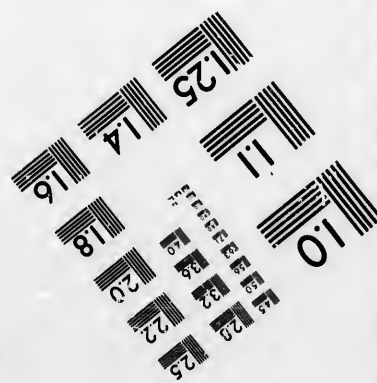
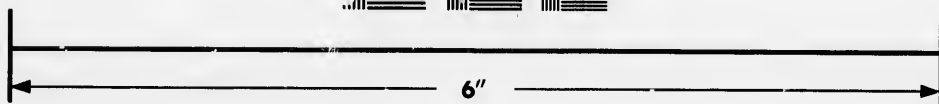
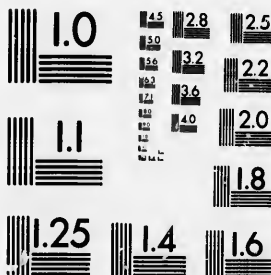


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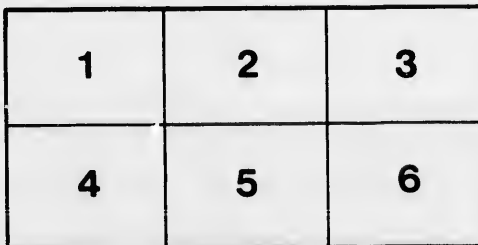
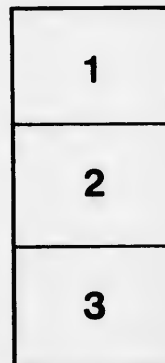
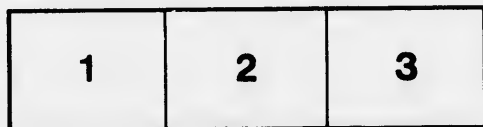
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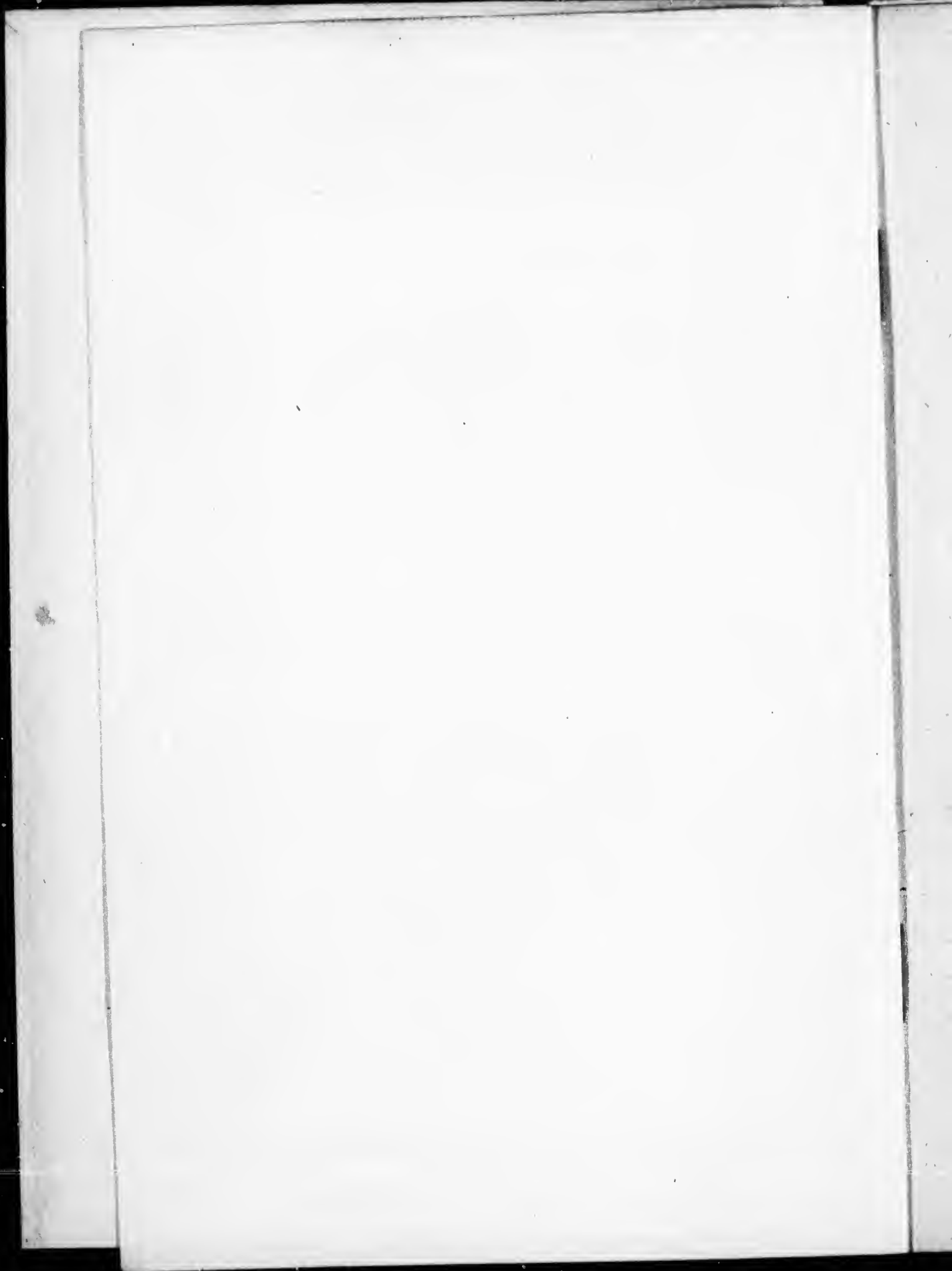
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M A N U A L

—OF—

LIFE INSURANCE EXAMINATIONS

BY

JAMES THORBURN, M. D. EDIN.,

Consulting Surgeon Toronto General Hospital ; Professor of Materia
Medica and Therapeutics, Toronto School of Medicine ; Medical
Director North American Life Assurance Company,
&c., &c., &c.

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LIFE INSURANCE EXAMINATIONS.

... Diseases occurring to society from Life Insurance are manifold,

ERRATA.

- Pages 7 and 9.—“thoraise” should be “thoracic”.
- Page 13.—“metastisis” should read “metastasis”.
- “ 14.—“straumous” should read “strumous”.
- “ 17.—“gonnorhalœal” should read “gonorrhœal”.
- “ 17.—“albumenuria” should read “albuminuria”.
- “ 19.—Third line, erase “and” and substitute “or”.
- “ 26.—Under Tests, etc., paragraph (1) If “net” albumen, read “If not, albumen.”
- “ 26.—Sp. gr. should be 1010 to 1025.

one of the most important duties undertaken by a physician.

High professional attainments are not sufficient in themselves to qualify a physician to act as an examiner; he must possess sound judgment and the faculty of weighing each and every departure from what is termed health, and, above all, he must be a man of strict integrity and honor; he must not be influenced by favor, fear, or affection.

Many medical men can diagnose and prognose disease with a degree of certainty, but when called upon to express an opinion as to the “expectation of life” of an applicant for insurance, they are at a loss to decide, not having made the subject a special study.

The following pages are intended to call the attention of medical examiners for life insurance to those principles which experience has



LIFE INSURANCE EXAMINATIONS.

The blessings accruing to society from Life Insurance are manifold, and much is due to the medical profession in removing it from the realm of mere conjecture to that of exact science.

