0	2	1	-1	0	0
意地悪	Ijiwaru イヂワル	411	-1	0	2	-1	0	0	0	0	0	1	-1	0	-1
いじける	Ijikeru	412	-1	0	1	1	-1	0	-1	0	0	1	-1	1	0
依存性	Inponsei インポンセイ	511	-2	1	2	-1	1	0	0	0	1	0	-1	1	0
色気	Iroke イロケ	512	0	1	2	-2	1	0	0	-1	1	0	0	1	-1
因業	Ingo インゴウ	611	0	0	0	1	0	0	0	0	2	2	-1	0	0
陰気	Inki インキ	711	-1	-1	1	1	-1	0	0	0	0	0	-1	1	0
陰険	Inken インケン	712	-2	0	-1	1	-1	0	0	0	1	1	-1	0	0
慇懃	Ingin インギン	811	1	-1	1	-1	-1	0	0	0	0	0	1	0	-1
焼気	Iyaki イヤキ	1412	0	0	1	0	0	0	0	0	0	0	0	0	0
鬼蔵	Itasura イタヅラ	16128	-1	1	0	0	1	0	0	0	0	0	-1	0	-1
意地張	Ijipari イヂバリ	60110	-1	1	2	2	1	0	1	0	0	2	0	1	1

ENCLOSURE (F), continued

		Criterion Score				
No.	Criterion	+2	+1	0	-1	-2
1	Morality - Immorality	The word expresses a very good morality	good (fairly)	indifferent or no relation	bad (fairly)	very bad
2	Activity - Passiveness	The word connotes active side of character	fairly active	indifferent or no relation	fairly passive	very passive
3	Emotional Rational	The word expresses a very emotional type of character	fairly	indifferent or no relation	fairly	very rational
4	Hardness - Softness	The word contains very hard sense	fairly	indifferent or no relation	fairly	soft
5	Extrovert - Introvert	The word expresses an extrovert tendency of character	fairly	indifferent or no relation	fairly	introvert
6	Intelligent - Stupid	High intellect	fairly	indifferent or no relation	fairly	low intellect
7	Strong Volition - Weak Volition	Strong will	fairly	indifferent or no relation	fairly	weak
8	Manliness - Womenliness	Manliness	fairly	indifferent or no relation	fairly	womenly
9	Realistic - Idealistic	Realistic	fairly	indifferent or no relation	fairly	idealistic
10	Perseverance - Non-Perseverance	Perseverance	fairly	indifferent or no relation	fairly	non-perseverance
11	Co-operative - (Social) Anti-Social	Co-operative (Social)	fairly	indifferent or no relation	fairly	non-social
12	Passionate - Non Passionate	Passionate	fairly	indifferent or no relation	fairly	cool, non-passionate
13	Selfish - Generous	Selfish	fairly	indifferent or no relation	fairly	human

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Morality													
2. Activity	$\bar{0}$.16												
3. Emotional	$\bar{0}$.04	$\bar{0}$.05											
4. Hardness	$\bar{0}$.04	$\bar{0}$.12	$\bar{0}$.06										
5. Extrovert	0.12	0.57	0.04	0.17									
6. Intelligent	0.40	$\bar{0}$.10	$\bar{0}$.23	0.11	0.02								
7. Strong Will	0.34	$\bar{0}$.08	0.11	0.36	0.01	0.29							
8. Manliness	0.10	0.11	0.01	0.45	0.30	0.11	0.32						
9. Realistic	$\bar{0}$.40	0.20	0.43	$\bar{0}$.15	0.14	$\bar{0}$.21	$\bar{0}$.25	$\bar{0}$.05					
10. Persevering	$\bar{0}$.15	$\bar{0}$.07	0.08	0.26	$\bar{0}$.15	0.06	0.32	0.03	0.07				
11. Social	0.55	0.08	$\bar{0}$.06	$\bar{0}$.08	0.02	0.22	0.12	$\bar{0}$.04	$\bar{0}$.28	$\bar{0}$.10			
12. Passionate	$\bar{0}$.14	0.18	0.37	0.06	0.03	$\bar{0}$.04	$\bar{0}$.06	0.01	0.10	0.08	$\bar{0}$.08		
13. Selfish	0.01	$\bar{0}$.02	0.04	0.16	$\bar{0}$.02	0.12	0.10	0.07	$\bar{0}$.07	0.17	$\bar{0}$.17	0.13	

ENCLOSURE (G)

TRANSLATIONS OF INDICES OF THE BULLETIN OF THE NAVAL MEDICAL ASSOCIATION 1940 TO 1943

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See pages 206 to 230, NavTechJap Report Index No. M-AB, "References from the Committee for the Technical and Scientific Survey of Japanese Activities in Medical Sciences".

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