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1939

pneumoconiosis page 37-39

Association of American Railroads

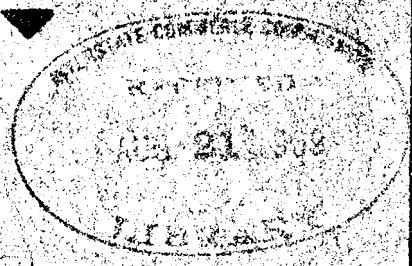
PROCEEDINGS

OF THE

NINETEENTH ANNUAL MEETING

OF THE

MEDICAL AND SURGICAL SECTION



STEVENS HOTEL
CHICAGO, ILL.
JUNE 15-16, 1939

PROCEEDINGS

OF THE

NINETEENTH ANNUAL MEETING

OF THE

Association of American Railroads

MEDICAL AND SURGICAL SECTION

HELD AT

STEVENS HOTEL, CHICAGO, ILL.
JUNE 15-16, 1939

EASTERN PRINTING CORPORATION
NEW YORK, N. Y.
1939

INDEX

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INDEX—Continued

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(Term Expires in 1941)

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Dr. G. P. Myers, Medical Director, New York Central System, Detroit, Mich.

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* Term as member of Committee of Direction expires in 1941.

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ment, Atlantic Coast Lin

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Dr. T. L. Hansen, Chief Sur
Chicago, Ill.
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Texarkana, Ark.
Dr. O. B. Zeinert, Chief Surg

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Committee on Developm

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Detroit, Mich.
Dr. Don Deal, Chief Surgeon,
Ill.
Dr. D. E. Remsberg, Assistar
and Pension Department
Dr. R. A. Woolsey, Chief Surg
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Dr. G. I. Jones, Chief Surgeon, Southern Railway System, Washington, D. C.

Dr. John McCombe, Chief Medical Officer, Canadian National Railways, Montreal, Canada.

Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Ry., St. Louis, Mo.

Representative from Committee of Direction

Dr. W. J. Lancaster, Superintendent and Medical Director, Relief Department, Atlantic Coast Line Railroad, Wilmington, N. C.

Committee on Fractures

Dr. B. L. Coley (Chairman), Chief Surgeon, New York Central Railroad, New York, N. Y.

Dr. J. D. Collins, Chief Surgeon, Seaboard Air Line Railway, Norfolk, Va.

Dr. T. L. Hansen, Chief Surgeon, Chicago, Rock Island & Pacific Railway, Chicago, Ill.

Dr. Wm. Hibbitts, Chief Surgeon, St. Louis Southwestern Railway Lines, Texarkana, Ark.

Dr. O. B. Zeinert, Chief Surgeon, Missouri Pacific Railroad, St. Louis, Mo.

Representative from Committee of Direction

_____ (Vacancy).

Committee on Developments Resulting from Physical Examinations

Dr. G. P. Myers (Chairman), Medical Director, New York Central System, Detroit, Mich.

Dr. Don Deal, Chief Surgeon, Chicago & Illinois Midland Railway, Springfield, Ill.

Dr. D. E. Remsberg, Assistant Superintendent and Medical Director, Relief and Pension Department, Norfolk & Western Railway, Roanoke, Va.

Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Railway, St. Louis, Mo.

Representative from Committee of Direction

Dr. A. R. Metz, Chief Surgeon, Chicago, Milwaukee, St. Paul & Pacific Railroad, Chicago, Ill.

Committee on Medical Aspects of Air Conditioning of Cars

Dr. T. R. Crowder (Chairman), Director, Department of Sanitation and Surgery, Pullman Company, Chicago, Ill.

Dr. E. V. Milholland, Medical and Surgical Director, Baltimore & Ohio Railroad, Baltimore, Md.

Dr. R. S. Yancey, Medical Director, Missouri-Kansas-Texas Lines, Sedalia, Mo.

Representative from Committee of Direction

——————— (Vacancy).

ASSOCIATION

DIVISION 1

MEDI

1. **REPRESENTATIC** representation of membe Chief Surgeons or other Express Agency, Inc., an in this Section.

2. **AFFILIATED MEI** collaborating or coopera ber thereof upon the appr An affiliated member sha road representative, exce

3. The officers of the and Secretary.

(a) As provided **VICE-CHAIRMAN** its membership. Th not succeed himself.

(b) The **SECRET** the Division. His s the approval of the partment.

(c) The **COMMI** bers, territorially re New England and C four from the West– serve for three years

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ASSOCIATION OF AMERICAN RAILROADS

DIVISION I—OPERATING—TRANSPORTATION

MEDICAL AND SURGICAL SECTION

RULES OF ORDER

1. **REPRESENTATION:** As provided in the Plan of Organization, the representation of member roads in the Medical and Surgical Section shall be Chief Surgeons or other persons engaged in a similar capacity. The Railway Express Agency, Inc., and the Pullman Company are eligible for membership in this Section.

2. **AFFILIATED MEMBERS:** A representative of an organization collaborating or cooperating with the Section may become an affiliated member thereof upon the approval of his application by the Committee of Direction. An affiliated member shall have the rights and privileges accorded a member road representative, except voting or the holding of office.

Officers and Committees

3. The officers of the Section shall consist of a Chairman, Vice-Chairman and Secretary.

(a) As provided in the Plan of Organization, the **CHAIRMAN** and **VICE-CHAIRMAN** shall be selected by the Committee of Direction from its membership. Their terms of office shall be one year. A Chairman will not succeed himself.

(b) The **SECRETARY** will be appointed by the General Committee of the Division. His salary shall be named by that Committee, subject to the approval of the Vice-President, Operations and Maintenance Department.

(c) The **COMMITTEE OF DIRECTION** will consist of twelve members, territorially representative as far as practicable—one each from New England and Canada; four from the East; two from the South and four from the West—elected as hereinafter prescribed, each of whom shall serve for three years.

The terms of office of all elective members of the Committee of Direction shall expire at the conclusion of the annual meeting. Vacancies in the committee membership shall be filled by appointment of the Committee until the next election.

In addition to the above, the Surgeon-General of the United States Bureau of Public Health Service or a representative to be designated by him, and a representative to be designated by the Conference of State and Provincial Health Authorities of North America shall be honorary members of the Committee of Direction.

The Committee of Direction will select from its elective membership a Chairman and Vice-Chairman of the Section, whose terms of office shall be one year. A Chairman will not succeed himself.

(d) The Standing Committees of the Section will be as follows:

Committee on Disability and Rehabilitation
Committee on Fractures
Committee on Developments Resulting from Physical Examinations
Committee on Medical Aspects of Air Conditioning of Cars

The representation of member roads on these committees will be, so far as is practicable, territorially selected, in approximately the same proportions as that of the Committee of Direction, personnel to be named each year by the Committee of Direction immediately following adjournment of the annual meeting.

Duties of Officers

4. The **CHAIRMAN** shall have general supervision over the affairs of the Section and shall preside at meetings of the Section and at meetings of the Committee of Direction.

5. The **VICE-CHAIRMAN,** in the absence of the Chairman, shall perform the duties of the Chairman and such other duties as may be assigned.

6. (a) The **SECRETARY** shall perform the usual duties of that office and such other duties as may be assigned to him by the Chairman.

(b) He shall receive six weeks in advance of the annual meeting each year the report of the Committee on Nominations, as elsewhere provided for, and will submit to the membership at the annual meeting the nominations contained in that report, to fill the vacancies in the membership of the Committee of Direction. He shall announce the result of the election promptly to the members.

Duties of Committees

7. The **COMMITTEE OF DIRECTION** shall:

(a) Exercise general supervision over the interests and affairs of the Section.

(b) Be empowered to act on behalf of the Section in the interim between meetings and shall submit at each meeting a report covering its actions.

(c) Examine and decide what portion of communications, papers and reports shall be submitted at the meetings. It shall determine which, if any, of the subjects presented by the various committees, shall be referred to the General Committee of the Division.

(d) Appoint two months in advance of the annual meeting each year a Committee on Nominations, consisting of representatives of five member roads, who shall not be members of the Committee of Direction.

(e) Appoint additional committees as required.

(f) Submit to the Chairman, General Committee, detail of contemplated financial requirements for conducting the work of the Section as required or as called for by that official.

(g) Call annual meetings of the Section, subject to the approval of the General Committee of the Division, if in its judgment conditions warrant.

(h) Call meetings of the Section, upon not less than thirty days' notice to each member. It must call special meetings of the Section upon the request, in writing, of a majority of the member roads.

8. The **COMMITTEE ON NOMINATIONS,** appointed as above prescribed, shall report to the Secretary at least six weeks in advance of the annual meeting of each year, at least two nominations for each impending vacancy to replace the four members of the Committee of Direction whose terms expire that year, and to fill any vacancy.

