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### Psychosomatic Disorders

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Claybrook, C. David, "Psychosomatic Disorders" (1967). *Honors Theses*. 569.  
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PSYCHOSOMATIC DISORDERS

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A Research Paper  
Presented to  
Kenneth S. Moxey, Ed.D.  
Associate Professor of Psychology  
Ouachita Baptist University

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In Total Fulfillment  
of the Requirements for  
Special Studies H-491

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by  
C. David Claybrook  
May 1967

Honors Paper # 40

## OUTLINE

### PART I:

- I. Definition
  - A. Illustration
  - B. Occurrences
    - 1. Clinical
    - 2. Daily
- II. Disorders
  - A. Location
    - 1. "Weakest Link" hypothesis
    - 2. "Specific" hypothesis
  - B. Reactions
    - 1. Primary
      - a. Muscle system
      - b. Endocrine system
    - 2. Secondary

### PART II:

- I. Migraine
  - A. Mechanism
  - B. Personality
- II. Gastro-Intestinal Disturbances
  - A. Peptic ulcer
    - 1. Mechanism
    - 2. Personality
  - B. Colitis
    - 1. Mucous
    - 2. Ulcerative
  - C. Nutrition
    - 1. Bulimia
    - 2. Anorexia nervosa
- III. Integumentary Disorders
  - A. Mechanism
  - B. Stigmatization
  - C. Neurodermatosis
    - 1. Ring neurodermatosis
    - 2. Otitis externa
  - D. Acne
- IV. Cardiovascular reactions
  - A. Tachycardia
  - B. Anginal Syndrome
  - C. Essential hypertension
  - D. Coronary disease
- V. Respiratory Reactions
  - A. Vasomotor Rhinitis
  - B. Bronchial asthma
  - C. Common cold

- VI. Urogenital Reactions
  - A. Urinary
    - 1. Micturition
    - 2. Enuresis
  - B. Gyneological
    - 1. Dysmenorrhea
    - 2. Amenorrhea
    - 3. Pseudocyesis
- VII. Endocrine Reactions
  - A. Goiter
  - B. Diabetes mellitus

#### SUMMARY



## PART I

Rosalind G. is blind. She has not been blind all of her life, nor has she met with some tragic accident that has robbed her of her vision. Miss G. until recently had been employed as an office assistant to a physician. Because of the trouble that her eyes were giving her, however, she resigned! At first sign of eye trouble it was only necessary for Rosalind to wear dark glasses to keep down the glare from the sun and bright electric lights. She has been to many doctors and eye specialists and although she has tried many pairs of perscription glasses, Miss G. has found no relief. Not too long ago, Rosalind became indifferent toward herself. She would not eat unless someone else prepared her meals. She never entertained and she never went out at night. Instead, she would stay home by herself with nothing around her but complete quiet and darkness.

Miss G. found no relief for her painful eyes. She soon covered her eyes completely and placed blinders around her glasses. She has begun ordering Braille literature in order

to keep up with current events. She can not tolerate light and for this reason and this alone, Rosalind G., age 56 is blind.<sup>7</sup>

This is indeed a tragic story, but nonetheless it is true. Rosalind is suffering from a disorder called photophobia. Photophobia is a psychosomatic illness. There are many people like Rosalind who live their lives in bodies that are tormented with disorders; some of them are hardly noticeable while others are acute enough to warrant hospitalization, and others even stop life. The one factor that makes these people peculiar is that their problems are not initially those of a physical or organic nature; but rather, they are psychological, emotional problems. These are psychosomatic disorders!

The term psychosomatic is derived from two Greek words, "psyche" meaning mind and "soma" meaning body. The concept embodies the principle that the mind is closely integrated with the body, that they are inseparable. A psychosomatic illness, therefore, is an illness that has its foundations in the mind but is manifested or has its symptoms in the body. It is important to realize that these illnesses are not merely in the rampant imagination of the sick person's mind. They are very real and often painful organic disorders. The distinguishing factor in psychosomatics is that they are precipitated, to a major degree, by emotional disturbances and not merely by physical disorders. Therefore, emotional

maladjustments lead to chronic dysfunctioning of some organ system of the body. This definition would seem to include almost all physical disorders that have anything at all to do with both the mind and the body. There are, however, two limiting factors. First, as has been mentioned, the primary cause of the illness is a chronic emotional maladjustment and the physical disorder is a by product of it. Somatopsychic is a term that is used when just the reverse is true. A head injury that causes neural damage is an example of a somatopsychic disorder. Encephalitis is another. Secondly, the organs that are involved must be controlled by the autonomic nervous system of the body. This second factor eliminates disorders such as psychasthenia and hysteria which are caused by stimuli carried through the central nervous system and are called neurosis.

Even though the definition has been limited, the number of kinds of psychosomatic disorders is more abundant than is usually realized. A recent estimation has conservatively published that at least 50%<sup>11</sup> of all people going to doctors in the United States are ailing because of psychosomatic illnesses. It has been reported in a well known Southern clinic that about 386 out of every 500 admissions are those of psychosomatic patients, a staggering majority of 77%.<sup>11</sup> These percentages are high indeed; but as will be seen, the types of illnesses are many and involve almost every part of the body. Another important fact is that all ages suffer

from emotional distress and therefore the young as well as the old are susceptible to psychosomatic illnesses.

The causes of psychosomatic illnesses, as unique and varied as each case history, are emotional stresses that are produced by circumstances of daily living. One authority has attempted to sum them all up in three words: cares, difficulties, and troubles. He says, "Whenever one has such a thick impenetrable layer of c.d.t. that he can't get up above it into a realm of joy and pleasure occasionally he gets a psychosomatic illness."<sup>11</sup> Of course this is an over simplification of the problems behind the disorders. A closer look at the machinery of the body, especially the autonomic nervous system, is necessary to understand the mechanism of psychosomatic illnesses.