The success of every Life Insurance Institution depends directly upon the duration of life amongst its insurants proving, at least equal to that assumed in the calculation of premiums. Nothing is more uncertain than the duration of any individual life, but there are few things less subject to fluctuation than the average duration of human life, when the observations are extended to a large number of individuals. Without medical selection, the average among insured persons would doubtless fall below that of the whole population, as a large proportion of diseased persons would enter; but with a selection excluding not only those who are actually diseased, but, as well, those constitutionally or otherwise pre-disposed to disease, the ordinary average is usually exceeded. It is obvious that without reliable medical selection, the most careful calculations upon the most conservative assumptions must prove disappointing in practice; hence the examination of applicants for life insurance is one of the most important duties undertaken by a physician.

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Many medical men can diagnose and prognose disease with a degree of certainty, but when called upon to express an opinion as to the "expectation of life" of an applicant for insurance, they are at a loss to decide, not having made the subject a special study.

The following pages are intended to call the attention of medical examiners for life insurance to those principles which experience has

shown, lead to correct conclusions in determining whether individual lives will probably survive their life expectation.

APPOINTMENTS.

It is premised that the appointment of Medical Examiner should be made from the head office of the company. The importance of this principle is evident,—the Examiner should be free and independent of local influences, and only responsible to the medical department. This is emphasized by the importance of the function he performs, and the confidence in his opinion, which is implied by the company assuming heavy financial obligations upon his recommendation.

THE APPLICATION.

To define perfect health is impossible. We must take an average and get as near it as we can. The purpose of the examination is to determine the condition of the applicant's personal health, and whether or not he is constitutionally or otherwise pre-disposed to disease. To this end, when he presents himself for examination, the Medical Examiner should read over carefully the several answers to the questions put by the agent, take note of any peculiarities of personal or family history, of any general or indefinite statements regarding deaths therein contained, such as "general debility," "cold," "ruptured blood vessel," "slow fever," "child birth," "change of life," etc. These terms are found from experience to be very generally associated with Phthisis in some of its various forms; they are not, however, necessarily connected with it; hence the importance of analyzing the answers, and thus being able to give not only positive, but negative evidence as to hereditary pre-disposition. For instance, in the case of the answer "child birth," ascertain if the woman was in good health previous to pregnancy, and during that condition, and also up to confinement. Did she have a difficult labour? How long did she live after, and was there any fever, etc?

Having become satisfied as to the correctness of the answers, given in the application, proceed to a consideration of the questions proposed by the Medical Examiner in the company's form.

THE EXAMINERS REPORT.

NAME.—Satisfy yourself that you are examining the person named in the application which is before you. The importance of this has been frequently tested—impersonation has been successfully accomplished, and Insurance Companies thereby defrauded. A careful examination will detect this fraud. If you have any doubt, compare

the signature of the person whom you are examining with the signature of the applicant for insurance, which will be found on the inside of the application form.

RESIDENCE.—Whether healthy or otherwise. A damp atmosphere with variable temperature is conducive to consumption, rheumatism, &c. Residence in malarious districts may give rise to fevers which may prove injurious to the constitution.

As a rule the inhabitants of the country are better risks than those residing in towns or cities. A temperate climate is conducive to longevity. We must not, however, be too dogmatic as to the influence of climate, as man can and does acclimatize himself readily.

OCCUPATION.—That occupation has an important bearing on the duration of human life there can be no question. Is that of the applicant healthy or injurious, and what probable effect may it have upon himself? As a rule, those persons whose business necessitates their being out of doors (unless attended by special dangers) are better risks than those who are compelled to reside indoors.

This law is influenced much by circumstances; those living habitually in an impure atmosphere are much more liable to disease than those who, although following sedentary occupations, have healthy surroundings.

Applicants have been divided into the following classes, for insurance purposes, after their occupations, viz :

FIRST CLASS.

- (a) Professional men, as Teachers in the country, Clergymen, Lawyers and Physicians.
- (b) Certain classes of Mechanics and Artisans, as House Painters, Blacksmiths and Carpenters.
- (c) Tradesmen, as Booksellers, Clothiers and Merchants.
- (d) Dentists, Druggists and Apothecaries.
- (e) House Decorators, Agricultural Labourers and Gardeners.
- (f) Clerks, as Bank Clerks and Insurance Clerks, &c.
- (g) Pressmen, Printers and Compositors.

SECOND CLASS.

- (a) Certain of those employed by Railway Companies, as Baggage Masters, Conductors on Passenger Trains and Railroad Detectives.

- (b) Certain Artisans and Mechanics, as Boiler Makers, Bolt Makers and Bricklayers.
- (c) Certain persons who work on Boats, as Canal Boatmen.
- (d) Men handling horses, as Teamsters, Stage Drivers and Stable Keepers.
- (e) Certain others, as Prison Office Keepers and Shooting Gallery Keepers.

THIRD CLASS.

- (a) Certain men employed on Boats, as Captains of Lake and River or Sea Vessels, Engineers and Mates.
- (b) Certain Artisans and Mechanics, as Timber Cutters, Bridge Builders and Steel Polishers.

FOURTH CLASS (EXTRA HAZARDOUS).

- (a) Those employed in the Liquor Trade, Bartenders, Saloon Keepers and Brewers and Distillers.
- (b) Certain employees on Railroads, as Brakemen on Mail Trains, Engineers and Switchmen.
- (c) Certain Artisans, as Sawyers and Powder Makers.
- (d) Brakemen on Freight Trains and Seamen.

Applicants in the first and second classes are insurable on ordinary rates, while those in the third class are subject to an extra rate, and those in the fourth are insurable only on the short endowment plan.

AGE.—For convenience sake we may accept the old divisions, viz., age of growth and development, age of maturity and manhood, and the period of decay or old age.

Each of these divisions is liable to special diseases.

- (a) The rate of mortality in the first period is much greater than in the subsequent period.

With the early part of this period we have little to do.

The age of puberty, which comes on in this country, in the female, from the 13th to the 15th year, and, in the male, from the 14th to the 16th year, is sometimes attended with the development of hereditary diseases, consequent upon the important changes which are taking place in the organism of the body at this epoch.

Between puberty and manhood the various organs rapidly develop themselves, and individuals are liable to inflammatory and rheumatic affections, typhoid fever, &c.

- (b) In the second stage, or that of manhood, which may be stated to be from twenty-five to forty-five years of age, the various organs of the body have become fully developed, and during this term man is better able to stand the fatigues and exposures of life than at any other time; and therefore the best risks for insurance are to be found within these years, as a general rule.
- (c) The third stage, or that of decay. During this time the physical powers show deterioration. Phthisis may develop itself, but it is not so liable to do so as in the first period. Diseases of the nervous and sanguineous systems are more common. Cerebral diseases, such as apoplexy, paralysis, &c., cancer, especially in the female, often develop themselves.

RACE.—The mixture of races, in many instances, impairs the vigor of the body. The offspring of the Indian and white, as well as that of the negro and white, are particularly prone to tubercular disease, and, as a consequence, their expectation of life is not equal to the average: hence the importance of reporting the race to which the applicant belongs.

FIGURE.—The outlines of the body will often assist us in determining the expectation of a life. An erect figure, with due proportionate measurements, is generally indicative of health; the opposite condition often indicates some weakness, especially in the thoracic viscera.

EYES.—The color of the eyes is not of so much importance as is generally supposed, but their appearance often gives us a key to the knowledge of the health of the person examined. A dull, listless eye, especially in the young, points to a sluggish constitution. A red or yellow conjunctiva is frequently caused by intemperance. The presence of arcus senilis in the second period of life is indicative of, and is frequently associated with fatty degeneration of the internal organs, especially the heart, kidneys and liver. This condition, if in young persons, is detrimental to longevity. A puffy condition of the eyelids point to disease of the kidney; a yellow, or stained conjunctiva, to the liver. These conditions, as well as any organic changes in the eye, should be reported.