The duties of the Standing Committees shall be as follows:

9. COMMITTEE NO. 1—The **COMMITTEE ON DISABILITY AND REHABILITATION** shall study and report, with suggestions or recommendations, on such subjects that have to do with the physical efficiency or inefficiency of railroad employes. It shall also consider ways and means for the rehabilitation of injured or incapacitated employes and the complete restoration of function.

10. COMMITTEE NO. 2—The **COMMITTEE ON FRACTURES** shall study and report on the treatment and transportation of fracture cases including (a) Diagnosis of fractures, (b) First aid and transportation splints, (c) Fracture report forms, (d) X-ray work in connection with fractures, and similar subjects.

11. COMMITTEE NO. 3—The **COMMITTEE ON DEVELOPMENTS RESULTING FROM PHYSICAL EXAMINATIONS** shall analyze and make report, with recommendations or suggestions, on data made available by periodic examinations, etc. It shall study and revise as conditions may warrant, the recommended standards covering physical examinations as well as the forms used in connection therewith.

12. COMMITTEE NO. 4—The **COMMITTEE ON MEDICAL ASPECTS OF AIR CONDITIONING OF CARS** shall study and report on this subject in its relation to the health and comfort of travelers, cooperating with other departments handling matters relating to air conditioning of equipment.

13. **VOTING AT MEETINGS OF SECTION:** (a) Vote may be taken viva voce, by rising, by roll call or by ballot. Each member road shall be entitled to one vote. The vote of the majority of the member roads represented shall be required to decide any question, motion or resolution, unless otherwise ordered. (b) Voting for candidates for membership on the Committee of Direction shall be by ballot. (c) Unless otherwise designated by it, the ranking officer will be recognized as the voting representative of a road at any meeting.

14. **LETTER BALLOTS** may be taken upon any subject by order of the Committee of Direction and **must** be taken on all questions affecting physical property. The voting power of the member roads shall be proportionate to the ownership of miles of track.

15. **ORDER OF BUSINESS:** The order of business at meetings of the Section shall, unless otherwise directed by a majority of the members present be as follows:

Approval of minutes of last meeting
Reports of Standing Committees
Reports of Special Committee
Reports of Tellers
Unfinished Business
New Business

16. Robert's Rules of order shall govern the proceedings of this Section, including amendment to these Rules of Order.

MEDICAL AND SURGICAL SECTION

Stevens Hotel, Chicago, Ill., June 15–16, 1939

The following representatives were present:

Members	Representatives
Alton R. R.	E. V. Milholland, Medical and Surgical Director.
Ann Arbor R. R.	A. M. Hume, Chief Surgeon.
Atlanta & West Point R. R.	J. R. Garner, Chief Surgeon.
Atlantic Coast Line R. R.	W. J. Lancaster, Superintendent and Medical Director, Relief Department.
Atchison, Topeka & Santa Fe Ry.	M. L. Bishoff, Chief Surgeon.
Baltimore & Ohio, Chicago Terminal R. R.	E. V. Milholland, Medical and Surgical Director.
Baltimore & Ohio R. R.	E. V. Milholland, Medical and Surgical Director.
Belt Ry. Co. of Chicago	J. G. Frost, Chief Surgeon. A. B. Dickey, General Claim Agent.
Bessemer & Lake Erie R. R.	R. W. Brown, Chief Surgeon.
Canadian National Rys.	John McCombe, Chief Medical Officer. A. J. Gilchrist, in charge of Treatment and Examinations.
Canadian Pacific Ry.	H. A. Beatty, Chief Surgeon and Medical Officer.
Chesapeake & Ohio Ry.	J. Frank Dinnen, Supervising Surgeon. J. J. Brandabur, Assistant Supervising Surgeon.
Chicago & Eastern Illinois Ry.	J. G. Frost, Chief Surgeon. J. F. Lord, Assistant to General Manager. D. J. Sheehan, Superintendent of Motive Power. A. R. Swanson, Chief Claim Agent.
Chicago & Western Indiana R. R.	J. G. Frost, Chief Surgeon.
Chicago, Burlington & Quincy R. R.	O. H. Horrall, Chief Surgeon. R. B. Kepner, Medical Officer. D. B. Moss, Chief Surgeon (Retired). J. T. Williamson, Supt. Relief and Employment Departments.
*Chicago Heights Terminal Transfer R. R.	A. R. Swanson, Chief Claim Agent.
Chicago, Milwaukee, St. Paul & Pacific R. R.	A. R. Metz, Chief Surgeon. A. I. Bouffleur, Chief Surgeon, Lines West. O. W. Yoerg, Surgeon.

* Associate Member.

Chicago, Rock Island & Pacific Ry.	T. L. Hansen, Chief Surgeon.
Colorado & Southern Ry.	L. H. Wade, Chief Surgeon.
Denver & Rio Grande Western R. R.	G. H. Curfman, Chief Surgeon.
	R. S. Allison, Assistant Chief Surgeon.
Erie R. R.	J. Frank Dinnen, Chief Surgeon.
	J. W. Houk, Asst. to Chief Surgeon.
Georgia R. R.	J. R. Garner, Chief Surgeon.
Great Northern Ry.	R. C. Webb, Chief Surgeon.
Gulf, Colorado & Santa Fe Ry.	O. F. Gober, Chief Physician.
Gulf, Mobile & Northern R. R.	C. H. Ramsay, Chief Surgeon.
Illinois Central System	G. G. Dowdall, Chief Surgeon.
Illinois Terminal R. R.	R. M. Sutton, Chief Surgeon.
Louisville & Nashville R. R.	Duncan Eve, Division Surgeon.
Missouri Pacific R. R.	O. B. Zeinert, Chief Surgeon.
Nashville, Chattanooga & St. Louis Ry.	Duncan Eve, Chief Surgeon.
New York Central System	G. P. Myers, Medical Director.
	L. A. Ensminger, Chief Surgeon.
	C. F. Stineman, Chief Claim Agent.
	H. A. Fathauer, Assistant Chief Claim Agent.
New York, Chicago & St. Louis R. R.	J. M. Dinnen, Chief Surgeon.
	J. Frank Dinnen, Assistant Chief Surgeon.
	J. W. Houk, Assistant to Chief Surgeon.
Norfolk & Western Ry.	D. E. Remsberg, Assistant Superintendent and Medical Director.
Northern Pacific Ry.	A. W. Ide, Chief Surgeon, Eastern Division.
Pennsylvania Railroad	Harvey Bartle, Chief Medical Examiner.
	Walter Aye, Medical Examiner.
	L. L. Cooper, Oculist.
	J. W. Harper, Medical Examiner.
	H. E. Heston, Medical Examiner.
	C. R. Houchins, Secretary to Chief Medical Examiner.
	LeRoy S. Howard, Medical Examiner.
	S. W. Hurst, Medical Examiner.
	A. P. Isenberg, Company Surgeon and Medical Examiner.
	T. B. L. Jordan, Company Surgeon and Medical Examiner.
	R. C. Kell, Neuropsychiatrist.
	J. S. Moses, Medical Examiner.
	J. E. Nickel, Medical Examiner.
	R. D. Saul, Medical Examiner.
	J. A. White, Medical Examiner.
Pennsylvania-Reading Seashore Lines	A. P. Isenberg, Company Surgeon and Medical Examiner.

Peoria & Pekin Union Ry.
Pullman Company

Railway Express Agency, Inc.

Reading Company

St. Louis-San Francisco Ry.
St. Louis Southwestern Ry.
Seaboard Air Line Ry.
Staten Island Rapid Transit Ry.

Southern Pacific Co.—Pacific L
Southern Railway System
Texas & New Orleans R. R.
*Toledo Terminal R. R.

Union Pacific R. R.
Wabash Ry.

Western Maryland Ry.

Western Railway of Alabama

Association of American Railroa

Railroad Retirement Board

United States Public Health Ser

University of Illinois

* Associate Member.

(Circular M. & S. 206)

ASSOCIATION OF AMERICAN RAILROADS

MEDICAL AND SURGICAL SECTION

REPORT OF COMMITTEE ON DISABILITY AND REHABILITATION

Dr. J. R. Garner (Chairman), Chief Surgeon, A. & W. P. R. R., W. Ry. of Ala., Georgia Railroad.

Dr. Glenn J. Jones, Chief Surgeon, Southern Railway System.

Dr. John McCombe, Chief Medical Officer, Canadian National Railways.

Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Railway.

Representative of Committee of Direction

Dr. W. J. Lancaster, Superintendent & Medical Director Relief Department, Atlantic Coast Line Railroad.

NEW YORK, N. Y., May 19, 1939.

TO THE MEDICAL AND SURGICAL SECTION:

This Report of your Committee on Disability and Rehabilitation covers its activities for a period of two fiscal years, there having been no annual session of the Medical and Surgical Section held during the year 1938.

The Committee has held meetings in New York and Chicago and has conducted a large part of its investigation through correspondence.