For many years, physiologists directed their studies of the body by the belief that the psychic and somatic processes were totally unrelated. It is becoming more and more accepted, however, that the human organism is a complex organic creation that is indeed controlled or operated by the workings of the mind. It is not unusual at all to hear a person relate the mind or emotion to the physical body. Children especially express their feelings in terms of the body. Some examples are: "no guts", "butterflies in your stomach", "heartache" and "broken-hearted". To a Chinese woman the highest proclamation that her beau can pay her is for him to exclaim that she has tied his intestines in knots.

Everyday observations will show adequately that feelings and emotions can affect the body. For example before going in front a group to present a program or make a speech, many people develop what is called stagefright. They can't eat. Their hearts beat faster than usual. Their mouths become dry. Their hands feel cold and began to tremble. Stagefright even causes many people to feel the need to urinate or have a bowel movement. Another emotion that can be easily observed is joy. A joyous person usually exhibits erect posture, a springy step, bright eyes, and a smiling face. Good facial coloring, a strong pulse, deep breathing, a good appetite, good degestion and elimination are all physical signs of mental well being.

A grieving person, on the other hand, might feel an aching tightness in his throat. He may be seized by a choking sensation, short breath, a need for sighing, a desire to cry and a general weakness, and easy exhaustion. A grieved person may also have a poor appetite and remark that his food tastes like sand. All of these are called psychosomatic reactions; reactions of the physical body to emotional stimuli. Most of the reactions mentioned are only slight and even sometimes hardly noticeable. They cause only temporary discomfort. Others, however, like the lose of appetite may become chronic and develop into malfunctions of complete organs or organ systems. Before one can accurately examine these disorders he must understand the relationship between the

body and the mind. He must understand to a degree the operation of the nervous system (more specifically, in the case of psychosomatic disorders, the autonomic nervous system) and its relationship to the body.

Man's nervous system reaches and controls every part of his body. There is very little of the body, however, that man can actually by thinking about it control himself. There are two parts of the nervous system: the central, consisting of the brain and spinal cord, and the peripheral system, consisting of all of the processes leading from and going to the central nervous system. The peripheral nerves are also divided into two groups: the somatic and the autonomic. It is the somatic system through which the body receives physical stimuli from the outside, such as touch, sight and sound, and then reacts to those stimuli. This is called the voluntary nervous system because it allows the person to govern his actions. The autonomic or automatic system, on the other hand, controls the movement and operations of internal glands. It also governs the smooth (involuntary) muscles which are found in all parts of the digestive track and internal organs (viscera) and surrounding all blood vessels. This system then allows the body to function without thought processes. It could be compared to an automatic pilot on an airplane. The autonomic nervous system is also composed of two parts which are always in constant conflict. They are the sympathetic and the parasymp<sub>u</sub>sthetic systems.

The sympathetic is usually the part that deals with mobilization of body resources for the production of work; in other words, the part that encourages the body to carry out its functions. The parasympathetic, on the other hand, is concerned with the conservation of bodily resources or the ceasing of work. If given complete control, it would cause all bodily processes to stop. Under normal conditions the two parts are in complete equilibrium. This allows the body to function properly. Strong emotion however can send impulses from the brain which may cause overactivity of some part of the body. Luckily however, emotions are usually transient and so overactivity may be of short duration and not even be noticed. All healthy systems of the human body are capable of bearing a great deal of overactivity when they are called upon to do so. But all machines have limits, and like any other, the human machine can only be expected to work so hard before it too reaches its limit. When this capacity is passed, a dysfunction of a system will occur and sometimes this overwork may even cause permanent physical damage. When this overactivity is caused through an unbalanced autonomic system because of strong emotion frustrations, the resulting physical dysfunction is called a psychosomatic disorder. Many times the disorder will not appear at the time of the greatest feelings of emotion, or it will appear and continue long after the pointed experience has subsided. Why does it remain in this state?

Because of the very close resemblances between man and many of the other animals, man has for years compared himself to animals for a better understanding of the human mind and body. It is profitable to do so in this case also. Animals are constantly being forced into situations that threaten their lives. Usually, however, these dangers are of short duration. Nature, for protection, has provided all animals, including man, with minds that quickly react to such danger. These reactions may be purely physical reflexes requiring no thought at all or they may be more involved, demanding conscious attention and action. In both of the above cases the unconscious mind is hard at work, causing changes in the inner body to prepare it for defense. Selye has divided this inner course of action, which he calls the General-Adaptation Syndrome, into three steps: 1) alarm reaction, 2) stage of resistance, and 3) stage of exhaustion.<sup>10</sup> He says that when danger occurs, physical or psychological (emotional), an animal enters into the stage of alarm reaction. This stage consists of various complicated bodily and bio-chemical changes. It is interesting to note that these reactions are usually about the same in respective animals, regardless of the conflict or stress involved. The second step is stage of resistance. This is when the reactions in the first stage disappear and reactions peculiar to combating particular dangers arise. It is in this stage that the anterior pituitary and the adrenal cortex, among other glands,



begin to secrete their hormones to allow the animal to resist. It seems probable that it is in this stage that the autonomic nervous system loses its equilibrium thus causing overactivity of certain organ systems in the body. If the stress is continued, the animal then enters into the final step of the syndrome. In this stage the resisting functions of the body become exhausted and begin to cause harmful changes in the tissues of the body. This may result in death. An animal's fate, therefore, depends upon the duration of the danger and the length of time that the animal can resist before becoming exhausted.