SKIN.—In health, the skin is soft and pliable, and free from any eruptions, especially of a specific nature. Notice any peculiarity of color; a pale, anæmic skin denotes an impoverished condition of the blood. A dark or livid color points to obstructed circulation, or imperfect aeration, and is frequently caused by intemperance. Any departure from the usual standard color of healthy skin, as the pigmentation which takes place in Addison's disease, and the coloration of the skin which takes place in those who habitually use nitrate of silver, should excite the interest of the medical examiner.

BONES.—In persons of a tubercular diathesis, the ends of the bones are generally disproportionally large. Persons with small bones are not, as a rule, capable of enduring great exposures or fatigue. Ascertain if the bones give any evidence of rickets or nodes.

DEFORMITIES AND PHYSICAL DEFECTS.—Defects of the organs of special sense should be inquired into, such as deafness, or blindness, and the cause of such conditions should be ascertained. If deafness, present, is it the result of disease, etc.?

Deformities, such as curvature of the spine (lateral or angular), are objectionable; exceptionable cases may be insurable.

Has the person ever had any of the following ailments:

Aneurism—Aneurism may exist without the patient's knowledge; it may be of the heart, the aorta, or any part of the arterial system. The aneurism may be so large, especially if of the thoracic variety, as to cause bulging of the parietes before its peculiar and distressing effects are developed; a careful physical examination would reveal this condition.

The presence of an aneurism invalidates the risk.

Apoplexy—A person who has ever had true apoplexy, no matter how remotely, is ineligible for life insurance.

Asthma—Asthma embraces a variety of symptoms rather than of disease, and must be valued according to the cause which produces it. Those cases of asthma arising from idiosyncrasy, such as rose or hay asthma, or that are dependent upon local atmospheric conditions, are not a sufficient cause to disqualify the applicant from some forms of insurance; but the asthma which arises from organic lesion, such as from cardiac obstruction, tuberculosis, emphysema, bronchitis,

thoracic tumours, hepatic disease or disease of the nerve centres, is sufficient cause for the rejection of the applicant.

Bad, or frequent Head-Aches—This condition is a symptom rather than a disease. It may arise from a variety of circumstances or causes; when from functional disturbance, or the influence of malaria, it may not be a bar to insurance; but when arising from organic lesion, particularly of the nerves, it is a most grave symptom, and necessitates a most careful examination. The duration and severity of the symptom has an important bearing on the examiner's decision.

Some people suffer from head-aches more or less continually, and do not seem to be in impaired health; such people, everything else being satisfactory, may be acceptable risks; again, head-ache, if recent, may be indicative of some febrile or organic disease: in such cases, postpone your decision until a future examination.

Bilious Colic—Bilious colic, when of frequent occurrence, and attended by painful symptoms, lessens very much the value of the risk. A single attack, with an intervening period of four years without other unfavorable symptoms, would not diminish the eligibility of the applicant for insurance.

Bronchitis—The presence of bronchitis is always a serious matter, especially if in a chronic form, or of frequent occurrence. Such cases are usually complicated with tubercle or inflammation of the parenchyma of the lung, or cardiac disease; if the bronchitis is associated with any of the three foregoing conditions, you should unhesitatingly reject the risk.

When bronchitis is due to reflex irritation, or other causes which may be amenable to treatment, the decision must be postponed for a further examination.

Cancer—Cancer, in the individual applicant, will be sufficient cause for his rejection, whether it be of the acquired or hereditary variety. The hereditary nature of this disease is no longer doubted, and the recurrence of even the most simple forms, after operation, is very common.

Carcinoma is more frequently met with in the female than in the male, and especially in the more advanced periods of life.

Epithelioma, which is said to arise sometimes from some persistent local irritation (as a tobacco pipe), is seen more frequently in the male.

Catarrh—This question, in insurance papers, refers especially to the condition of the nasal passages, and points to disease of a chronic form, which is usually indicative of constitutional vice.

A great deal will depend on the locality and extent of the catarrh ; if the deep-seated structures be involved, especially the bones, the applicant must be rejected.

Consumption—This disease, of all others, is the most common cause of death among the general as well as insurance population, and requires the most careful and searching examination on the part of the physician, so as to enable the Medical Director of the Company to arrive at a proper decision as to the value of the risk.

The Examiner must enquire if there are any predisposing causes, either of a hereditary or acquired nature, which are likely to influence the expectation of the life of the applicant.

In life insurance, the claims result largely from Phthisis, and it is here that medical selection tells more according to the manner in which it is conducted, than in any other disease.

The deaths from consumption, compared with the general mortality, are decreasing in the earlier periods of life. This is probably due to the fact that more regard is being paid to sanitation, and to the improvement in the social condition of the people.

In a person in the slightest degree predisposed, any debilitating influence, either mental or physical, may light up the latent disease.

A morning cough with hoarseness, a sense of weakness without any particular assignable cause, loss of weight with a frequent pulse, and especially if there has been hæmoptysis, even of the slightest degree ; are strongly indicative of Phthisis, although the physical signs of the disease may not be well developed.

The general appearance of an applicant is sometimes deceptive, and persons in seeming good health are on the verge of disease ; still the rule is, that an experienced Physician, who exercises his observation, will be able to detect the phthisical diathesis, even if physical examination give negative results.

Delirium Tremens—If the applicant has ever had Delirium Tremens, the risk is much imperilled ; its morbid impress is left on the system, and the danger of its recurrence is considerable, and any such applicant should not be received until after the lapse of a long period of time, and other strong evidences of a moral reform.

Diabetes.—The pathology of this disease is still undecided, but the symptoms of it are well known.

A person having symptoms of this disease is ineligible for life insurance.

The presence of a slight trace of sugar in the urine may be due to temporary functional causes; a re-examination would be necessary in such cases.

Diphtheria.—This disease is frequently followed by impaired nerve power and nutrition. It may also lay the foundation for tubercular deposit in the lungs, or may give rise to nephritis, or more or less permanent paralysis.

Dizziness.—Dizziness is not a disease in itself, but is indicative of cerebral trouble; it may be functional or organic in its origin.

If persistent or recurrent, it is of grave importance, especially in those past the middle period of life.

Dropsy.—Dropsy is the result of disease rather than a disease itself.

The Examiner should direct his attention to the heart, kidneys and liver, and ascertain their condition.

If the applicant has had dropsy, it may have only been temporary, such as the dropsy resulting from malaria, scarlatina, or other zymotic diseases; in such cases if complete recovery has been made the applicant may be received. The same may be said of the *anasarca*, which accompanies *anæmia*.

Dropsy arising from organic lesion precludes the person from the benefits of life insurance.

Eruption or Skin Disease.—The Physician must distinguish between those eruptions which arise from specific disease or other constitutional cause, and those which are purely local in origin and innocuous in their nature. The former may vitiate the risk, while the latter may not.

Erysipelas.—This is oftentimes a grave disease, and in some individuals will recur from very slight causes, either of a traumatic or idiopathic character. If from the latter the value of the life is much impaired.

Fistula.—Fistulae occur in different parts of the body, and from

various causes, for instance, by a gun shot wound when foreign bodies such as metal, cloth or detached bone are left in the wound, thus keeping up irritation. These and similar cases are usually remediable and if the patient has fully recovered, and if the result of the examination is in every other way favorable, he may be insured.

