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Pathological Physiology as a Basis for Medical Practice

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The primary interests of the clinician revolve around the three general topics of diagnosis, therapy, and prevention of disease. Regardless of the extent of his factual knowledge, his ability to accurately diagnose disease and to instruct and treat patients satisfactorily bears a direct relationship to his working knowledge of physiology, biochemistry, and pathology.

Whatever symptom a given patient may have is due to his conscious recognition of a physiological action. Such recognition may be brought to his consciousness over the common somatic afferent pathways or through the special senses. For example, he is conscious of the existence and location of pain associated with angina pectoris; or the numbness of the fingers and the contractures of certain muscles caused by the acapnia of hyperventilation. In recognition of the presence of inadequate and difficult breathing, he is informed that he has dyspnea. He becomes conscious of the dependent edema or cyanosis of myocardial failure by what he sees more than by what he feels or of the bruit of Leudet associated with middle ear pathology, by what he hears.

Sometimes certain symptoms must be recognized by the physician as resulting from normal physiology. When present they indicate response of a healthy subject. Unfortunately such normal responses are not always so interpreted by patients, and more unfortunately they are not uncommonly misinterpreted by the physician.

On the other hand, most symptoms result from physiological reactions which can be classified as abnormal. As a rule, the majority of symptoms which are brought to the attention of the physician by his patient are included in the classification of being abnormal, or at least unusual. The proposition that there is a legitimate cause for all such physiological disturbances must be accepted and agreed to. In other words, there is a definite, if not a specific, pathological state which forms the primary background for the existing abnormal physiology and the associated troublesome symptoms. Even though organic lesions are frequently the basic causes of the physiological state which exists in given subjects, for one to promote the idea that the pathological state is always a well-defined or demonstrable anatomical lesion would be a gross misstatement of facts. Even to project the thesis that existing organic lesions always give rise to easily recognized physiological disturbances and thereby to well-defined symptoms or syndromes, would be an equally serious error. The situation is seldom that simple.

In defining a given pathological state one must keep clearly in mind that it may or may not be associated with demonstrable anatomical abnormalities; that the apparent physiological explanation of existing symptoms may be of minor consequence as compared to other physiological disturbances which remain hidden to a superficial analysis and which require rather deep and organized probing to find,
in mind what happens to food after it is eaten. Therefore, he should have an understanding of the processes of digestion, absorption, and metabolism. He should have in mind the relationships between food and other body functions. Otherwise, how could he be in a position to prescribe what, how, when, and where to eat?

The same principles apply to rest, exercise, recreation, mental attitudes, environments, and other factors which may have an influence on the life and the well-being of any person.

As previously intimated, the unphysiological approach to the solution of the problem of preventive medicine, such as has been promoted by certain enthusiasts both within and without the profession, has frequently been detrimental to the accomplishment of the most good, and altogether too often has actually contributed to harm. This does not mean that all such individuals are insincere or malicious, but it does emphasize the necessity of one's having a sound working knowledge of the physiology of the human organism before he is in a position to prescribe.

In conclusion, emphasis is placed upon the fundamental propositions that the conditions of life which affect the average human being are complicated; that all factors which touch him and his living conditions have an influence upon his inherent complicated physiology; and that the doctor of medicine must have a practical knowledge of the factors which may be involved in promoting normal physiological actions before he is in a position to diagnose disease, prescribe treatment, or direct in the prevention of human ailments.

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