This is also true with man. The human animal, however, is distinguished from the rest of the animal kingdom in that its mind is capable of "thinking". He is able to examine and re-examine past experiences and to dream and wonder about the future. These additional powers of man's brain when used correctly can afford him many hours of pleasant reminiscence and a peace of mind that can come from looking to the future with trust. When man allows himself, however, to bring out only the bad things of the past, the things that threatened him or wrongs that he himself committed, he produces emotional discomforts in his mind that, in an animal, would have ceased at the time the actual fault ended. Likewise when man allows himself to look to the future with doubt and uncertainty he is producing discomforts in his mind that will lead to emotional tension and, if held, psychosomatic malfunctions. One

authority phrased it this way. "Man, feeling threatened, may use for long term purposes, devices designed for short term purposes."<sup>16</sup>

Another way that man facilitates the occurrence of psychosomatic malfunctions is by the improper use of the protective devices that nature has given him. The autonomic nervous system, along with other organs such as the pituitary and adrenal cortex glands, are designed to compensate for stresses that ordinarily occur in daily life. Many people, though, use these devices in the wrong way. For example, unlike animals, man has the power to channel his hostilities in many directions, but when he meets a danger that should be taken care of by physical assertion, and instead turns it into his mind and allows it to build up inside of him, he is causing undue emotional strain. A ~~b~~usinessman who is filled with nervous energy needs to occasionally take a little time off and relax, with a hobby or something. If he instead ~~s~~uppresses this need and pushes the energy back into himself, the result will be seen in an over-anxious mind and finally maybe even in a physical breakdown caused by emotional tension. If this hypothetical case should become real, where would this breakdown occur? What system of the body would be affected?

Why do some people have ulcers while others have asthma and still others develop cancer? Why did Miss G. develop photophobia instead of some other psychogenic illness? There are two answers that authorities are giving to this interesting

question. The simplest of these is that the system that breaks down is the one that is organically the weakest. The cause of this weakness may have been illness or injury. It may have been an innate weakness — poor development or heredity. There are those, however, who believe that this is too simple and are looking for a more justifiable, at any rate a more complete, explanation. The second suggestion is called the "specific hypothesis." This hypothesis states that different emotional stresses are in some way related to different patterns of autonomic discharge. This simply means that a particular kind of stress would affect a specific organ or system of the body. General observations will to some extent support this belief. For example, a person who has a guilt feeling and the hidden desire to "get something off of his chest" will often develop an illness in his respiratory tract. Another example might be a frigid woman who conveniently develops sores on her skin because of the subconscious desire to keep from being touched by her date or husband. The "specific hypothesis" does seem to be valid, but only to a certain extent. Many researchers are not satisfied with it or with the theory of the "weakest link." It may be that both of these hypotheses work together or that still another more complicated mechanism is at work.

Although the reasons for the area of attack are questionable, it is known that either one or both of two main systems of the body are usually affected first and then through these

the disorder may be carried to other systems and become more specific in its result. These two are the muscular and the endocrine systems. There are three kinds of muscles in the body: striated, smooth and cardiac. These three kinds of muscles are responsible for the motility of every movable part of the body. The striated muscles are often called skeletal muscles. They are attached to the bones and are controlled by the peripheral or voluntary nervous system. This enables man to move an arm or leg when he feels like it. The smooth and cardiac muscles, however, are controlled only by the autonomic nervous system (A.N.S.) and cannot be moved voluntarily. Cardiac muscles are the parenchyma of the heart. Smooth muscles are found in the digestive track, viscera and surrounding all blood vessels of the body.

When a person is under emotional stress, the A.N.S. causes certain smooth (and sometimes the cardiac) muscles to contract or expand. Undue tightness may cause pain in several areas. The muscles in the back of the neck are usually the first group tightened during emotional stress. This tightness usually then spreads to the muscles of the upper and lower esophagus, then to the stomach and on down the digestive tract. Almost everyone who has been under tension for a period of time has felt a tightness in his neck. Fear might cause a dryness of the throat and excitement might bring on "butterflies in the stomach." Of course it must be remembered that not all persons react alike and it is highly

probable that a person might never have trouble with tightness of the neck muscles. That person might be affected in others places.

All of the blood vessels of the body are surrounded by layers of smooth muscles. These are necessary, of course, to contract and expand the vessels to assure the correct pressure of blood throughout the body. Under stress, these muscles often are overworked. This may cause various secondary and tertiary malfunctions. Good examples of these are headaches and skin disorders. When muscles are affected in the chest region, a person may become over anxious about his heart. This may, in turn, cause anxiety and a reciprocal operation is underway. If the original pain was not psychosomatic, the resulting one surely might be.

The second main system affected is the endocrine system. The endocrine or ductless glands actually control a great deal of the bodily functions. Then their operations are disturbed, the affects can be far-reaching. For example, when a person is greatly frightened, an impulse is sent through the A.N.S. to the adrenal gland which increases its secretion of adrenaline. This hormone is carried throughout the body by the blood stream and in a matter of moments can give added strength to the muscles of the body. It can also cause the heart to beat faster to increase the blood supply to the brain; affect the respiratory center of the brain which causes a person to gasp for air. The above

reactions are merely complicated, protective devices that the body is equipped with. A prolongation of these reactions, however, may bring about serious dysfunctions in organs and may lead to psychosomatic illnesses. These primary reactions may lead to any one or more of a vast number of secondary and tertiary responses. Just as there are many such reactions, there are many types of psychosomatic disorders. As has been said, some are hardly noticeable, while others are crippling. To mention them all would be impossible in a paper of this nature, but it seems necessary to at least look at some representative examples of each of the major types of disorders.

## PART II

### MIGRAINE

The migraine headache is one of the most well known and talked about psychosomatic disorders. It is associated mostly with the emotional stress of anxiety. Many people even refer to problems that are worrying them as "headaches." Migraine headaches can be of any severity but are recognizable because they are usually located on the side or the back of the head. They are usually one-sided and thus the name "hemicrania"<sup>6</sup> or migraine. These headaches are usually preceded by a disturbance of vision and a rare tactile sensation. They may be accompanied or succeeded by nausea or vomiting.