The term fistula in insurance cases refers usually to fistula-in-ano. This may be either constitutional or local in origin; the constitutional variety is usually found in phthisical persons or those who suffer from liver disease—such applicants must be rejected.

If the fistula, however, is due to local causes, such as the presence of hemorrhoids or ischio rectal abscess, and if the patient has entirely recovered, the risk may be accepted.

Fits.—This is a general term including a great variety of conditions, such as apoplectic, epileptic and hysterical fits.

When arising from apoplexy, reject.

Epilepsy, *per se*, does not shorten life, but in consequence of the danger of accident to persons suffering from this disease, the value of the risk is lessened.

Sometimes epileptic fits arise from causes amenable to treatment, such as those having for their origin eccentric irritations, that is uterine, intestinal or vesical irritations, which act in a reflex manner and cause convulsions of an epileptical character; if such a condition be fully recovered from and some considerable time has elapsed since the last fit, the applicant may be received, but if the fits arise from centric causes, such as pressure resulting from depressed bone, intracranial tumours, mal-nutrition of the nerve centres, emboli, etc., we must reject.

Epileptic paroxysms frequently occur in drunkards and may not again recur in case of reformation of habits.

Hysterical fits are common in females and sometimes occur in males. The experienced Physician will have little difficulty in distinguishing between true epilepsy and the hysterical fit; the latter being due usually to emotional causes and amenable to treatment; they are also most common in young persons. Such cases are insurable.

General Debility.—This term is applied to a general weakness of the body; if such a condition has been present and is entirely recovered from, the applicant is insurable, but of course much will depend on

the cause of the debility, and the decision will be in accordance with it.

Gout.—This disease is often hereditary, and is more common in the older countries of Europe than in America.

Although painful, the danger attending it is chiefly due to its liability to metastasis and to the degenerative condition of the heart and blood vessels which is usually found in the bon-vivant.

Applicants who suffer from gout are not first-class risks.

Gravel.—This term is applied to the passage of calculi along the ureters, accompanied by paroxysms of pain.

A person who has experienced one attack is liable to recurrences at periods more or less remote, and although the suffering is usually extreme, it very rarely, if ever, proves fatal, *per se*, the danger being from the serious diseases to which it may give rise, viz., destructive inflammation of the kidney, vesical calculus, etc.

Habitual Cough.—The history of habitual cough is strongly indicative of disease of the respiratory tract, and the examiner should exercise his utmost care in ascertaining the cause.

Such cases are generally uninsurable.

Inflammation of the Lungs or Pneumonia.—This question is suggested in consequence of the serious morbid changes which are apt to be developed by this disease, viz., Chronic consolidation of lung substance, the development of tubercle and the formation of adhesions, etc., which may seriously interfere with the due oxygenation of the blood, and with the proper performance of respiration.

If any serious consequences arising from this disease are manifest, the applicant should not be received.

Insanity.—If the person examined has ever been insane, the physician will ascertain if the disease has been hereditary; the form and kind of insanity; the age of the individual at the time of the attack; the duration, and whether the person has had more than one attack; the nature of the real or supposed exciting cause, and whether the person at present exhibits symptoms of the disease.

We must not confound mere eccentricity of manner or character or imbecility of mind with true insanity.

Chronic insanity of itself does not necessarily shorten life. A person who has suffered from the acute form is apt to have a recurrence

of it, and in consequence of his inability to control his actions he is very liable to injury, accidental or self-inflicted.

Insanity may arise from causes which are quite amenable to treatment, such as malaria, the delirium which accompanies acute fever, and the abuse of alcoholic liquors, etc. Some forms of puerperal mania may also be included in this division.

Liver Complaint.—The liver is the alleged father of many diseases, and is the seat of cirrhosis, amyloid disease, fatty degeneration, cancer and tubercular disease, all of which render the applicant unfit for life insurance.

If, however, the disease has only caused a temporary derangement of the organ, such as catarrh of the bile ducts or the effect of malarial influence, which have yielded to treatment, the applicant may not be rejected.

Lumps or Swellings.—This question is intended to direct attention especially to the swellings which result from scrofulous disease of the lymphatic glands, and to nodes, such as the syphilitic.

Swellings of the lymphatic glands generally point to a strau-mous diathesis, which is at all events closely allied to tubercle, and the medical examiner should in these cases look carefully to the condition of the lungs.

The mere presence of a cicatrix in the region usually affected by scrofulous inflammation of the lymphatic glands does not necessarily result from struma, as these glands frequently inflame and suppurate in diphtheria, scarlatina, etc.

The presence of nodes should induce the examiner to look for a previous history of syphilis.

Neuralgia.—Neuralgia is the purest type of pain, and is generally functional in its origin, that is unattended by inflammation or structural change.

It may occur in any part of the body, but especially in those parts most abundantly supplied with nerves of sensation.

It may be caused by mechanical pressure on a nerve trunk either at its origin or in its course, as from the pressure of tumours, etc. ; it is also a common symptom in malaria and lead poisoning. Neuralgia in itself does not shorten life ; the repeated recurrence or persistent presence of it, however, should excite the examiner's suspicion of some

morbid influence affecting the constitution, such as the individual's surroundings or personal condition.

The observant physician will readily distinguish the pain of neuralgia from that arising from inflammation or other causes.

Unless the neuralgia be obdurate and accompanied by constitutional vice the applicant may not be rejected.

Open Sores.—Open sores point to diseased action, such as cancer, ulcers of various kinds, sinuses, fissures, fistulæ, etc., and the physician should ascertain their cause and nature, and whether they are curable or not.

If an open sore be due to cancer or syphilis, reject.

Palpitation of the Heart or any form of Heart Disease.—Palpitation is a symptom, not a disease, and is of little practical value in itself except in calling the attention of the physician to the condition of the heart.

Perhaps there is no organ of the body which requires a more careful study than the heart; the skill of the physician is tested to distinguish between functional disturbance and organic disease.

Dr. Walsh observes that aortic regurgitation is the most common cause of sudden death. He remarks it may take place during the act of walking, eating or speaking while the person's emotions are excited and, *per contra*, at a moment when he is perfectly calm; and a very singular proposition is that the more pure and uncomplicated the regurgitation, the freer the heart from any other disease, the more likely is the individual to be cut off without a moment's warning; further, that there is no direct connection between the amount of danger of disease at an orifice of the heart and the intensity of the existing murmur.

The very weakness of a murmur may indeed be a fatal sign.

According to Dr. Begbie, of Edinburgh, the deaths from heart disease comprise five per cent. of the deaths in adult life.

The most common cause of heart disease in this country is rheumatism.

Paralysis.—Paralysis of either motion or sensation, or of both, calls for a most careful enquiry whether it be paraplegic, hemiplegic or local.

We must always endeavor to ascertain the cause in every instance.

If concurrent with disease of the circulatory system and lesion of

nerve centres, the applicant must be rejected; also in case the condition be due to diseased nutrition, degenerative changes, tumours or traumatic lesion of nerve centres.

Some forms of paralysis are curable, and may be entirely recovered from, especially those of a local character, as the paralysis resulting from the division of a nerve, from pressure of a tumour, the presence of a foreign substance, as of a bullet or piece of cloth, and that form of paralysis of one side of the face caused by cold.

If a considerable interval of time has elapsed since the person was affected, and if he has now fully recovered, he may be received.

There may also be a paralysis which is usually temporary, as sequelæ to such zymotic diseases as typhoid fever, diphtheria, &c., or it may arise from reflex action as in teething children; the latter case, however, would not come under the cognizance of the examiner for life insurance.

Piles.—Piles are often associated with liver disease in consequence of the communication between the veins of the rectum and the portal circulation. They are also caused by a debilitated condition of the system; they are painful, and sometimes give rise to a hemorrhage which may endanger life.