While your Committee, at this time, presents some subjects not heretofore reported upon it feels that the major subjects previously investigated and brought to your attention are of paramount importance, and these subjects are reviewed in the light of more recently acquired data. We therefore invite your consideration of the following topics:

Dysfunction of the Ductless Glands

During recent years the Chief Surgeons of several railroads have become interested in the possibilities of endocrine therapy, even to the extent of adding an endocrinologist to the list of their consultants.

In order to ascertain the practical usefulness of such medication to railway employees the morbidity figures of a member line, with an average working force of something over seventy thousand men, have been scrutinized for the year 1938 and enquiries have also been made through various authorities specializing in the field of endocrinology. The result of these investigations has produced two conclusions. On the one hand that the limitations of the glandular treatment are, in the light of our present knowledge, definitely prescribed and that in the ordinary work of industrial or railroad medicine these limitations should not, generally speaking, be exceeded with any expectation of definite results. On the other hand, laboratory and other experimental work is proceeding at such a pace that definite and valuable additions to endocrine therapy may be expected in the near future. For this reason the following resumé of glandular disorders and their treatment, as applicable to railway employees, is presented herewith.

Peoria & Pekin Union Ry.	J. E. Meloy, Chief Surgeon.
Pullman Company	T. R. Crowder, Director, Department of Sanitation and Surgery.
	R. M. Graham, Chief Medical Examiner.
Railway Express Agency, Inc.	E. C. Holmblad, Regional Surgeon.
	J. W. Titman, Claim Agent.
Reading Company	F. S. Ferris, Chief Medical Officer.
	A. Neupauer, Superintendent, Philadelphia-Reading Relief Association.
St. Louis-San Francisco Ry.	R. A. Woolsey, Chief Surgeon.
St. Louis Southwestern Ry.	William Hibbitts, Chief Surgeon.
Seaboard Air Line Ry.	J. D. Collins, Chief Surgeon.
Staten Island Rapid Transit Ry.	E. V. Milholland, Medical and Surgical Director.
Southern Pacific Co.—Pacific Lines	C. A. Walker, Chief Surgeon.
Southern Railway System	G. I. Jones, Chief Surgeon.
Texas & New Orleans R. R.	J. L. Taylor, Chief Surgeon.
*Toledo Terminal R. R.	Tom Brown, Surgeon.
	N. T. Barnes, Assistant Surgeon.
Union Pacific R. R.	J. R. Nilsson, Chief Surgeon.
Wabash Ry.	W. E. Gollings, Superintendent Wabash Hospitals.
Western Maryland Ry.	F. C. Warring, Senior Chief Resident Surgeon.
Western Railway of Alabama	J. R. Garner, Chief Surgeon.
	also
Association of American Railroads	R. S. Henry, Assistant to President.
	J. C. Caviston, Secretary, Medical and Surgical Section.
Railroad Retirement Board	J. W. Callender, Chief, Disability Claims.
	M. E. Lynch, Director, Retirement Claims.
United States Public Health Service	Albert E. Russell, Surgeon in Charge Syphilis Control in Industry.
University of Illinois	S. Perry Rogers.

* Associate Member.

Within the limits of our present knowledge should be considered the thyroid, pancreas and suprarenal glands, all of which show varying grades of glandular dysfunction in the adult, and to cope with which we have at our disposal definite extracts and substances obtained from these glands for the correction of their deficiencies.

Considering the thyroid gland first, we have, of course, the hypo and hyper function of this gland. Hypofunction or myxoedema manifests itself in a general slowing of all body functions, a lowering of the oxygenation of all tissues, namely, a low basal metabolic state. The metabolism test for this deficiency represents a low oxygen utilization by the body tissues and one obtains a minus precentage utilization calculated upon the basis of surface area and body weight and height. In contradistinction to this, the hyperfunctioning thyroid will show an increase percentage utilization of oxygen calculated in the same manner.

The symptoms and signs of a hypofunctioning thyroid will, of course, be increasing body weight, slow pulse or heart rate, low blood pressure, dry and generalized thickening of the skin with oedema, dry falling hair and brittle nails, lethargy, fatigue, sensitivity on exposure to cold, drowsy, sleepy, heavy feeling, a sluggish function of the intestinal tract and inability or lack of ability to generalized body perspirations.

The consideration of treatment centers around the degree of hypofunction which exists and this may be determined by a basal metabolic test which will furnish the oxygen utilization. Knowing this, we can proceed to give thyroid extract to make up for the lack of normal secretion. In doing this it is well to remember that the U.S.P. and the B.P. differ in their standardization of the extract and therefore their potencies differ. The U.S.P. form is some six times stronger than that of the B.P.

The hyperfunctioning thyroid will be manifest in the signs and symptoms of an overactive gland function with loss of body weight, irritability, profuse generalized perspirations, nervousness, sleeplessness, loose frequent bowel actions, increased pulse and heart rates, elevated blood pressure with an increase of pulse pressure, moist hot skin of fine velvety texture with flushing, the nails will be soft and pliable and the hair will be oily and moist with a natural sheen.

This form of thyroid disturbance requires the administration of iodine in the form of Lugol's Solution in order to help the gland store its normal secretion, and after obtaining a lowered basal metabolic rate then either surgical removal of part of the gland or X-ray radiation of the gland should be resorted to. The surgical removal or treatment by X-ray radiations is necessary to remove some and at times all of this hyperfunctioning glandular tissue, as it will soon take on increased activity again.

We should next consider the pancreas and in this we have to deal in the great majority of cases with hypofunction of the gland which results in a definite disturbance of the body's sugar metabolism. This will be seen in the signs and symptoms of loss of body weight, lack of energy and strength, nervousness and general irritability, itchiness of the skin, frequency of urination, increased

thirst and appetite, headaches an
of the urine will usually reveal a
evidence of reducing substance fo
words, the presence of sugar in the
reveal an increase in the sugar con

In the treatment of this pancrea
has been prepared as an extract
requires to be given hypodermicall
amount of sugar found in the blo
has been combined with protamin
tion of the extract, and thereby p
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individuals because it promotes a
into the body and prevents many
suffering from diabetes and this
known as insulin or diabetic con
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day and thus permits the individu
necessity of frequent repetitions
from the older form of insulin to
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The hyperfunctioning suprarena
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thirst and appetite, headaches and frequently ocular disturbance. Analysis of the urine will usually reveal an increased density or specific gravity and evidence of reducing substance for Fehling's or Benedict's Solution, in other words, the presence of sugar in the urine. Chemical analysis of the blood will reveal an increase in the sugar content.

In the treatment of this pancreatic deficiency we have today insulin which has been prepared as an extract of this gland. Insulin in the original form requires to be given hypodermically several times a day, depending upon the amount of sugar found in the blood and urine. The newer form of insulin has been combined with protamine zinc, in order to promote a slower absorption of the extract, and thereby prevent a too rapid reduction in the level of sugar circulating in the blood stream. This is of great assistance to most individuals because it promotes a much slower administration of the insulin into the body and prevents many acute drops in the blood sugar levels of those suffering from diabetes and this offsets and prevents many of the collapses known as insulin or diabetic coma. Another great advantage to working people is the fact that this form of insulin only requires to be given once a day and thus permits the individual continuing at his employment without the necessity of frequent repetitions of his insulin requirements. In changing from the older form of insulin to the newer protamine zinc form it should be clearly understood that very careful observation and study of the blood sugar must be made, in order to see whether the individual can use this form successfully or not.

More recently clearer conceptions of the suprarenal function have been formed, and with this one may now differentiate between a hyperfunction and a hypofunction of this gland.

The hyperfunctioning suprarenal gland cases show paroxysms of hypertension with paroxysmal or permanent tachycardia, nervousness, irritability, headaches and difficulty in metal concentration. These cases all show definite tumor formation within the gland which though usually unilateral, may be bilateral. The treatment of this condition is surgical removal of the gland involved.

On the other hand, the case of hypofunctioning suprarenal shows signs and symptoms of marked fatiguability, weakness, loss of strength and energy and a great inability to concentrate, dizziness and feelings of great unsteadiness. Physical examination reveals a slow pulse, low blood pressure and small pulse pressure not unlike a case of hypothyroidism. The basal metabolic rates will also be found to be low.

The treatment of this condition depends upon the use of Cortin, the cortical extract of the suprarenal gland, and the use of ordinary sodium chloride by mouth. The latter has been found of considerable value alone, as it has been pretty clearly demonstrated that in this hypofunction of the suprarenals there is a very definite loss of sodium and disturbance of sodium metabolism within the body.

The above fairly well covers our present definite knowledge of glandular dysfunctions and their treatment, more particularly as applied to industrial

and railway employees. The future holds great promise for the successful extension of endocrine therapy and by it to maintaining prolonged energy and fitness for work in ageing employees.