The smooth muscles surrounding certain cerebral arteries of the brain are the machinery of migraine. The A.N.S., because of emotional stress causes spasms in the cerebral arteries. During this first stage the pain can be relieved by the use of vaso-dilatating drugs. When the emotional stress is allowed to continue, the second stage may be reached. This is distinguished by a great distension of the arteries. This distension stimulates pain nerves in and around the vessel walls, causing the headache. Relief can be found then by the use of vaso-constricting drugs. In the final stage, the artery walls swell, thicken and become rigid. When the headache becomes this bad, there is no treatment.

It has been found that attacks of migraine usually occur in settings of tension, fatigue and exhaustion. Of course, the incidents of the attacks vary with the patient's state of fatigue or tension. It has also been proven that when the emotional stress is lessened or relieved, the attacks decrease proportionally with a positive correlation. Migraine is frequently familial and is often demonstrated in association with asthma, urticaria, and eczema, hay fever, and other psychosomatic disorders. Migraine headaches have been found to occur most frequently in patients with a specific type of personality.

Studies by MarCusson and Tolff in 1949<sup>6</sup> found that most migraine patients are tense and driving. They are ambitious and are rigid perfectionists. They are reliable, conscientious

and hard-working, but they take on more responsibility and work than they can handle. This gives them a feeling of failure and self-resentment. They harbor strong feelings of insecurity and a resentment of criticism. A self-assured manner is often observed, but there is usually an inner need for assurance and a fear of making mistakes. Migraine people are usually stubborn and inflexible. They are self-righteous but also self-critical. They are usually cautious and aloof in social relations. Four out of five women are poorly adjusted sexually. Although the men are better adjusted, they are usually dependent on their wives or mothers. Migraine patients tend to be neurotic but not psychotic.

#### GASTRO-INTESTINAL DISTURBANCES

For some reason, many physical disorders caused by emotional stress occur in the gastro-intestinal track, better known as the digestive track. The kinds of malfunctions that are found related to the digestive track are very numerous and, on the whole, very interesting. They range from conditions that seem to involve no physical dysfunctions to disorders, on the other hand, that seem to be caused completely by organic breakdown.

Probably the most well known or talked about of these is the peptic ulcer. Ulceration is caused a great deal of the time by the over richness of the food and may not have anything to do with the state of mind. It seems though that



in many cases, an ulcer is caused by the prolongation of the phenomenon that is called gastritis or "nervous stomach." Gastritis is characterized by irritation of the stomach walls, but it usually stops short of causing localized injury. An ulcer, however, is formed after a prolonged period of chronic gastric distress. A crater, or crack in the stomach (or upper duodenal) walls is formed and there is loss of blood.

When food is taken into the stomach, impulses are received in the brain and messages are sent by the A.N.S. which causes the stomach to produce a hormone, gastrin. Gastrin then causes the stomach to begin producing digestive juices. In these juices is found HCl (hydrochloric acid). This acid is necessary as a catalyst to enable the juices to digest the food. Normally, when the food is passed out of the stomach, the extra secretion of these juices is no longer necessary and is stopped. In an ulcer patient, however, the processes do not stop and the stomach begins to digest itself. What causes this unceded continuation of these processes? Digestive peristalsis (muscle contraction) and secretion are stimulated by the parasympathetic division of the autonomic system. They can be produced organically by an injury to the midbrain or by drugs. It has been found though that there is no brain damage in most ulcer patients. It can be concluded, therefore, that ulceration might be psychosomatic.

Either or both of two distinct character traits are usually found in psychosomatic ulcer patients. These patients are

usually men with strong ambitions and hard driving tendencies. They also have hidden conflicting desires for rest and comfort, support and loving care -- dependence. These men often feel ashamed because of their hidden longings, and so emotional conflict is produced, a conflict between active assertion and dependent longings. This conflict over the desire for support and loving care is often displayed in the digestive system. "This tension activates the digestive processes because of a long-standing associative link between the receiving of loving care and the receiving of food."<sup>16</sup> It has been proven that a healthy baby must be shown that he is loved and cared for as well as just being fed. They usually are cuddled more and loved more during feeding time than any other time. An added proof of this idea of dependence in ulcer patients is the fact that when they are hospitalized, under the care of nurses and doctors, and need no excuse from work, many outgrow their ulcers.

The other personality trait that some believe to be common among ulcer patients is that of aggression. Many authorities believe that resentment and hostility play a central role in the formation of ulcers -- that physical violence causes gastric overactivity. It is believed that infant frustration takes the form of hunger which mounts until the child is fed. Feeding causes gastric activity, thus after a while a conditioned response is established between frustration and digestion. Ulcers are only one type of gastro-intestinal disorder. There are others of course and they must be looked into.

Some people have a great deal of trouble with elimination. A lot of this trouble may be caused by emotional upsets. Like the ulcer, constipation and diarrhea must be understood with early childhood in mind. The first time that a child is able to have a bowel movement when it is required of him by his parents, is one of the first experiences of giving something when expected. When the bowel movement came at a bad time, the child may have been wrongly punished. This would instill in a child's mind the fact that a bowel movement could be used as a means of aggression against his parents. It would lead him to believe that the functions of elimination are associated with giving or retaining or conforming or rebellion.

Colitis is a condition in which there are multiple symptoms. These may include diarrhea, constipation, lower abdominal pain, and even bleeding. Colitis is not as universally accepted as a psychosomatic disorder as is the peptic ulcer, but is coming to be more so every day. There are two types of colitis: mucous colitis and ulcerative colitis. Mucous colitis is characteristic of the elimination of stools containing mucous. Other symptoms may be loss of appetite, indigestion, heaviness and pain after eating, belching, and nausea. In ulcerative colitis, the mucous membrane of the colon becomes broken or cracked, which leads to bleeding and the formation of ulcers. It has been noted that ulcerative colitis may occur after any great emotional disturbance such as loss of job, divorce, death in the family and so on.