In those cases where the piles are associated with disease of the liver, or if there has been much hemorrhage, we would reject the applicant.

Piles may arise from constipation, &c., or in females from the presence of a gravid uterus.

These cases may sometimes be received, but in every case ascertain if possible the cause, and decide accordingly.

Pleurisy.—If followed by extensive adhesions, so as to interfere with the respiratory act, or if fluid be present in the pleural cavity as well as adhesions at the apex, which are usually associated with chronic inflammation and tubercle, reject.

The physician must satisfy himself by a careful physical examination and by analyzing the statements of persons supposed to have had this disease, as it is often confounded with intercostal neuralgia or pleuro-dynia on account of the common symptom of a stitch-like pain.

Pleurodynia would not invalidate the risk.

Rheumatism.—Rheumatism in its various forms, viz.: Inflammation.

matory, hereditary, syphilitic, gonorrhœal and alcoholic, is a most serious disease, not only from the danger attending its actual presence, but from the sequelæ which may arise from it.

The rheumatic poison has a strong tendency to affect fibrous tissues wherever found, as in the valves of the heart, the pericardium, the dura mater and the fibrous structure of joints, etc.

These structures, although often escaping at the time of the attack, may be involved in serious lesion as a consequence of the rheumatism, even after a long period has elapsed since the last attack; heart disease sometimes is developed in this way.

The attention of the physician must be especially directed to the condition of the heart in those persons who have ever had rheumatism.

If there is any disease of the heart the applicant must be rejected.

Not only is there danger from heart failure consequent on disease of the organ, but also from embolism, a sequence of diseased valves.

Other objections to applicants who have suffered from rheumatism are that one attack predisposes to a recurrence, and from the degenerative changes which ensue in the blood vessels apoplexy is not an uncommon sequence of rheumatism.

We must not confound the pain in muscles (myalgia) which occurs in different parts of the body with the condition above described; such pains are very common, and in fact there are few persons who do not experience them in some form or other now and again.

Scarlatina.—This is a disease of youth rather than adult life and is of importance to the examiner for life assurance because it is frequently followed by serious lesion which may terminate fatally after the lapse of a long period of time.

Otorrhœa of a chronic nature often results from an attack of scarlatina and is liable to develop at any time into an acute inflammation, which, spreading to the structures of the middle ear and mastoid cells, may cause death from inflammation of the brain and its membranes.

The kidneys are frequently involved in disease after scarlatina and hence we may have uræmia, albumenuria and dropsy as a result; hence the necessity of enquiring carefully into the condition of these organs in persons who have had scarlet fever; if any of the foregoing conditions are present at the time of examination they disqualify the applicant for insurance.

If a person has had scarlatina and fully recovered from it, the risk is improved thereby.

Scrofula.—Persons of a scrofulous diathesis are less liable to stand the attack of disease than healthy people, and they are frequently carried off by tubercle of glandular structures, and hence are not good risks.

The fact of former scrofulous disease of the glands of the neck does not render such persons uninsurable as clinical observation shows that those who have been thus affected in early life are not more liable than others to be carried off by tuberculous disease of the lungs in after life.

Shortness of Breath.—Is often indicative of thoracic disease or functional disturbance, and requires the careful attention of the physician to ascertain its cause; it is sometimes due to mental emotion or physical exertion.

The gravity and permanence of the excito-motor cause must be sought for and weighed accordingly.

Small-Pox.—The discovery of vaccination by the immortal Jenner towards the close of the eighteenth century has divested this disease of much of the importance which it had in the two previous centuries, when it ranked first among the acute affections destructive of human life. Whole communities and tribes have been extinguished by it and many people are still carried off by this preventible disease. The ignorant prejudice and obstinacy of man is well illustrated by the refusal of many to avail themselves of the antidote, vaccination.

The proofs of its efficacy are overwhelming. It appears from the report of the Registrar General of England (1871), that of 100,000 persons who have been vaccinated, one hundred may expect in any year to have the disease, and ten of these to die.

Of persons not vaccinated it is calculated that in 100,000 six hundred will be infected in the same time and 270 die, the probability being 26 to 1 in favor of those vaccinated. In persons having one or more clear marks the mortality was but 4 in the 100 of those attacked. With bad or indifferent marks the mortality was 25 in 100, and in patients without marks (presumably not vaccinated) the deaths were 48 in 100 of those attacked.

A person not vaccinated should be so before being accepted as a risk,

Some Insurance Companies insert a clause in their policies whereby the policy becomes null and void provided the insured dies from small-pox not having previously been vaccinated and not having had the disease.

Spinal Disease.—When there is evidence of organic disease of the spine the applicant must be rejected, but the examiner must take great care to distinguish functional disturbance from organic disease; the former is common in females and anæmic individuals.

The early symptoms of locomotor ataxia should be carefully looked for as they are sometimes very insidious; if there is any want of proper co-ordination accompanying vague so-called rheumatic pains, the case should be rejected.

Spitting of Blood.—This is an important question and requires care and time on the part of the medical examiner to diagnose the cause.

In a great majority of cases it comes from the lungs and is a precursor or associate of tuberculosis, either in its latent or active form; or it may arise from mitral regurgitation: in either case reject.

If it comes from diseased bone of the nose or malignant disease of the stomach, reject.

If it can be thoroughly established that it has come from the nose, throat or gums, or in females from vicarious cause, or even in some cases of ulcer of the stomach, the application may be accepted.

Often cicatrized ulcers have been found in the stomach of those who have died of some other affection and the presence of the ulcer was only revealed by post mortem. Moreover, persons suffering from purpura hæmorrhagica and typhoid fever often lose large quantities of blood by the mouth, nose, rectum, &c., and make good recoveries; this should not be a bar to insurance itself.

In a case where there has been hæmorrhage from the lungs and seven to ten years have elapsed without any return, the applicant being now perfectly healthy, he may not be disqualified for insurance, especially for a short term endowment.

Sunstroke.—Sunstroke is not uncommon in hot climates and in hot seasons. Sometimes little or no effects follow it and the patient makes a complete recovery, but such a result is not always to be met with. The brain power may be diminished and organic disease occur; perhaps epilepsy or paralysis may ensue, therefore ascertain how long a time has elapsed since it occurred and whether or not the

applicant is suffering any ill effects from the sunstroke, and decide accordingly.

Syphilis.—Sir Wm. Jenner and Sir James Paget, with many other eminent surgeons, consider that this disease is a very common cause of death.

When it is present in any form the decision should be postponed; however, we must not conclude too hastily. By some people every sore on the genitals is called syphilis. This is far from being the case; the true chancere is characteristic and it only is followed by constitutional symptoms. The physician must look carefully for traces of eruptions on the skin, whether there is any emaciation or evidence of depraved nutrition, enlarged cervical glands, white patches or cicatrices on the mucus membrane of the mouth or tongue or throat, nodes, induration of lymphatic glands, onychia, &c.

Such persons should not be received until all evidences of the disease have disappeared.

Typhus or Typhoid Fever.—Typhus fever is a very virulent disease with a large mortality, and like other acute fevers is apt to leave serious consequences which tend to weaken the constitution. Fortunately, however, for us it has not made its appearance in this country for upwards of forty years.

Typhoid or enteric fever. This disease is common throughout the world. Persons in the acute stage would not come under our observation in our capacity as Examiners for life assurance, but in consequence of the probability of its affecting the glandular or nervous systems of the body our attention must be directed towards their conditions.

The recurrence of diarrhoea in a person who has had typhoid fever would point to some weakness in the glandular structures of the intestines.