Your Committee realizes the difficulty attendant upon compilation of data from already existing records in which specific items may not have been tabulated and indexed. Chief Surgeons of member lines are therefore requested to maintain full records during the ensuing year of all cases of glandular dysfunction coming to their attention and to be prepared, before the next annual meeting, to supply the data requested in a questionnaire, as follows:

To what extent have you made use of endocrine therapy during the year 1939-1940.

Number of cases treated for thyroid dysfunction:
Number of cases treated for pancreatic dysfunction:
Number of cases treated for suprarenal dysfunction:
Number of cases treated for other form of glandular dysfunction:
Results obtained in each category:
What is your opinion of the future usefulness of endocrine treatment for industrial workers?

Common Colds

Our Railroads sustain a tremendous annual loss of time due to disability of employees who have developed that form of respiratory infection known as "common colds." This is more noticeable in office employees; due to close proximity, and frequent crowding in inadequately ventilated offices, where the infection appears to spread with great rapidity.

The prophylaxis of common colds is both hygienic and medicinal.

Hygienic measures consist of:

(1) An abundance of fresh air in sleeping quarters, offices or work rooms.
(2) Avoidance of sitting directly in drafts.
(3) Removal of top coats, wraps, etc., upon entering a warm room.
(4) Removal of wet clothing or shoes upon entering the house.
(5) When coughing protect others by holding a handkerchief over your mouth and nose.
(6) When you have a cold:
    (a) Reduce amount of exercise.
    (b) Make sure of proper eliminations.
    (c) Maintain a nourishing diet.
    (d) Increase the amount of fluid intake.
(7) When you have a cold accompanied by fever go to bed and call your family physician.

Medicinal Prophylaxis:

(1) Vaccines administered hypodermatically. These have been thought by many to be from 60 to 80 per cent effective in the prevention of colds. The cost, associated with the inconvenience of hypodermic

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(2) Practically the same bacterial vaccine is now available for oral administration in either capsules or enteric coated tablets. These are administered one each morning for a period of seven days, after which one capsule or tablet is taken twice a week, until twenty (20) have been taken in all.

The Chief Surgeon of one member line has used this quite extensively and believes to have reduced sickness from common colds among his employees by at least 37½ per cent. This form of administration is less expensive to the patient and does not hold the antipathy attached to hypodermic injections. A longer study will be required to determine the efficacy of this means of prophylaxis.

Chronic Arthritis

On several past occasions your attention has been called to chronic arthritis which, in some form or other, constitutes a disability in itself or is associated with some real or alleged injury. Probably the most frequent complaint is that of low back pain. Records seem to indicate that the presence of arthritis of the spine is on the increase, probably it is being more frequently recognized and diagnosed. In all cases of alleged back injury, without definite symptoms—either local or manifest by the X-ray, we stress the importance of seeking for and, if possible, identifying some distant or obscure foci of infection as being the true offending factor.

Mental Disorders

In our 1937 report your attention was called to several forms of mental disorder, which may at any time arise in other apparently healthy individuals and constitute a serious menace if the employee be engaged in an occupation wherein he may constitute a hazard to himself or others. Cerebral arteriosclerosis, encephalitis, following infectious diseases, and the catastrophe of cerebral syphilis were mentioned as diseases productive of metal disorders, and drug addiction as a habit productive of the same ill effects.

We cannot emphasize too strongly the importance of a firm handling of any individual suspected to have developed some mental disorder. They should not be permitted to remain in positions of responsibility.

Recently many Psychiatrists became enthusiastic over the socalled "Insulin Shock" treatment of mental conditions. More recently still, a preparation known as "Metrazol" has come into prominence with the report of many cures following its use. Time alone will prove the permanency of such reported cures.

Some physicians are of the opinion that a person having suffered a mental disorder and later having been pronounced as recovered therefrom is capable and safe to resume his former occupation. The Psychiatrists, asked for their

opinion by members of your Committee, have been unanimous in the opinion that a person having once suffered from a mental disorder is more prone to recurrence of his aberration, particularly if he returns to the same social, family and business surroundings which existed at the time of his first mental breakdown. For this reason great caution should be exercised in the returning of such employees to responsible or hazardous occupations.

Epilepsy

While your Committee has previously reported upon its investigation of epileptics as a hazard in railway industry, a member line has asked for information on this subject.

Any person known to have had an epileptic seizure is a hazard in any form of railway train service and should be withheld from all such employment. The fact that the sufferer has never previously had a similar attack is no defense since everything temporal, even epilepsy, must have a beginning.

It is indeed difficult, if not impossible, to diagnose epilepsy in a person not seen during the seizure. In the interim he may appear as a perfectly normal individual. There is a possibility of scars being present on the tongue where this organ has been bitten in the attack, but even this would only be subjective evidence. As a general rule reliance must be placed upon the statements of persons who have seen the sufferer in his seizure and who can accurately describe the manifestations at that time.

It has previously been recommended that any period of unconsciousness suffered by an employee and not otherwise sufficiently and satisfactorily accounted for should be looked upon as a suspicious case of epilepsy.

Syphilis

Among railroad employees there can unquestionably be no more important hazard than that constituted by syphilis. Education is now accomplishing much toward convincing the unfortunate syphilitic that his malady is amenable to treatment if taken in hand in its early stages and treatment is persisted in for a sufficiently long period of time. We cannot stress too greatly the importance of impressing syphilitic employees with the fact that their employment is not to be interfered with if their condition is not in a stage that would constitute a hazard to others or has not advanced to that point where there is little hope of controlling and curing their trouble. This, of course, providing they undergo prompt, efficient, and sufficient treatment. They should be kept under regular and frequent observation. Quite obviously there is no place in train and engine service for the neurosyphilitic.

In examining railroad employees or applicants for employment, it is more essential to ascertain that the party in question does not have syphilis than to learn that he does. A relatively low blood test, described as Klein's Test,

is reputed to be more effective for this purpose in that a negative reaction gives assurance that the subject is non-syphilitic. In the presence of a positive reaction, the blood should be checked by the Wassermann and Kahn Test before a positive diagnosis is reached. The ease, rapidity and relative inexpensiveness of the Klein Test, together with its reliability as to negative findings, makes it especially applicable for examination of railway employees.

Poison Oak

In 1931 your Committee made an extensive study of the subject of skin conditions due to employees working upon the roadway and telegraph lines coming into contact with poison oak, poison ivy and similar growths.

At the present time the consensus of opinion is that if the parts coming into contact with these poisonous plants are immediately scrubbed with an abundant amount of soap and water this process will remove the poison before it has penetrated the skin and will prevent the development of the characteristic lesions. As a preventive against poison oak infection, it is suggested that laundry soap be applied to the exposed parts, such as the arms and hands, in the form of a heavy lather which should be permitted to dry on the skin.

Tuberculosis

No new data relative to the development or treatment of tuberculosis have been presented to your Committee since its last report upon this subject. The consensus of opinion, however, is to the effect that all active manifestations of tuberculosis shall have been in abeyance for a period of approximately one year before the railroad employee should be permitted to resume his former duty.

Diabetes

While there have been no particularly new developments in the diabetic field, your Committee feels that it should not overlook this opportunity of bringing to your attention the ocular changes which occur in persons subject to this disease and to the insidiousness with which such ocular changes occur. It is recommended that all diabetics should be required to stand a test as to their visual acuity at fairly close intervals.

We reiterate our former recommendation, which was based upon advices received from the foremost members of the profession treating diabetes, that no diabetic requiring Insulin for the control of his sugar output should be permitted to engage in any form of engine or train service, or any other occupation where he would constitute a hazard to himself or others.

Cardio-Vascular-Renal Disease

The importance of Cardio-Vascular-Renal Disease in Railroad employees cannot be too greatly stressed. Your Committee feels justified in reiterating

a portion of its 1936 Report wherein twelve (12) Rules to be applied in the examination of employees were set out.

It was recommended that the following features should be investigated and evaluated, singly and in conjunction with each other:

(1) Blood pressure.
(2) Palpation of pulse.
(3) Auscultation of heart.
(4) Urinalysis, including microscopic.
(5) Blood Wassermann.

Abnormality to a significant degree in any of the above would disqualify an applicant for employment, and in the case of the reexamination of employees, already in service, further examination is recommended, including:

(6) X-ray of Heart—Two views, plus fluroscopy.
(7) Electrocardiogram.
(8) Blood chemistry, especially N.P.N. and blood sugar.
(9) Moderate Physical Exertion and Its Effect upon Heart, Pulse, Blood Pressure, M.B.R., etc.

In exceptional cases further tests may be needed to complete and confirm the foregoing; in this connection the following are suggested:

(10) Ophthalmological Examination, especially for sclerotic changes in the retinal vessels.
(11) X-ray of extremities with soft tissue technique for evidence of arteriosclerosis.
(12) Steiglitz Nitrate Test for Arteriosclerosis in hypertensive cases.