Personality studies show that colitis patients seem to be a little above average in intelligence but lack the emotional maturity to react properly to certain disturbing situations. When such difficulties arise, they become enraged or depressed. These feelings are generally accompanied by bowel malfunctions. "Other studies show these patients to be highly narcissistic and preoccupied with the body."<sup>7</sup> There has not been demonstrated to any degree of accuracy any particular pattern of personality with colitis patients. Most of them, however, have in common feelings of anxiety, guilt and resentment.

Another kind of psychosomatic disorder of the gastro-intestinal track, which seems like it is actually a state of mind rather than body, is bulimia or obesity. The idea that obesity is caused by malfunctions of particular growth glands is, in the vast majority of the cases, false. It is true that some cases of obesity are caused by gland trouble, but these are very few as compared to the actual number of cases involved. It is being shown more and more that overeating may be the outward display of an emotional problem. Studies have shown several reasons for overeating.

Food seems to represent a substitute satisfaction for unfulfilled needs and desires. Obesity itself may have a defensive or symbolic value. Food may be substituted for love, tenderness and attention. Women often overeat as a protection against men and the possibility of marriage. Being large unconsciously afford security to some. This idea is illustrated

in the cliché, "throwing your weight around." To state another reason, men as well as women have the desire to bear a child, and therefore eating may be an attempt to stimulate pregnancy. (It is always necessary to remember that many of these desires are of subliminal nature. They are not recognized by the patients themselves and if confronted with them, they probably would be denied.)

A small infant is often preoccupied with the mouth and with eating. He derives most of his enjoyment from being fed. If the problem that youngsters have during this period of life are not resolved at that time, the need for oral enjoyment may be carried over into later life. A pregnant woman often feels emotions of insecurity in face of the approaching responsibilities of taking care of a newborn baby. She also may be concerned about her loss of attractiveness and may fear a shift in her husband's love, from her to the baby. This may even bring about an unconscious desire for the death of the child. All of these feelings of insecurity may cause overeating and thus obesity or bulimia.

Psychological problems can also cause just the opposite effect. This is called anorexia nervosa. This condition is characterized by a distate for food, a loss of appetite and a total or near ceasing of eating which leads to a weight loss and, in extreme cases, death. There are several reasons that may help answer the question as to why people would quit eating. Many people are afraid of growing up. They are comfortable

in the stage of life that they are in and do not wish to accept the added responsibilities involved with advancing age. People react to the maturing processes in many ways. Some totally resist them. Patients of anorexia are like this. They think that by not eating they can stop the maturing processes. Anorexia may be a carryover from childhood. Many mothers show frustration when a child refuses to eat and so refusal may become a good weapon. The disorder is more common in women than in men, probably for this reason. Women generally look forward to puberty, sexual maturity, marriage and sexual relationships with more apprehension than do men. They do look forward to child bearing, but at the same time they may fear it. Many anorexia patients refrain from eating because of the repressed childhood belief that babies come from something that the mother has eaten. They are therefore afraid of oral impregnation. In many cases of anorexia, there are difficulties in the home, usually between the mother and the daughter. The mother is either overprotective or the opposite, rejective.

#### INTEGUMENTARY DISORDERS

Emotions often affect the skin in many ways. These are seen and for some it is just a matter of placing names for various common observations. For instance, all people have watched the face of a person turn from white to bright red. This reaction often occurs during a feeling of embarrassment.

Fear, on the other hand, may cause the face to turn white. These are common reactions to emotional stress and are not harmful in the least, except that when attention is called to a flushed face, the owner of the face usually becomes more embarrassed than before. What causes this sudden redness of the skin?

There are thousands and thousands of tiny blood vessels interwoven throughout the complete network of skin. These vessels are all surrounded by smooth muscles which constrict and dilate them. (The muscles are, of course controlled by the A.N.S.) Under normal conditions, the tiny vessels in the skin are partially contracted. When a person becomes frightened these vessels contract even more, forcing a great deal of blood out of the vessels or capillaries. This shortage of blood in the skin leaves it looking rather white or pale. Under other conditions the vessels are dilated and blood rushes into them more freely giving a red color to the skin. The skin, like other parts of the body, also reacts to physical stimuli. A slight blow on the arm will cause the skin to whiten at that spot. A harder blow will cause a wider pale spot and a very hard blow will cause swelling and a reddening of the skin, called a flare. If the blow is still harder, a blister or wheal may form. These responses are important because they are the same kind as are observed in some serious psychosomatic skin disorders. An example of these is urticaria, sometimes called nettlerash or hives.

There are many variations of urticaria, but generally it is characterized by the presence of many flares. These are usually 1 - 2 cm. in diameter with small wheals or blisters in the center which may be 1 - 2 mm. in diameter. This condition is also accompanied by itching. A 1950 study of urticaria patients by Graham and Wolf<sup>6</sup> related urticaria to emotional changes. They found that the emotion that was almost invariably behind the trouble was resentment. The patients believed that they had been in some way wronged or injured. They also thought that they were helpless to do anything at all about it. They could neither run or fight. The patients were usually conscious of their resentment but were usually unaware of the hostilities that they had built up inside of themselves. Another study disagreed on this point. It found that the patients not only expressed no hostility but that they actually did not even feel hostility. Reactions in both groups were the same however in that they both used their skin as an outward display of inner emotional turmoil. Because the patients thought that they had been harmed or injured, their skin reacted as if they actually had been hit. There was a great resemblance in the condition of the skin to the psychological blows and to that of the appearance of skin that had been dealt real physical blows.

There is an important secondary emotional factor involved with skin disorders that is not usually present in other conditions. This is that skin disorders can not be hidden from



view as others can. For this reason they are usually employed subconsciously to display some feeling to other people as well as to themselves. This was usually true in the cases of urticaria and is also true in the illnesses of stigmatization and neurodermatosis, other skin disorders.

Stigmatization is a disease that is highly symbolic, usually of religious happenings. Patients develop sores on the fronts and backs of their hands and feet, on their side, sometimes on their forehands, and in other locations that approximate the wound marks on Christ's body as he was crucified. The sores or wounds usually begin to occur on Good Friday or other religious holidays and develop to the point of real wounds. Usually after the religious day or time is passed, the wounds will disappear and the patient again feels well.