Loss of power or paralysis, caused by embolism, frequently follows this disease, and if present would render the applicant uninsurable.

If there is a tubercular diathesis, however slight, in a person who has suffered from typhoid, it is not uncommon for the latent tubercle to be developed as a result of this disease.

Varicose Veins.—The etiology of this disease is not certain; it may appear in the robust and in the weak, in those who live well and those who do not, in the young and in the old, and although it may

interfere with the comfort of the person it does not necessarily shorten life.

Varicose veins may appear in any part of the venous system, but are most likely to recur in the veins of the legs.

The Examiner must bear in mind that they are liable to become inflamed, or thrombosis may take place, or they may ulcerate or may rupture.

They are common in pregnant females, but after labor usually subside. Unless the varicose veins are unusually large or extending above the knee the applicant may be insured.

Is the person subject to dyspepsia, constipation, dysentery or diarrhœa?

Dyspepsia is very common, and *per se* is not of grave import; it generally indicates a catarrhal condition of the mucus membrane of the stomach or a slight disturbance of the functions of the liver, or it may be merely sympathetic of uterine, kidney or nervous affections. Such is not always the case, however, as it is frequently a premonitory symptom of tuberculosis or it may indicate a malignant or non-malignant organic disease of the stomach.

Whatever may be its cause, duration or severity, it is deserving of the serious attention of the Examiner.

Constipation.—The demands of nature allow a wide latitude in reference to the evacuation of the bowels in individuals, and what would be considered alarming in one person may be quite normal in another; for instance, some persons are never comfortable without one or more evacuations in the 24 hours; others do not have them relieved more than once a week, and this may be natural in both cases; the latter is common in anæmic females or in persons who have an atonic condition of the muscular fibres of the intestine.

These and similar cases are usually insurable, but when it arises from mechanical obstruction, such as from stricture, morbid growths, whether malignant or non-malignant, or if the condition be due to certain diseases of the brain or spinal cord, reject.

Diarrhœa or the opposite condition of Constipation.—The character more than the frequency of the discharge is important here.

Many of the causes of diarrhœa are amenable to treatment such as that arising from improper dietary; acute attacks are very common at all ages of life, and with every person. The frequent recurrence of this disease would lead one to enquire into the condition of the

liver and into the habits of life of the person; those addicted to the use of alcohol or narcotics frequently suffer from a relaxed condition of the bowels.

If the disease is persistent, and especially if the person loses flesh, the diarrhoea being attended with more or less abdominal pain, an unhealthy hue of the countenance, occasional chills or slight elevations of temperature, the case is serious and is probably due to ulceration of the glands of the intestine. Such persons would be ineligible for insurance.

If along with the alvine evacuations are found blood or pus, the applicant must be rejected, as serious organic disease is indicated.

Dysentery in the acute stage is sufficient cause for rejection; if chronic, we must ascertain its cause, if possible; we will frequently find it arising from local disease, such as piles, ulcers, or morbid growth about the rectum, and may be curable; such cases should be reported and the applicant may or may not be rejected, according to circumstances.

If the disease is persistent, and if the party has resided in hot climates or made free use of alcoholic drinks, we would have reason to suspect some obstruction to the portal circulation.

As in all other cases, ascertain the cause and decide accordingly.

Describe fully the person's practice in regard to the personal use of stimulants and narcotics.

We need hardly expect an applicant who uses stimulants to excess to admit the fact on being questioned; we must look for the signs of habitual over-indulgence.

Those people who have occasional sprees at long intervals of time are not so apt to show the injurious impress on the constitution as those who habitually use an excessive quantity of alcoholic drink. In the latter cases the general appearance will be a good guide to the Examiner, the complexion, the condition of the eye (arcus senilis, &c.,) any tremor of the muscles of the hands, &c., may assist us in determining the habits of the applicant. Some authors have fixed a standard whereby to judge what is an excessive quantity of alcohol for an adult. The effects on the constitution is what the Medical Examiner must investigate. The use of narcotics, which is another form of intemperance and which in some cases is even more intractable than the abuse of alcohol is detrimental to longevity.

The principal narcotics which are likely to be habitually used are opium, chloral hydrate, cannabis indica, tobacco, ether and chloroform.

What has been the habit in this respect throughout life?

If a man has reached the age of 40 without forming the habit of over-indulgence he is unlikely to form such a habit after that age, but we must take into consideration his occupation, surroundings, &c.

If a man be now a total abstainer, we must remember he may be a reformed drunkard, and besides the dangers of a relapse to his former condition we must be careful to find out if any serious morbid impress has been left on any of the important organs, as liver, kidneys and heart.

Is there anything disproportionate in the weight, stature or girth measurements?

Weight.—In considering this question, the general development of the body, must be taken into account as well as the peculiarities of families. Excessive weight, particularly in early life, not being hereditary, is indicative of faulty nutrition, and is often caused by intemperance or want of exercise.

Stature.—As a rule tall men are capable of less endurance than those of average height, viz., 5 ft. 8 in., and are more prone to pulmonary and cardiac diseases, and are more liable to have hernia, varicose veins, and ulcers of the extremities. Short men are apt to be disproportionally developed, and their physical endurance is small.

As a limit of under and over-weight the following table will aid the examiner in forming an opinion of the safety of the risk for the Company. Twenty-five per cent. *under-weight* is the loss of one-fourth of the man, and calls for the most searching investigation on the part of the examiner. These light weight cases may be the result of chronic dyspepsia, diarrhoea or dysentery, marasmus, scrofula, hæmorrhoids (bleeding), hypertrophy of the heart, with excessive impulse, albuminuria, Bright's disease, &c., &c. In addition to these, in the case of females, some chronic uterine disease may be suspected. The exceptions are few in which it is safe to disregard these limits, and in every such case of under-weight tests for Bright's disease and other obscure organic mischief are imperatively indicated. In this connection will be seen the importance of being accurate in stating the height and weight. Mistakes might cause the rejection by the Home Office of a good risk, or the acceptance of a bad one,

TABLE OF HEIGHT, WEIGHT AND MEASURE.

Height.	25 per ct. Under Weight.	20 per ct. Under Weight.	Amer'can Standard Average Weight.	25 per ct. Over Weight.	40 per ct. Over Weight.	Average Chest Measurement.
5 ft.	86	92	115	144	161	38 in.
5 ft. 1 in.	90	96	120	150	168	34 in.
5 ft. 2 in.	94	100	125	156	175	35½ in.
5 ft. 3 in.	97	104	130	163	182	36 in.
5 ft. 4 in.	101	108	135	169	189	36½ in.
5 ft. 5 in.	105	112	140	175	196	37 in.
5 ft. 6 in.	107	114	143	178	200	37½ in.
5 ft. 7 in.	109	116	145	181	203	38 in.
5 ft. 8 in.	111	119	148	185	208	38½ in.
5 ft. 9 in.	116	124	155	194	217	39 in.
5 ft. 10 in.	120	128	160	200	224	39½ in.
5 ft. 11 in.	124	132	165	206	231	40½ in.
6 ft.	127	136	170	212	238	41 in.
6 ft. 1 in.	131	140	175	219	245	41½ in.
6 ft. 2 in.	135	144	180	225	252	42½ in.

The Respiratory System.—The importance of a thorough examination of the respiratory organs cannot be too forcibly impressed on the mind of the Examiner. In England, according to the latest authorities one in six of the deaths occurring in the adult population is from diseases of the respiratory tract. Foul air is a great factor in producing respiratory diseases. We must ascertain by inspection, percussion and auscultation, and ascertain whether the respiratory murmurs and percussion notes are clear and distinct and of normal character over all parts of both lungs.