A diastolic pressure of 100, and/or a systolic pressure of 200 or more should be regarded as being in the danger zone.

We no longer hear of the occurrence of sudden deaths due to "acute digestion" and other vague maladies. We have learned that almost invariably the cause of death in such cases is due to coronary occlusion. All physicians engaged in railway service should familiarize themselves with the essential predominant symptoms of coronary occlusion since the recognition of the condition when the patient is first seen may result in the preservation of a life. Laymen working in railway shops, and all trainmen, should be cautioned against moving any person who is suddenly seized with a shortness of breath and a feeling of oppression around the heart. These persons should be kept in a recumbent posture, with the ties and collars open at the neck, until the physician arrives upon the scene. To undertake to transport these patients to their home or hospital may result in a fatality.

A person having suffered from a coronary occlusion should be considered unfit for any future employment in engine service.

Heat Cramps

With the approach of summer months, your Committee feels that attention should again be directed to what has previously been stated with reference to heat cramps and the prevention thereof.

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It has been estimated that a
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It is a well established fact that the condition known as "heat cramps," "bends" and several other names, is in reality a condition brought on by excessive perspiration, which removes from the blood a large percentage of its sodium chloride content. The amount of water carried off by this excessive sweating is replaced by the drinking of equal or large amounts of water. If sodium chloride is taken in a sufficient quantity to make up for the loss sustained, heat cramps may be avoided.

It has been estimated that as much as 15 pounds (2 gallons of water) and 25 grams of salt may be extracted from a normal man in the course of 24 hours by excessive sweating.

Salt tablets are available as a matter of convenience and may be obtained with dextrose added for those who prefer this combination. It is frequently easier to get employees to swallow a tablet with each drink of water than it would be to get them to take granular salt or drink a salty water, though either would answer as well.

Various machines for dispensing salt tablets at or in proximity to the supply of drinking water are now upon the market. These are quite handy and act somewhat as a stimulus to remind the worker that he must partake of salt with each drink of water.

Pneumonoconiosis

Your Committee made a report on the subject of Pneumonoconiosis, which appears in the Proceedings of the Seventeenth Annual Meeting of the Medical and Surgical Section.

The Air Hygiene Foundation of America, Inc., has given much time and attention to the study of pneumonoconiosis, silicosis, anthricosis and other allied trouble. The Chairman of your Committee attended the annual sessions of the Air Hygiene Foundation of America, Inc., held in Pittsburgh, Pa., in November, 1937, and November, 1938.

A resumé of the principal points stressed by the speakers at these meetings is as follows:

Dr. Willard E. Hotchkiss, Maurice Falk Professor of Social Relations, Carnegie Institute of Technology: "Social Aspects of Industrial Health." The important feature brought out by this speaker was that two million days were lost each year on account of failure in health of employees—the cost of this running up to some six million dollars. The cost of training new employees was stressed as being exceedingly heavy—much more so than the prevention of illness. Emphasis was also made of the fact that acts of man are responsible for more injuries than the act of God; and much was said as to prevention being less costly than corrective measures.

Mr. Philip Drinker, Chairman, Preventing Engineering Committee:
"Engineering Progress toward further Protection of Industrial Health;
Report of Preventive Engineering Committee, Including Plans for 1939."
Expressed little that could be applied to Railroad work, but made mention of specially constructed paint spray booths and exhaust systems for plants.

Mr. T. F. Hatch, New York State Division of Industrial Hygiene:

"State Codes for Control of Industrial Health." Dealt extensively with unintelligent regulations in the several State Codes, and made recommendation of the adoption of certain fundamental principles which might be incorporated in all. He insisted that the various Codes should be grounded on facts and authentic data; and stated that the objections to the several State Codes are that they are not definitely and intelligently worded and should solve the problems of little industries as well as large. He stated that the Codes, as at present existing, had a tendency to stifle progress and they should be rewritten so as to become educational, and to embrace common sense. He stressed the fact that less then 10 per cent of accidents were due to mechanical failures.

Mr. Theodore C. Waters, Chairman, Maryland Occupational Diseases Commission:

"Legal Trends of Interest Respecting Industrial Health." This speaker stated that twenty-one States now have Compensation Laws but what is, or what is not, an Occupational Disease was not definitely defined by the Law. His idea is that Occupational Diseases are conditions which are due to some peculiarity of the occupation.

Dr. A. J. Lanza, Chairman, Medical Committee:

"Medical Progress Toward Further Protection of Industrial Health; Report of Medical Committee, Including Plans for 1939." This speaker stated that in his opinion instead of removing man from dust infection work that the dust should be removed from the work. He urged periodic examinations, and stated that tuberculosis, or a tendency thereto, increases disability. He stated that there is no specific treatment known for silicosis. He urged that a check be made on the absenteeism to learn whether the illness be really due to occupational illness or to a general illness. He also referred to an International Labor Board which has made some investigations along these lines.

Dr. E. P. Pendegrass, University of Pennsylvania Hospital:

"Some Practical Considerations Concerning Lung Changes Among Silica Workers." The only factor of interest brought out was that pure silica produces definite nodular fibrosis.

Dr. Leroy U. Gardner, Director, The Saranac Laboratory:

"Report on Further Researches on 'Mixed' Dusts and 'Protector' Dusts." Had nothing in particular that was not covered by other papers.

Dr. S. Reid Warren, Jr., Associate Director, The Moore School X-ray Laboratory:

"Comparison of Film and Paper in Roentgenographic Work." Dealt quite extensively with the use of X-rays made directly upon paper and those made on films—and this might be of interest to the railroads in making check-ups and in examination of applicants. The speaker stated that of 1342 films made, 114 made on paper and 39 made on film were not diagnostic. In other words, they were not Roentgenograms of any value. He called attention to the fact that X-rays on paper show reflected

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light, whereas, those made on film show transmitted light and therefore possibly more detailed but stressed the point that paper is sufficiently adequate for industrial surveys—though the sharpness was not as contrast, and not as marked as in the films. His suggestion was that owing to the cheapness and rapidity of paper, same is recommended for survey work and general observation, and cases requiring further study could be detailed with films.

Mr. V. P. Ahearn, Executive Secretary, National Industrial Sand Association:

"Industrial and Public Relations Aspect of Industrial Health," stated the Wagner Act cannot accomplish the purpose intended until both employers and employees are disposed to compromise with each other. He stated that the Wage and Hour Law cannot be held constitutional unless the Supreme Court reverses itself in its ruling on the Child Labor Law.

Foci of Infection

In previous reports your Committee has brought to your attention the more frequent foci of infection responsible for arthritis of the spine and other parts, low back pain, and various other complaints which an employee, having sustained some slight accidental injury, may be inclined to connect with the said injury. The teeth, tonsils, prostate, colon, and hemorrhoids are the more frequently found sites of such infection.

Studies are now being made by your Committee of the incidence of Foci of Infection among railroad employees retired under the Railroad Retirement Act because of permanent and total disabilities.

The Railroad Retirement Board is indulgently cooperating in the preparation of this work by placing at the disposal of a member of the Committee, the records of physical examination of railroad employees who have been retired for disability.

In these studies an endeavor will be made to analyze the probable effect of past existing and neglected foci of infection as the immediate and contributing cause of more serious defects which become sufficiently severe to constitute disabilities, and the effect of presently existing foci of infection to the production of disabling defects.

It is purposed to prepare these studies so that analyses may be made in age groups, geographical location, location and degree of disabling defects, and site and degree of the focus of infection.

To date eighty (80) cases have been reviewed. The following data are, therefore, only a preliminary report on this phase of your Committee's work.

The approximate average age of the group studied is fifty-nine years.

The most commonly found previously and presently existing focus of infection is the teeth.

History of, or the existence at the time of examination of, more than one focus of infection is not uncommon.

The most common disabling defect is of the cardio-vascular system and the diagnostic types exist in the following order:

1. Myocardial degeneration.
2. Hypertensive heart disease.
3. Arterio-sclerotic heart syndrome, in which group is included the coronary insults and accidents.
4. Valvular heart disease.

The preliminary examination of records appears to confirm the experience among railroad surgeons that:

1. Periodic physical examinations with the discovery and early removal of foci of infection (teeth, tonsils, naso-pharynx and accessory sinuses, prostate, colon and hemorrhoids) will conserve the collective health and physical preservation of the individual, prolong work capacity, increase work efficiency, and increase the age increment of disability groups.
2. Railroad employees are fairly generally neglectful of balanced diets, recreation, and proper physical exercise.
3. Improvement of well-being and contentment may be expected to follow some specific program of instruction for the larger groups of railroad employees in health preservation and disease prevention, particularly in the numerical reduction of disabling cardio-vascular disturbances.

Your Committee expects to continue this special study and to present to you, in a later report, a tabulation of some 400 or 500 cases who have been retired under the Act.