The other disease, neurodermatosis, may be manifested in several ways. One of these, ring neurodermatosis, is characterized by an irritation and inflammation of the skin under the wedding band and less often, the engagement ring. Removal of the rings to another finger does not change the locale of the irritation: a fact which eliminates the possibilities of allergy and irritation by the ring.

Otitis externa is a form of neurodermatosis in which there is an irritation of the lining of the inner ear, often resulting in loss of hearing. This illness has been found to occur usually at times when bad news is likely to be heard. A good

example is that of a woman who soon after her husband had his first heart attack, developed otitis externa. She was hostile toward him and for this reason felt guilty. With ear trouble she would not have to hear the fatal news, news that she inevitably longed for.

Any summary of psychosomatic skin disorders would not be complete without a word or two about acne, the malady that affects at one time or another almost every person who is or has passed through puberty. Acne was once thought to purely psychosomatic; that the grease glands of the skin were controlled by the A.N.S. This, however, is not so. It is believed, however, that emotions do play a part at least in spreading the existing condition. Acne is caused primarily by physiological changes that occur during puberty. These changes, among other things, cause the grease and sweat glands to work harder. When a pore becomes clogged with dirt and oil, a pimple appears. The adolescent often is embarrassed or at least awkward with the changes that are taking place throughout his body. The occurrence of acne only adds fuel to the fire. It is a natural instinct to cover up something that is threatening to security and to many youngsters, a blotched face certainly wobbles its foundations. "One of the most striking indicators of the sense of inferiority and shame is the instinctive attempt to hide a blemished face with the hand . . ."<sup>6</sup> This constant face rubbing and pimple popping will undoubtedly spread the condition. It has been shown that acne is increased

by fatigue and exhaustion and also by anxious tension, especially about sex. Emotions are important, but they play a secondary or indirect role.

### CARDIOVASCULAR REACTIONS

One of the most common of psychosomatic disorders is a reaction in which the cardiovascular system develops the primary symptoms. The heart is a good target for psychosomatic disorders, because it is the most universally accepted organ for the expression of emotion -- both good and bad. It is colloquially the seat of emotions, especially the romantic phases. The heart is linked with the sex drive and is therefore involved in many emotional disturbances of mankind. The vascular system is often mentioned in casual conversation. Examples are: "heartfelt" joy, "broken hearted", "warmhearted", "hardhearted" or "coldblooded", and "chickenhearted." The lover is warned that "faint heart ne'er won fair lady."<sup>12</sup> Another reason that the heart and circulatory system are good targets for psychosomatic dysfunctions is because, unlike the digestive track, the skin and muscles, they have no ways of external discharge by which emotional conflicts can be expelled. The emotions must, therefore, be displayed in some way within the system itself. There are four main types of psychosomatic disorders that can be located in the circulatory system. They are tachycardia, anginal syndrome, essential hypertension and coronary disease.

Tachycardia is characterized by the rapid acceleration of the heart beat. Faintness and difficulty of breathing may also be present. The normal heart rate is approximately 72 beats per minute. A patient of tachycardia under anxiety and stress provoking conditions may suddenly have a heart beat of well over a hundred, and in extreme cases, over two hundred. When the stressing condition is known and is passed, the heart beat returns to normal. When the stressor is unknown, the accelerated pulse may last for a few moments or longer and then for no apparent reason return to normal. The type of personality usually involved is a competitive one; but one that has difficulty and is actually afraid of competing and being beaten.

The main symptom of anginal syndrome is a sharp pain in the chest. The syndrome may depend on a combination of factors. These include a weakened physical body, poor social adjustment, and a need to express a conflict in a symbolic way. Of course all chest pains are not psychological but a great many of the patients visiting cardiologists are reported to have no actual organic disease. Two examples of the syndrome will be sufficient. One is that of a man who complained about a pain in his chest. He remarked while visiting a physician that he felt as if his heart had been torn out of him by his wife who had been unfaithful. The second is of a businessman who had been cheated by his trusted business partner and felt as if he had been stabbed.

It is estimated that over half of all people over the age of 45 die because of cardio-vascular-renal diseases. The most common of all of these is essential hypertension or high blood pressure. It is believed that psychological and physiological conditions usually work together in the causation of this disease. The mechanism is believed to be brought about in either or both of two places. First, when the vessels leading to the kidneys are constricted, depriving the kidneys of blood, those organs release a substance that causes the heart to beat faster. This tends to raise the blood pressure. Secondly, it is known that steroids released from the adrenal gland can raise the pressure of the blood. A great deal of information is available concerning the relationship between emotions and the endocrine glands and so it is possible that emotions do play a major role in essential hypertension. Extensive studies, as a matter of fact, have proven that constant vasoconstriction and acceleration of the heart beat, the symptoms of high blood pressure, often occur after long periods of emotional tension. Personality studies have shown that patients of hypertension are submissive and always dependent. Either or both of the parents of a patient are domineering. Patients are not hostile however, and are usually rather placid. They usually exhibit a conflict between resentful feelings and a fear of expressing them.

The last type of cardiovascular disorder (and an excellent example of how the body may use its defensive mechanisms

against itself) is coronary disease. This dysfunction is carried out by two operations: the constriction of the vessel walls that supply the heart with blood, and a shortened clotting time of the blood.

In the discussion of the functions of the autonomic nervous system in emergency situations, it was pointed out that various reactions take place that will aid the animal in defense in time of danger. One of these mechanisms is the change in the clotting time of the blood. This time is greatly reduced under stress for the purpose of saving the blood of the animal should he become wounded in battle. Anxiety, irritation, and excitement increase cardiac output, increase the peripheral resistance to the flow of blood, and speed up blood clotting. "The combination of these factors may result, particularly for an already weakened heart, in what is essentially a psychogenic coronary occlusion,"<sup>7</sup> a blockage of vessels and an increase in blood pressure.