In general terms, in health, the act of respiration (including inspiration and expiration), should be quiet, easy and regular in the ratio of one to four or five of the pulse, and not exceeding 20 per minute. This may, however, be temporarily influenced by mental causes or physical exercise.

Drawing a full breath and holding it for a few seconds should cause no distress or pain.

An adult should be able to count aloud rather slowly from 20 to 30 without drawing a fresh breath,

In the adult the chest should expand in all directions and the muscles of the neck and arms (axillary muscles) should not take any very active or visible part in the act.

If the blood be well aerated the lips and ears and the tips of the fingers should not have any livid or purple tint. The respiratory murmur should be gentle like a slight breeze among the trees, not harsh or noisy.

Prolonged expiration frequently points to lung disease.

Irregular, intermittent or jerking respiration points to derangement of the nerve centres. If the respiratory act varies from the normal standard in frequency, a subsequent examination should be made before reporting on the case.

Is the character of the heart's action uniform, free and steady?

In health, the heart's action should be uniform, free and steady, its sounds and rhythm regular and normal. On inspection the impulse of the heart will be visible about one and a half inches within and the same distance below the left nipple, in the fifth intercostal space; it should be plainly perceptible when the person is in the erect position, but should not appear jerking or widely diffused.

The sounds of the heart should be quite clear and distinct, unattended by any murmur or friction.

The rhythm of the normal heart is regular; we must not, however, too hastily conclude when departure does take place that it is necessarily due to disease. Sometimes such a condition is due to idiosyncrasy or a temporary disturbance of the nerve centres; it may also be due to anæmia. In such cases postpone decision until thoroughly satisfied as to the cause of such departure.

The frequency of the pulse varies during the different periods of life and also in different climates.

In the adult its rate in temperate climates is from seventy to eighty per minute, the pulse of females being slightly more frequent.

In the North-west part of this continent the pulse rate is increased by about 10 beats per minute, while in the West India Islands it is reduced by about the same number. The pulse should not intermit or become irregular when the applicant is in a passive condition.

Some people, without any evident cause and perfectly free from disease, have an intermittent pulse; others have an abnormally slow one from idiosyncrasy. Note all such peculiarities. If the pulse rate is above 88 or below 54, re-examine on another day.

Urine.—Reference to the following table will be found useful when examining this fluid :—

MORBID ELEMENT.	PHYSICAL CHARACTERS.	TESTS AND RE-ACTIONS.
ALBUMEN.	Sp. gr. varies from 10.10 to 10.25 ; color, light ; a precipitate of a light color generally falls after a few hours.	(1) If the urine is clear (and if not, filter) nearly fill a test tube and heat the upper portion ; if it becomes turbid add two or three drops of nitric acid ; the precipitate dissolves if it is phosphates, if not albumen is present. (2) To another portion of the filtered urine add ferrocyanide of potassium and acetic acid ; a white precipitate in the cold indicates albumen.
SUGAR.	Color, light ; sp. gr. high ; very peculiar odor ; rarely deposits sediment ; contains large excess of water.	To a portion of the urine (if albumen is absent) add an equal volume of Fehling's solution of copper and boil ; a yellow or yellowish brown precipitate indicates sugar ; if a slight precipitate only is produced, add more urine, boil again and allow it to stand for a few hours ; if sugar is present, the solution becomes colorless and a red precipitate falls to the bottom of the test tube ; if doubtful, use fermentation test, which is conclusive.
BLOOD.	Color, red, smoky or dingy ; deposits, on standing, brownish or coffee-ground sediment ; if in large quantity, minute coagula may be seen at bottom of test glass.	To a portion of the urine add an equal volume of tincture of guaiacum, followed by a few drops of old turpentine or solution of peroxide of hydrogen ; a blue color, if produced, indicates blood.

MORBID ELEMENT.	PHYSICAL CHARACTERS.	TESTS AND RE-ACTIONS.
Pus.	When urine contains pus it deposits an opaque, creamy sediment, or a gelatinous mass, is generally alkaline, and always slightly albuminous.	Upon microscopic examination, pus cells are readily discovered; a drop of acetic acid should be added to the specimen under examination for the purpose of developing the nuclei. The chemical test for pus is liquor potassæ, which forms therewith a gelatinous precipitate of a light straw color.
BILE.	Color very dark; sp. gr. not materially changed; generally coincident with other symptoms of hepatic derangement.	Pour a small quantity of urine on a white plate or other porcelain surface; a drop of nitric acid is then added; a play of colors shortly takes place, commencing with green and blue, passing to violet and red, and often finally to yellow and brown.
Mucus.	Color, light; a more or less abundant flocculent deposit takes place, putrefactive changes commence very early, the urine rapidly becoming ammoniacal.	Upon the addition of acetic acid, the fluid part of the mucus coagulates into a thin semi-opaque, corrugated membrane, which at once establishes the difference between mucus and pus.

N.B.—In case of any suspicious color or deposit in the urine, use microscope.

Nervous System.—This system of all others is most influenced by a great variety of causes. The question suggests itself, if there is any departure from the normal condition of the nervous system, is it due to organic disease or temporary functional derangement?

Digestive Organs.—The nutrition of the body depends on a healthy

condition of the digestive organs, and unless digestion is properly performed wholesome assimilation will not take place.

Genito-Urinary Organs.—Enquiry should be made as to any evidence of present or past disease of these organs.

Locomotory Organs.—The connection between the diseases of nervous system and the locomotory system is very close, and reference has already been made to the more prominent ones.

Cutaneous System.—Its abnormal condition often points to constitutional disease, hence the importance of careful observation when examining this system.

The Organs of Sense.—Disease of the organs of special sense is sometimes fraught with danger, as in the case of disease of the ear; although not urgent at the time of examining, still may at some future time prove fatal by an extension of the inflammatory process to the structures of the middle ear and mastoid cells and thus light up an inflammation of the brain and its membranes. The loss of sight, although not in itself lessening the "expectation of life," exposes the afflicted one to greater dangers of accident than he otherwise would have.

Do you find any tendency past or present to cough, expectoration, difficulty of breathing, or palpitation? Or of predisposition, hereditary or acquired, to any particular disease?

This question is intended to direct the Examiner's attention particularly to the condition of the thoracic viscera, past or present, and to ascertain, if possible, whether, when there has been any departure from the healthy condition, if it has been due to hereditary or acquired causes.

Do you find that there have been any cases of consumption or other hereditary disease among the parents, brothers or sisters of the applicant?

On the evidence or non-evidence of such, the fate of the applicant for insurance frequently depends.

At the present day the hereditary nature of some diseases is unquestioned, and of all the diseases which exercise an hereditary influence, consumption is the most prominent.

The proportion of hereditary and acquired cases vary at the different ages of life. According to Dr. Fleming those cases which occur be-

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fore the age of forty or forty-five are usually hereditary; after that period they are usually acquired cases.

The same authority states that there are fewer deaths from consumption in Insurance institutions in the period of life embraced between 15 and 80 years than is experienced in the general population, but a considerably higher proportion above this period, that is after 80 years of age.

That consumption is capable of being transmitted from parent to offspring, we presume is admitted.

The offspring of consumptive parents may or may not be attacked by the disease, or the seeds may lie dormant in one generation and become developed in another; thus we find phthisical parents bearing apparently healthy children, or the children of such parents who seem themselves to be healthy having phthisical offspring.

In such cases individual modifying circumstances must be carefully examined and weighed.

The age, personal health, configuration, habits, residence and occupation of the person examined, and the health and longevity of relations generally must be considered before deciding on a case; also ascertain if more than one relative has died of the disease and the degree of propinquity, the age or ages at which death occurred, the number of deaths and the ages and state of health of the members of the family now alive.