Rehabilitation

In a previous report (May 25, 1938—Circular M & S 200) your Committee has indicated the structural difficulties presented by contracts between the railroads and employee organizations to the promotion of any constructive endeavor in rehabilitation of partially disabled employees.

The transfer of partially disabled railroad employees from a specific type of work for which he has been trained and in which he is proficient, but for which he is disabled because of some physical defect, would appear to be sound practice from the viewpoint of the employee as well as the employer. Rehabilitation policies and programs for the education and training of men disqualified because of increase in the accident risk created by his physical defect could be adopted and made effective if sympathetic interest and support could be developed.

The situation at present precludes the adoption and practice of a positive rehabilitation program.

There does exist now an opportunity for a form of rehabilitation, which, while it has no particular value to the service accomplishments of the employee has a human and morale value which should be promoted.

This has to do with the preparation, through education, of those employees who are approaching the age in which disqualifying physical defects and

enforced retirement becomes inevitable both in the interest of the longevity of the individual and the preservation of the reasonable degree of collective efficiency of personnel which a properly operated transportation system demands.

It is a common experience that railroad employees are psychologically unprepared for retirement because of disqualifying physical defects or of age and are not only separated from the work to which they have devoted their lives, in a most unhappy mental state, but resent and resist the action as an unjust and unreasonable imposition creating an event for which they are neither economically or spiritually prepared.

Considering the elements of accident risk and maintenance of average collective efficiency in railroad operation, it is not unreasonable to assume that practically all railroad employees who reach the age of sixty-five years may expect retirement because of physical defects and that continuance beyond that age will be rare exception rather than the indulgent practice.

It would, therefore, be appropriate to give all employees knowledge of the fact that experience (a) justifies the anticipation of retirement between the ages of 55 and 65; (b) the transition from active railroad work to mentally less engaging and interesting existence on a retired status creates a sense of insecurity and unhappiness unless some compensating avocation is developed to maintain interest after retirement.

It is recommended that appropriate action be taken in the organization of program of instruction and education through the brotherhoods and railroad authorities in order that employees may be fully informed of the necessity of mental interest in the attainment of physical health and contentment when the event of retirement is imposed upon them.

Retirement

The Railroad Retirement Laws recite in general the following condition under which annuities will be paid to physically disabled railroad employees:

a. The employee must be totally and permanently disabled for regular employment for hire in any work (railroad or other) which the Board construes to be substantial and not trifling, and

b. Must be sixty (60) years of age or have completed thirty (30) years of service.

The interpretation which the Railroad Retirement Board has made on the provision of this Act, presumes that railroad employees who are discontinued from service because of physical disqualification and consequent intolerable increase in the accident risk, may be transferred to less exacting occupations in the railroad organization or, without difficulty, secure other gainful work. The age and service limitation of the Act in determining eligibility for disability annuities places all men beyond fifty (50) years of age.

It is inconsistent with past and present experience to expect individuals fifty years of age to acquire proficiency in new occupations which will make the return for the work substantial and not trifling.

Considerable confusion and, at times, considerable difficulty have been experienced in presenting to the Railroad Retirement Board evidence of physical disability sufficiently convincing to warrant prompt action in favorably concluding that the individual is entitled to disability annuity under the Board's interpretation of the Act.

Disabled employees, who are under sixty-five years of age, are largely dependent upon the railroad surgeons for successful promotion of their cause.

The Retirement Board has very properly recognized the "carrier" Surgeons as the medical authority to make the physical examination of employee applicants for disability annuity. This is as it should be. The Board has provided a special form of history and physical examination, designated Form No. B-58.

The Railroad Retirement Board is charged with the responsibility of determining from the report of physical events and findings included in Form B-58 the eligibility of the applicant for annuity under the provisions of the Act.

The responsibility of determining total and permanent disability cannot be legally delegated, in fact or inference, to the designated examiners. That must be done by the Railroad Retirement Board.

From the foregoing it is patent that "Reports of Physical Examination" must be **complete** and **convincing** as to **existence of disqualifying defects** and **in degree to permanently and totally disable.**

The procedure established for the consideration and processing of applications for disability annuity appears sound and reasonable.

The use of selected "carrier" Surgeons as the medical authority designated to procure and represent in reports of physical examination the nature and degree of disqualifying defects and disabilities is proper. No other class of medical examiners can understandingly and sympathetically represent the disabled railroad employee in securing his rightful retirement heritage when his working capacity is reduced to the necessity for complete relinquishment of earning ability.

Under the Railroad Retirement Act the Board is the responsible authority designated to determine eligibility of employees for disability annuities.

The Board cannot legally transfer or delegate its authority or responsibility to medical examiners or others to finally determine "total and permanent disability" under the Act. This determination must be made by the Board.

The work of the Board and the interests of the totally disabled employee can be advanced by careful, complete, and positive preparation of the Report of Physical Examination, Form B-58. This report should, in each instance, contain a statement of the conclusive diagnoses which are disabling, supported by a full statement in the several paragraphs of the symptoms and physical signs which were developed in reaching the diagnosis. The requirements of the Railroad Retirement Board are reasonable and necessary.

The fulfillment of these requirements lies in the preparation of Reports of Physical Examination which give a recitation of a clinical picture which indubitably shows the applicant to be permanently and totally disabled under the interpretation of the basic law.

This is an important obligation of Chief Surgeons—one which cannot be

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ignored if the happiness and contentment of railroad employees is to be promoted in the transition from active service to retirement.

In conclusion, your Committee desires to express appreciation of the assistance rendered by the member lines and their Chief Surgeons and to earnestly solicit a continuation of this support and cooperation in connection with its further endeavors. It is obvious that the work of this Committee is endless, and we, therefore, respectfully submit the data herein contained with the request that same be accepted as a Progress Report.

Respectfully submitted,

COMMITTEE ON DISABILITY AND REHABILITATION,
J. R. GARDNER, M.D., Chairman.

THE CHAIRMAN: Dr. Garner's report will now be followed by the remarks of several gentlemen who have been asked to discuss special aspects of it. Before we go ahead with these discussions I believe Secretary Caviston has another announcement or two to make.

. . . Secretary Caviston made a few additional announcements regarding the day's and evening's program.. . .

THE CHAIRMAN: Following the presentation of the papers and remarks of these several gentlemen who are going to take up specific aspects of Dr. Garner's paper, we will have a general discussion in case anybody wishes to go into the subject further. First we will hear from Dr. Bartle.

Discussion pertaining to the report of Committee on Disability and Rehabilitation, presented at the Annual Meeting of the Medical and Surgical Section of the Association of American Railroads, Chicago, Ill., June 15th and 16th, 1939,

by

DR. HARVEY BARTLE, Chief Medical Examiner,
Pennsylvania Railroad.

Colds:

Persistent, baffling and misunderstood. The inability to check, retard or greatly modify the prevalence of common colds in its sporadic or epidemic forms, is a gentle reminder of our medical limitations.

We can all too well describe it minutely but prevent or abort its progress is another problem.

Industry pays a tremendous toll. It disrupts home life, school life and every phase of collective human expression at times.

We advise educational and hygienic measures, with a definite plan and yet without signal success. It is practically the only thing of which I have knowledge that has not yielded, the cause of which I cannot answer.

I personally feel like adding to 6-b especially orange juice and perhaps there would be objectors to it.

I would be audacious enough to make another suggestion No. 7—When you have a cold go to bed, whether you have a fever or not and whether or not you call a physician, of course the latter is highly desirable.

I would not advocate any lessening of our professional activities—

It would isolate.

It would prevent secondary infections.

It would hasten recovery.

Surely most desirable accomplishments.

Full recovery will stem the tide of disseminators.

Not long since I sent out a questionnaire as to the efficacy, use and recognized results following the use of bacterial vaccines "Hypo." It was forwarded to a representative group of physicians in all classes throughout U. S.

Their gracious replies indicated about 75% favorable in all aspects and practically 100% when we consider it as an agency to curtail the secondary manifestations.

My personal opinion is a favorable one, covering an industrial use of about two million injections during the past twenty years. We failed to collect statistics to definitely prove this impression.

We have not used the oral type, if effective of course it would be more desirable.

As to medical aids, I feel Codeine Sulphate is par excellent.

Cardiovascular-Renal Disease:

With the recent refinements in disgnosis it is becoming more and more apparent the role the heart plays as an exit to man in leaving the joys, trials and tribulations incident to twentieth century life. Cardiacs whom we expect to pass on live, many persons pass out through the cardiac route whom we do not expect to do so, as there are no previous symptoms or signs illicitable on which to predicate such an end.

Of course, blood pressure should be studied; except in few cases it is not a predictable factor. There should be limits established when properly taken, beyond which it is unreasonable to continue persons in hazardous work.