#### RESPIRATORY REACTIONS

For a long time, breathing difficulties have been associated with emotional stress, such as anxiety and fear. Often people gasp for air or breath when they find themselves entrapped in a harmful situation. Everyday expressions again reveal people's recognition of the link between their social and emotional problems and their physical mechanisms. Everyone has had "breathhtaking" experiences or felt the need to

"catch his breath" or to get "something off his chest."

Some examples of respiratory disorders will be mentioned.

Vasomotor Rhinitis is an illness that is characterized by the swelling of the mucous membrane of the nasal cavity. A profuse discharge of fluid from the nose, watering of the eyes, and sneezing are other symptoms. This disorder may be caused by oversensitivity to grass pollen, flowers and plants. When caused purely by physical things, it is called hay fever. A lot of research has been done on the allergy or physical side of the question, but experiments have also shown that these organic symptoms can be brought on by the mere representation of these allergies. For instance, pictures or artificial flowers have brought on sneezing fits and runny noses in people who profess to be allergic to real flowers.

Studies have shown that some sufferers of rhinitis never have the disorder as long as they are in a cheerful, or happy mood. In other words, as long as things are going good, they don't seem to be bothered with hay fever. But when exposed to the causative factors while they are anxious or in a resentful mood, the patients develop the nasal symptoms.

Personality surveys have revealed that these patients are much concerned about deprivation of parental love and support. They react defensively by shutting in their feelings and shutting out the world. They are usually non-participants to challenges of the everyday world. The majority are shy, self-conscious and usually hypersensitive. They appear to be

well-mannered and polite, willing to please; but these facades only shield an underlying defiance and stubbornness.

Another psychosomatic illness of the respiratory track is bronchial asthma. Its symptoms are usually difficulty of breathing, inflammation and swelling of the bronchial mucosa, shortness of breath, coughing, wheezing and a sense of tightness of the chest. The idea that asthma is psychogenic is often opposed. Two main reasons are usually given. First, it has been proven that asthma is caused by a hypersensitivity to substances that are inhaled and that it can be cured by treatment for these allergies. Even in cases when the cause is not recognizable, one could easily exist and be unknown. Secondly, asthma occurrences may run in families. [This second argument is not really very valid as will be shown later.] The main argument for the fact that it may be at least partially psychosomatic is that some cases occur only during emotional upsets: when problems are resolved, the asthma attacks also disappear.

Many personality studies have been made with asthma patients, especially children. The main or predominating character trait is that of anxiety caused by insecurity. Male patients usually have had an overprotective mother that thwarted any sexual experimentation. The females had often been sexually attracted to their fathers during childhood; an attraction that had been encouraged by the father and suppressed by the mother. Therefore, in both cases, love and sex were linked



with the loss of mother's love. And so the common anxiety was caused by the striving to rid oneself of being separated from mother by confessing to sexual temptations. "To control his anxiety, the patient wants to confess, cry, and obtain forgiveness, but this impulse is balanced by equal anxiety lest the mother become angry and reject the patient anyway."<sup>16</sup> Therefore some authorities have concluded, without thorough proof, that the urge to confess and cry blocked by the fear of rejection results in the characteristic asthmatic wheezing. This may be a sound hypothesis, but most authorities are convinced that the asthmatic conditions must be initially prompted by an allergic sensitivity.

A study of the respiratory track would be incomplete without a look at the "common cold." There is a great deal of evidence that suggests that colds are infectious -- due to a virus -- and thus are bonified organic illnesses. There is also, however, increasing evidence that the cold may have emotional components. It may be reaction to frustration, irritation, neglect and need for attention. Development of a cold might make it possible for the patient to avoid situations, it may help "solve" other life problems. It is a fact that individuals who are under stress are more susceptible to colds.

The autonomic nervous system has direct pathways to the nose, mouth, throat, and sinus cavities of the head. Emotional stress causes swelling of the mucous membranes of these areas, making it more possible for an organic infecting element to attack and thrive. Psychologically, a cold might be useful

in many ways. It may be an excuse for rest, and regression. It may be an instrument of hostility and aggression. A sickness of any kind might be a source of increased attention and concern. "One patient appeared to have frequent and prolonged colds because it made it possible to remain at home, 'close to mother.'"<sup>7</sup> Others might like to play hooky, either from work or school or just to escape an unpleasant situation. It may be possible that the general feelings of fatigue and lack of energy may actually be a form of mild mental depression or anxiety that has caused the cold: a causative factor rather than a result of the cold.

#### UROGENITAL REACTIONS

The urogenital system, as the name implies, is the combined scope of the urinary and the reproductive systems. Because they are closely related to each other they are often studied together. The fact that their operations can be altered by emotional stresses is a fact that has been recognized for centuries.

Biologically, the urinary tract is well supplied with nerve fibers of the A.N.S., and many urinary disturbances are caused by emotional problems. There are few, if any, however, that cause very serious damage even physical disorder. Most malfunctioning occurs because urination takes place at inopportune times, too frequently or not at all. Of course the last situation, if prolonged, would cause serious trouble and

a great deal of pain. It is not uncommon for a person's bladder to malfunction while that person is in strange surroundings or situations. Two good examples of this are a person who can not urinate in a bottle on demand at a hospital, and a person who can not urinate in the presence of others. Many women, on the other hand are plagued with a chronic frequency of urination for no apparent reason.

Studies of these problems have shown some correlations between bladder action and emotional stress. Generally, a frequency of urination is characterized by anxiety, aggressiveness, resentment and overt conflict; while retention of waste may be a symptom of emotional repression and other withdrawal reactions.