Drs. Begbie and Christison state:—When two members of a family have died of consumption the risk must be declined. This rule is not, however, always acted upon.

The following general rules have the approval of medical experts in reference to accepting applicants who have the history of consumption in their family:—

In the following cases reject:

1. When three cases have occurred in a family.
2. When the applicant is under twenty-one years of age and one case has occurred.
3. When under thirty and a parent has died of the disease.
4. When under thirty-five and two members have shown the disease.
5. When under forty and both parents have died of the disease.

These are the general rules for applicants on the whole life plans of insurance, but some of the foregoing cases may be taken on en-

dowment plans for a suitable term of years, when the personal history of the applicant is good.

The communicability of consumption is patent to all physicians of any considerable experience; how this communication occurs is still an open question.

Among the other hereditary diseases we may mention insanity, gout, cancer and epilepsy.

Has the applicant ever had any serious illness or injury?

The Examiner will here enquire carefully; some illnesses are frequently followed by organic lesion, such as malarial fever, typhoid or diphtheria, &c. As to injuries:

Injury to the head or spinal cord may, after the lapse of months or years, give rise to fatal results, hence the importance of finding out the fact and history of any such occurrence and its probable effect on the constitution or on any important organ. As an instance, a man may receive injury of the brain or spinal cord, and although he recovers from the immediate effect, it may be followed by ulterior consequences which may terminate unfavorably.

If the applicant be a woman, state number of children, if now when last pregnant, whether there have been any miscarriages or difficult labors, are the uterine functions now regular, has she ever suffered from uterine or menstrual disease or disorder?

Most Companies do not insure a pregnant woman, nor a married woman until she has had one child, unless she is over forty years of age; nor an unmarried woman, except on short endowments.

With the whole population the duration of life amongst females exceeds that amongst males; but in the experience of life insurance companies the reverse is true. If this curious fact is to be explained on the assumption that medical examinations of females are not usually so thorough and disingenuous as that of males, it is a reflection upon our profession which we hope the future will remove.

There are certain conditions incident to females which render their lives somewhat hazardous, such as menstrual functions, child-bearing, miscarriage or difficulty in labor, &c. A woman who has once borne a child without any considerable difficulty, is a much better risk than a primipara, and married women are better risks than those who are single. Previous labors, if any, should be carefully enquired into.

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Rupture is much more common than is generally supposed and is met with oftener in the male than in the female, the proportion being 5 to 1.

According to Malgaigne one man in every thirteen in France is ruptured.

The word Hernia in insurance papers refers especially to the various forms of abdominal hernia; the dangers attending this condition are well known, but at the same time it is a remarkable fact that the mortality due to hernia is only four per cent. of those so affected. Hence, if a properly adjusted truss be worn, the risk may be received, and in most policies a clause is inserted to the effect that the insured must wear a suitable and well fitting truss.

Are the muscles hard and strong? Is the gait firm and elastic?

These questions have a bearing on the general condition and physique of the person examined.

Is the spleen or liver enlarged?

If the party is residing at present or has resided in a malarious district, we may find some enlargement of the spleen or liver as a result of the influence of malarial poison acting on these organs. If the enlargement be chronic it is due to organic change in the structure of the organs themselves, and would be a cause for rejection.

If the person has been a *bon vivant*, or used alcoholic drinks to excess, or if he has resided in tropical climates, we may have an enlarged liver as the result. Such cases must be postponed or rejected, as the circumstances point out.

Does the state of the teeth, mouth and throat indicate health?

Persons who have sound teeth masticate their food properly and are not liable to dyspepsia.

Sound teeth are usually associated with a strong constitution, and decayed teeth with the reverse.

Inherited syphilis may sometimes be recognized by the conformation of the teeth, particularly that of the incisors, and also by the state of the mouth and throat; look for any evidence of syphilis, see if chronic pharyngitis be present or if the tonsils are enlarged. If any evidence of ill health be found from the condition of these parts, weigh carefully its importance.

Do you find by examination or enquiry any indications that the applicant's habits of life are or ever have been other than correct and temperate? Make a searching investigation here. The observant

Examiner can usually judge of this from the general appearance of the applicant.

Excess of any kind, if continued for a period of time, will lessen the chance of longevity, but there is a great difference between individuals as to toleration of the system. Inroads upon the constitution will be recognized if looked for, and should be weighed carefully.

Do you find any unfavorable features whatever in the applicant's physique, family or personal history, residence (*e.g.*, if malarious), occupation (*e.g.*, if involving any special exposure or danger), habits or circumstances of life?

This question is a summary of the circumstances affecting the proposed risk, and the answers to it should be well weighed and studied.

Physique refers to conformation or build; any departure from the normal standard would be of importance only when it affects the probable duration of life.

Family and personal history. Special care must be exercised to ascertain if there have been any cases of hereditary disease in the immediate family or near blood relations.

Personal history refers not only to his present physical condition, but also to his present and past habits of life, &c.

Residence, whether healthy or otherwise. If malarious, the person is exposed to the dangers of the various forms of malarious disease, both of an acute and chronic nature.

Who is the applicant's medical adviser? Do you need any information from him?

This question may sometimes be of importance, as applicants for insurance have denied having had any medical man attending them, and it became subsequently known that they had undergone a serious illness, and had been under professional treatment.

A false answer to this question might invalidate the policy.

Sometimes much valuable information may be obtained as to the habits and former health of the applicant from his usual medical adviser which might not be brought to light by the Company's Medical Examiner.

Do you think the applicant will reach the full expectation of life?

By "expectation of life" for a given age, is meant simply the probable average duration to which life, among men who have attained that age, will be further extended. Thus, taking 1,000 healthy men who have attained the age of 35, the aggregate duration of life

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beyond that age for the whole number, will be 31,020 years, or an average of 31.02 years for each man.

Tables of "life expectation" are a deduction, by a simple calculation, from the "mortality tables," which are made up from observations of the rate of mortality at each separate age. Several such tables are in use, but the one named in the Dominion Insurance Act of 1886 is the Hm. Table, and is made up from the experience of 20 leading English offices. The following is the expectation of life, for each age, from 20 to 70, on the basis of the Hm. Mortality Table:—

TABLE OF LIFE EXPECTATION.

Present Age.	Expectation of Life, (healthy male lives)	Present Age.	Expectation of Life, (healthy male lives)	Present Age.	Expectation of Life, (healthy male lives)	Present Age.	Expectation of Life, (healthy male lives)
20	42.06	33	32.48	46	23.08	59	14.44
21	41.33	34	31.75	47	22.38	60	13.89
22	40.60	35	31.02	48	21.68	61	13.24
23	39.88	36	30.29	49	20.99	62	12.66
24	39.15	37	29.56	50	20.81	63	12.10
25	38.41	38	28.84	51	19.63	64	11.55
26	37.66	39	28.12	52	18.95	65	11.01
27	36.91	40	27.40	53	18.28	66	10.49
28	36.16	41	26.68	54	17.62	67	9.98
29	35.42	42	25.96	55	16.96	68	9.48
30	34.68	43	25.23	56	16.32	69	8.98
31	33.95	44	24.51	57	15.68	70	8.50
32	33.21	45	23.79	58	15.05		

All the considerations involved in the foregoing questions lead up to this most important one. The skilful examiner having investigated the habits, the personal and family history, and the present physical condition of the applicant, and become acquainted with the conditions and influences which surround him in his daily life, is prepared to give a reliable opinion as to the probable duration of the applicant's life.

In any case of reasonable doubt he should give the Company the benefit of it by rejecting the application, or by recommending an endowment policy whose term shall be well within the probable duration of the applicant's life.