With laboratory measures, such as Ekg., X-ray, etc. together with clinical symptoms, we can segregate about two-thirds of cardiac deaths; there are, however, about one-third remaining in the category referred to above who pass out suddenly, on or off duty, and who have been regularly examined periodically with no record of any abnormality.

We should heartily endorse the suggestion of more general use of ophthalmoscope to give an accurate picture of eye grounds, x-ray of extremities to which reference has been made, as well as the dorsalis pedis pulse to formulate a composite picture.

Precipitating factors—over-exertion, putting the heart muscle on the stretch, thus over-stretching the sclerosed coronary artery, emotional aspects, physical effort and over indulgence.

We can admonish against over-weight, use of tobacco, emotional stress or strain, excessive physical effort.

Do not be unwarrantedly perturbed when you have unexpected sudden heart deaths, we all have them. If you do not, remember the story of the ostrich.

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The compiling of data surrounding such cases may eventually lead to further assistance in enlarging our sphere of diagnosis.

Medical history pertinent, existing luetic infection, habits, eating, smoking are important considerations.

Symptoms—Gastro-intestinal disturbances, respiratory difficulty, congestive phenomena are helpful leads.

The proper appraisal of the heart load depends much on the kidney involvements,and also a possible long standing hyperglycemia. Functional kidney tests are becoming more necessary to approach a definite status evaluation of the heart and kidneys and may reveal involving features.

With the accomplishments in medical progress removing many physical impediments the life span has been increased, thus causing the subject of our discussion to become an important factor in the Geriatric field of medicine.

We do not meet the artful malingerer in this group. We must of necessity be the safety agents as all involving issues are purely medical.

Therefore, the recognized insidious and subtle focal infections should be sought and eradicated early to avoid irreparable damage before they are removed.

Surely the last word has not been said in the human heart role.

It emphasizes the expediency of periodical examinations in persons in the transportation industry to avoid jeopardizing life and property.

Expressing our appreciation of this splendid report of the Committee we still recognize there are more worlds to conquer just around the corner.

THE CHAIRMAN: We will next hear from Dr. Ide, Chief Surgeon, Northern Pacific Railway.

DR. A. W. IDE (Northern Pacific Railway): Doctor Garner has referred to the report read by Doctor J. D. Collins on pneumoconiosis at the last meeting of this Section. In that report, Doctor Collins described in some detail, the clinical aspects of this disease. His report was comprehensive and was of real value to the Association. Doctor Garner's report wisely omits this phase of the problem and deals largely with quotations from various authors. The present committee is to be commended on again bringing this very important problem to our attention.

The word "pneumoconiosis" comes from the Greek and means, "disease of the lungs caused by inhalation of dust." It is a general term and is used to include various diseases that are caused in this way. These diseases are: Silicosis, Anthracosis, Asbestosis, and kindred conditions.

There is a great variety of dust that may be inhaled and may cause disease in various ways. Certain metals such as lead and arsenic may be taken into the lungs by inspiration and cause definite and rapid poisoning. Certain other substances may be inhaled and cause chronic irritation, and such conditions as bronchitis. Other substances will cause immediate irritation and an acute inflammatory process in the lungs.

The work that has been done on this subject has included various substances. The conclusion has been reached that the real problem in pneumoconiosis is silicosis. It has been shown that other substances are comparatively inert and inactive when taken into the lungs. This is true of coal dust, iron dust, and a great variety of other substances. The actual trouble resulting from these

substances is due to the silica content and the resulting silicosis, so that practically speaking, the problem is silicosis rather than pneumoconiosis.

It is interesting to note that there are very considerable changes due to these other substances.

I recently saw a post mortem on a patient who had worked in an iron mine all his life. The lung was the red color of iron ore and was very heavy. He must have had a very considerable amount of disability due to this siderosis.

There is very voluminous literature on this subject. The articles have been more numerous of late. Possibly some of you may have noticed a recent lay article that appeared in Collier's Magazine, June 3, 1939, entitled "Dust fights Dust." This article refers to work that was done in Toronto, in the laboratory of Sir Frederick Banting, in connection with a mine in Canada. This article claims that if silica dust is mixed with aluminum dust, it is rendered harmless. I have not yet seen the scientific article describing this work, but this lay writer seems to think that this pretty much solves the problem.

The Federal Reporter, May 1, 1939, page 432, cites the case of Pieczonka, vs. Pullman Company. It was alleged in this case that the plaintiff's life was shortened because of silicosis contracted while engaged in sand blasting.

Silicosis is caused by the inhalation of silica dust. The particles of silica must be in a very finely divided state and the pathology resulting is in proportion to the extent to which the silica has been pulverized. This substance is taken into the lungs in this finely divided state and this material is acted upon by the body and produces the characteristic changes of silicosis.

Silicosis has been a recognized disease for a great many years. It was known as Grinder's or Potter's rot; it was also known as Miner's Pthysis, the latter indicating the early conception of the relation of pulmonary tuberculosis with silicosis. It is stated that pulmonary tuberculosis predisposes to silicosis, and conversely, that silicosis predisposes to pulmonary tuberculosis.

In this country, this subject was studied in 1924, 1925, and 1926 among the granite cutters at Barre, Vermont. This was reported in the U. S. Public Health Bulletin No. 187, in 1929. It was found that the men working in this industry would usually develop this disease after working for about 10 years.

The rapidity with which the patient develops silicosis is dependent on various factors other than time; particularly their own physical condition and the character of the dust inhaled. During the past 10 years, silicosis has maintained a prominent place as an industrial problem and a compensation disease.

Silica is used in industry in vast quantities. It is estimated that 100 million tons are sold in this country annually. This material is used in the building trades, as railroad ballast, cleaning and polishing industries, and in a vast number of other industries. It is present everywhere and a great many people inhale dust containing this substance. The number of people who inhale the dust in sufficient quantities to do real damage is of course, relatively small. It is no doubt true, that a small quantity of this dust does no harm. Otherwise, practically our entire population would be somewhat affected. However, there is a very considerable number of people who are exposed to this dust in sufficient quantity to be dangerous.

Silicosis as a railroad problem has apparently not been considered. Our Section has not given this matter the consideration to which it is entitled; I do not believe it has ever expressed an opinion as to whether or not silicosis is really a railroad problem. In a general sense, it would seem that it is not a

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serious problem. The following incomplete list is given as occupations where workers may develop silicosis:

Miners, quarriers, drillers, sand pulverizers, sand blasters, grinders, asbestos workers, manufacturers of scouring soaps and powders, miners of iron ore, lead, and other ores.

It will be noticed that in this list, the sand blasters seem to be about the only workers in Railway service that would be likely to contract silicosis. It is true that the Railroads do engage in many industries other than those strictly connected with railroading, as for example, mining. If these are eliminated, it would seem that there is a very small field for the study of silicosis in railroad operation. It would seem never the less, advisable for the committee to make a detailed study of this subject. It would be interesting to know what the actual experience of our railroads has been in the compensation for this disease; how many claims for silicosis have been considered. Our own experience in this matter has been very limited. I am very sure that the railroads operating in other parts of the country have had more experience than we have had.

This disease is insidious, very definitely a compensation disease, and is incurable. Anything that this Section can do to throw any light on the subject would certainly be worthwhile.

THE CHAIRMAN: Our next speaker will be Dr. R. A. Woolsey, Chief Surgeon, St. Louis-San Francisco Railway.

REHABILITATION

By

DR. R. A. WOOLSEY,
Chief Surgeon St. Louis-San Francisco Railway

First I would like to quote from an Article entitled "The Work Cure" in the Readers Digest of May, 1939—"The Greek philosopher Galen said in 172 A. D.: 'Employment is nature's best physician and essential to human happiness.'"

"From the doctors of the American Expeditionary Forces came a call for women workers to provide bedside occupation for sick and wounded soldiers. Training schools for occupational therapists were hastily set up, and from that time on, the prophecy of Dr. Thomas W. Salmon, chief consultant in psychiatry in the American Expeditionary Forces, has step by step, begun to be fulfilled. He said: 'Some day occupational therapy will rank with anesthesia in taking the suffering out of sickness, and with antitoxin in shortening its duration. It is only during the past two decades that occupational therapy has taken its place in rehabilitation of the indigent. This new profession is really an outgrowth of the World War.'"

The Aetna Rehabilitation Clinic at Syracuse, N. Y. was developed by the Aetna Insurance Company especially to improve the physical condition of crippled workmen and has proven to be a worthy enterprise, not only from the humanitarian standpoint, but has been fully justified from an economic standpoint. The treatment is chiefly physiotherapy. On occasion mental readjustment is also indicated. Following a serious injury with prolonged disability the patient becomes discouraged and his self-confidence is shattered. Patients react to the situation by developing a hobby, or some outside interest, and

with improvement of their physical condition will resume their normal activities. There is still room for enormous expanse in this new field for all its growth in two short decades, only 792 of the 6,189 hospitals in the United States, approved by the American Medical Association, have occupational therapists on their staff.