Another malfunction of the urinary system that may be psychosomatic is enuresis or bed-wetting. It is the most frequent urinary disturbance of childhood but is usually stopped after toilet training or by late childhood. When it does occur it is generally a sign of emotional conflict. Psychological treatment can stop it. It may become prevalent again, however, during stress. A good example of this is the great frequency of enuresis among military men during wartime. Authorities have also come to other possible relationships between urination and the sex drive. Urination is one of the first pleasant experiences of infancy and many children confuse it with a sexual experience. Another idea is that bed-wetting by children and adolescents may be acts of aggression against

the authority of adults, since parents usually try to force a child to stop it before the child is physically to control himself.

It has been stated that a large majority of the patients, especially female ones that visit clinics in complaint of gynecologic disorders are cases which are entirely or mainly the result of emotional stress. Many women upon nearing or entering menstruation display symptoms of organic dysfunctioning. Dysmenorrhea, pain of menstruation, is one of the most common experiences of women. Although there are a great many physiological changes taking place during menses, there is growing evidence that psychology plays an important role in dysmenorrhea. Studies of why this is true have found that some women are reluctant to assume their feminine role. Others subconsciously associate the bleeding of menstruation with that of an injury.

Personality studies show that dysmenorrhea patients for the most part were "tomboys" who had no desire to be females. They were dependent children who did not want to accept the responsibilities of adulthood. Often, masculine characteristics are present. Usually these patients are young unmarried women who started having pain when they first came into contact with adult sexual problems. They often have unconscious fantasies that the sex act is cruel and painful. These beliefs often are taught, though inadvertently, to the girls by their well-meaning mothers.

Another menstrual disorder is that of psychogenic amenorrhea. This is a change, cessation, or decrease in menstruation

without the presence of organic, endocrinal or nutritional disturbances. This often occurs after the patient has received an emotional shock. This shock might be a sex conflict, tension created by quarreling and arguments, intense desire for pregnancy, death of a parent (especially the father) or other emotional disturbances.

Psychogenic bleeding or beginning menses at an unusual time also is common. This, like its opposite, may be caused by emotional stress. One example should be sufficient. This is that of the bride who may suddenly begin menstruation on her wedding night. This could be a protective reaction caused by fear of the sexual act or by modesty.

Pseudocyesis or false pregnancy is another psychosomatic disorder of the reproductive system of women. Cases have been reported for centuries, but only recently has the disease been linked to emotional disturbances. Patients with pseudocyesis exhibit all of the symptoms of regular pregnancy: amenorrhea, weight increase, urinary frequency, changes in gait, and morning sickness. Extensive mammary gland and uterine changes are also present. Some symptoms have been so authentic that doctors have missed the diagnosis. These cases ironically are related to both an intense fear of pregnancy and a strong desire for it.

#### ENDOCRINE REACTIONS

Not much research has been done regarding the effects of emotional changes on the endocrine system, but studies

have shown that changes in the amount of production of certain hormones may cause emotional changes. For example, it is known that sudden fright has been caused by overactivity of the thyroid gland. The idea, on the other hand, that emotional states are greatly associated with thyrototoxic conditions is of recent origin. Studies have shown that a great many cases of hyperthyroidism are preceded by emotional disturbances. Similarly it has been found that psychic trauma often precedes the onset of exophthalmic goiter.

One endocrine disorder that is rather common is that of diabetes mellitus. Psychological factors are highly important in cases of diabetes mellitus because they increase the body's blood sugar level and tend to trigger the diabetic attacks. Personality studies of diabetic patients have revealed that they are usually passive and immature. They feel frustrated in their attempt to secure love and attention. They are usually dependent, ~~but mental~~, but mental depression seems to be the most common characteristic involved. It is now believed that psychic trauma can also cause diabetes.

#### SUMMARY

Psychosomatic disorders are physical manifestations of emotional stress. Emotional stress may be the only cause of these disorders, but in a great many of the cases studied, the disorder was also associated with a physical causative. As has been seen, psychosomatic disorders are usually the

misuse or overuse of certain defensive devices with which the body is equipped. The result of this misuse is not necessarily extremely harmful, but is in many cases and may even cause permanent physical damage or death. How does the body know to use these devices? No one really knows, but for modern man, there may be three answers. First, it is believed that man, like other animals, may learn to be sick. Experiments with dogs, cats and rats have shown that "involuntary" activities such as heart beat, blood vessel constriction, and glandular secretion can be affected by learning. We too may actually learn to use our bodily mechanisms for various purposes; to display hostilities, to avoid unpleasant situations, and so on.

The second suggestion is that psychosomatic disorders may be taught, though probably unconsciously, to a person by members of his family. An example of this is the mother who is sensitive about her diet. Her concern might cause the whole family to be mal-nutritious. She may, on the other hand, not care at all about her diet. "Many adolescent girls starve themselves because their mother's obesity makes them adverse to food."<sup>4</sup>

The third suggestion is that our culture itself causes many people to invent psychosomatic disorders. It has been stated by a University of Southern California psychiatrist that our society is so hard hearted that people can not ask for love and attention for that sake alone. He said, "We force people to invent symptoms rather than letting them say

simply, 'I just need help for a while.'<sup>15</sup> In our culture, everyone is supposed to have feelings and emotions, but no-one is supposed to let them show.

From this study, it seems that all people are destined to be plagued with psychosomatic disorders. Although this report is not meant to be therapeutic, it seems necessary to at least suggest some ways that a person might prevent psychogenic disorders in his life. A medical doctor has prescribed this treatment for people who tend to become emotionally disturbed. He suggests that you should:

1. Quit looking for knocks in the motor, analyzing yourself all the time, looking for trouble.
2. Learn to like to work. All people have to work and you might as well like it.
3. Have a hobby -- learn to relax.
4. Learn to like people. You have to live with them.
5. Learn to be satisfied with the situation if you can't easily change it and change it if you can.
6. Learn to accept adversity -- life is full of it.
7. Learn to say the cheerful, humorous thing, never say the mean thing, even if you feel like it.<sup>11</sup>

This is indeed a lot of "learning", but who knows, you may save yourself a headache, and everyone else you meet one too.



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