Infection and its possibilities are one of the biggest hazards in industrial surgery. Severance of muscle tissue, tendons and nerves must be in the hands of competent surgeons who will make proper repairs.

A mechanic whose fingers are stiff after injury and operation should be given something to do that requires finger motion, which should be kept up and increased until he is able to get back on his job. One whose shoulder is stiff following a fracture and immobilization might be put at wood work with a saw which would gradually make him reach farther and farther and eventually bring the shoulder back to normal.

In fracture cases immobilization is essential and in order to get immobilization the contiguous joints must be immobilized. In splint and cast applications one must be careful that the dressing is not too tight as it will hinder circulation and cause edema. The dressing must not be left on too long because long inactivity of the joint alone produces stiffness and takes more time to work back to normal.

In the treatment of muscles and joints, infra-red, diathermy, massage, and muscle re-education plays an important part. Reconstructive plastic operations corrects crippling deformities.

Dr. John J. Moorhead of New York City makes the statement that it is more apparent than ever that prompt and efficient care of the injured is the best safeguard against disability and deformity. Long ago he made the statement that the maximum of surgical treatment meant the minimum of disability.

The American Association of Occupational Therapy, with headquarters in New York, acts as a clearing house for information. One need not speculate about the future of the new profession; its benefits for patients are being demonstrated daily.

Occupational therapy must not be confused with vocational rehabilitation, though the two sometimes overlap. The latter aims to give the patient a school whereby he may earn his living: the former is primarily curative.

Many employes, because of injury or anatomical defects, are disabled in their particular line of work, such as train service, but are able to carry on in some other line of duty, such as watchman, crossing flagman, etc., but even though their seniority rights have to be forgotten, as they are in some other class of work, they are able to earn a livelihood and have something to occupy their minds, which means a great deal to the individual. I have seen many employes who have been in active service over a long period of time, put on pension at the age of 70, this before the Retirement Board existed, who were in as good a physical condition at that time as they were 20 years previously, and without occupation of any kind, slipped rapidly and died within a couple of years who, if they would have been allowed to carry on, would have been competent and their activity would have kept them from worry and mental strain and been responsbile for longer life and happiness.

The education and training of men, disqualified in their own particular occupation, can fit them for another class of work if sympathetic interest and

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The railroad employe over 65,
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THE CHAIRMAN: Gentlemen,
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DR. GARNER: Mr. Chairman
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THE CHAIRMAN: Is there any
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DR. G. G. DOWDALL (Illinois
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DR. W. J. LANCASTER (Atlant
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support could be developed and would be of human and moral value to both the employe and employer.

The railroad employe over 65, with over 30 years service can get full returns from the Retirement Board and the majority of the employes will take advantage of this program. Yet, these men who have been actively employed over a period of many years should be advised that the transition from active work to idleness, creates an insecurity and unhappiness, unless some compensating avocation is developed to maintain interest after the retirement.

It is recommended that appropriate action be taken in the organization of a program of instruction and education through the brotherhoods and railroad authorities in order that employes may be fully informed of the necessity of mental interest in the attainment of physical health and contentment when the event of retirement is imposed upon them.

THE CHAIRMAN: Gentlemen, you have heard Dr. Garner's report and the discussions which followed it, by three of our members. The report is now open for general discussion. Does any one wish to ask any questions or ofier any additional comments?

DR. GARNER: Mr. Chairman, I feel that I must take issue in one or two particulars with my good friend, Dr. Ide. Our committee has handled the subject of Pneumonoconiosis and all its allied diseases, such as silicosis, anthracosis, and kindred conditions, quite extensively in the past, and several reports have been made on that subject in previous meetings, by this Committee.

THE CHAIRMAN: Is there anybody else who wishes to make any comments? Does anyone care to ask any questions?

DR. G. G. DOWDALL (Illinois Central System): I understand that Dr. Lancaster is the one who has been engaged in this work with regard to the prevention of colds, by oral administration. I'd like to ask him to say a few words about the general results which he has obtained and to tell us whether or not he still considers it to be an experimental process.

DR. W. J. LANCASTER (Atlantic Coast Line Railroad): Mr. Chairman and Gentlemen: The results we have had have been on the whole, most satisfactory. I will say this: that we have been criticized by some doctors for recommending an oral vaccine. While our records are not absolute ones, they nevertheless show that among our clerical forces, particularly in office buildings, etc., the data is fairly comprehensive. Our records show that it has been very beneficial in about 37% to 40% of the cases.

Our number of absentees from work on account of colds in the past couple of years, since we have been using an oral vaccine, has been materially reduced. We have found no bad effects from it. Some individuals have a mild reaction, the same sort of reaction which they would experience after a hypodermic injection has been given them: that is, they have a little ache, or they feel a bit upset for a day or two after they first start to take it. But beyond that we have noticed no ill effects from it and we think that it has been of material benefit to the personnel. We are using it right along.

THE CHAIRMAN: Thank you, Dr. Lancaster. I believe Dr. McCombe has something to say to us on this subject.

DR. JOHN MCCOMBE (Canadian National Railways): Dr. Lancaster told us about this at one of the meetings of the Committee on Disability and Rehabilitation, after which we got in touch with our people and made arrangements for a limited supply. We used it in specially selected cases, so that perhaps our figures are a little wrong, but we found it efficacious in about 35% to 40% of the cases in which we used it.

THE CHAIRMAN: Does anyone else have anything to say at this time?

DR. A. W. BOUFFLEUR (Chicago, Milwaukee, St. Paul & Pacific Railroad): I move you that the Report of the Committee on Disability and Rehabilitation be accepted as a progress report.

. . . The motion was seconded, put to avote and unanimously carried. . . .

THE CHAIRMAN: We are very fortunate in having with us to-day the gentleman who is going to be our next speaker. He is going to discuss a subject in which we are all deeply interested. I now have the pleasure of introducing to you Mr. M. E. Lynch, Director, Claim Service, Railroad Retirement Board, Washington, D. C. Mr. Lynch! (Applause.)

MR. M. E. LYNCH: Mr. Chairman and Gentlemen: I realize that this meeting is interested primarily in the application of the disability provisions of the Railroad Retirement Acts. I thought, however, that you would be interested in a discussion of the basic provisions of the law relating to the payment of the various types of benefits authorized under the Railroad Retirement Acts.

Under the Railroad Retirement Acts of 1935 and 1937, the Board makes five types of payments to employes or their dependents. These are: (1) Employe annuities, both disability and old age, paid to eligible individuals; (2) survivor annuities, paid under joint and survivor elections to the surviving spouse of a deceased employe annuitant; (3) death benefit annuities, paid only under the 1935 Act to the surviving spouse or dependent next of kin of a deceased annuitant or employe entitled to an annuity under that Act; (4) lump-sum death benefits, payable only under the 1937 Act, with respect to the death of any employe who earned compensation under the Act after December 31, 1936, to a designated beneficiary or to the legal representative of the deceased employe; (5) pensions to individuals who were on the pension or gratuity rolls of employers under the 1937 Act, both on March 1 and July 1, 1937.

Annuities based on age and service are awarded to eligible employe applicants who have attained age sixty-five. Applicants who have completed thirty years of service may receive a reduced annuity upon the attainment of age sixty. Applicants for annuities based on disability must be shown to be totally and permanently disabled for regular employment for hire and, if they are less than sixty years of age, must have completed at least thirty years of compensated employer service. Employes totally and permanently disabled who have had less than thirty years of employer service, may qualify upon the attainment of age sixty regardless of the number of years of service.

At the close of business on M
annuities had been received by t
cations from 6,572 employes wh
to annuities as of that date. 11,
The balance of the cases, or app
and the applicants were found
Board or were found to be ineligi
considered.

In the case of individuals wh
monthly amount of age and disa
compensated service not to exce
and on compensation earned by
was not in excess of $300 in any o
not employes on the enactment d
service subsequent to December
nuity rate for employes who ha
service and are in service when th
pensation used in the computat
possible from original records. I
to report monthly earnings of em
Board, for many years to come,
sation prior to that date from em

In order for an employe to
January 1, 1937, he must have b
an employment relation thereto
Act, an individual is in an emplo
call for service and ready and will
on account of sickness or disabilit
and practices in effect on the em

Where an employe was not in
termination of the existence of a
vestigation to ascertain if there is
ship could exist. The determinat
the facts in the individual case
employer which the Board has
Approximately 23,000 claims cov
require special consideration for
feature, of which 2,500 are now i

An employe may elect to have t
of a reduced annuity during his lif
Section 4 of the 1937 Act require
to be valid, must have been filed
date, it must be made at least fiv
begins to accrue, unless the appli
the Board. Such proof, in order t
the employe is free from any dise
his normal life. An election made
prior to age sixty, based upon
employment for hire and thirty ye
life annuity may be awarded to s