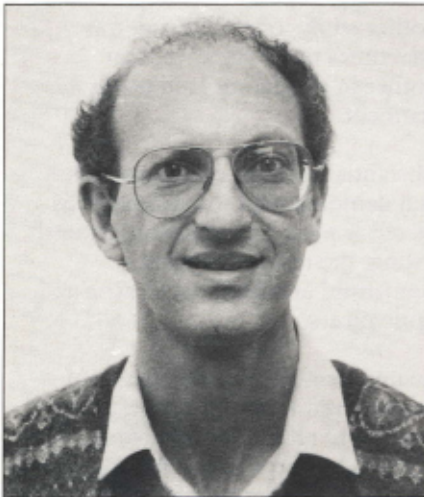


Body - Mind Medicine and the Placebo Response — Dr B Brom



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Curriculum vitae

Bernard qualified in 1965 in Cape Town (MBChB) and after 2 years of gastroenterology in Groote Schuur Hospital, went with his Canadian wife on a trip around the world, starting in Miami, Florida. During this time he developed a strong interest in medicinal plants, and when they returned to the RSA in 1975 he spent much time in the use of biological remedies, acupuncture and the use of low frequency laser: as an acupuncture tool and as laser treatment in its own right. Bernard is the present Chairman of the SA Medical Acupuncture Association and is on the committee of the recently created SA Association of Medical Doctors for Complimentary Medicine.

Bernard has a particular interest in Bio-energetic medicine and would appreciate contact with other doctors with similar interests.

Summary

The author refers to research findings of many scientists on the powerful and varied placebo responses, to illustrate the body-mind connection in patients, and how the healing process is stimulated by the attitude of the doctor, the attitude of the patient and the symbols used. The mind-body connection has become a widely researched phenomenon in medicine and it is showing increasingly clearer the physiological processes involved. The GP is well placed to use this clearer understanding of the placebo response and the mind-body connection when dealing with his individual patients. He is never separate from the healing process of his patient, and this will help him understand better the uniquely individual, multi-dimensional processes which operate in the healing processes of his patient.

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The basic philosophy of modern medicine is characterized in the biomedical approach to health and disease. This is a reductionistic approach according to which man's body can be understood completely in terms of the arrangement and functioning of its parts. In a previous article¹ the limitations of this model was discussed and it was suggested that a systems model was more appropriate to the study of man.

The systems model recognizes body-emotions-mind-spirit as a system (see

the figure) which is open ended outwardly to the environment and inwardly to spiritual dimensions. The system obviously functions as one piece and is constantly working to maintain the integrity of the whole. In this approach the emphasis is not on the particles or physical substances, but on processes that are interconnected to form a network of systems. Looking at man from this functional point of view allows one to assess living, vital, conscious and intelligent aspects in addition to the merely mechanical aspects generally considered by the classical theory.

Some of the dynamics of body-mind medicine have already been described.² It is a Holistic approach to medicine in which disease is recognized as the absence of healing processes which are nevertheless still present maintaining order in the rest of the system. It was suggested that this was an approach to healing in which these healing processes are stimulated and directed to the disorder and the blocks to the healing of the disease are removed.

It sometimes seems that the reality of the mind-body as a functioning unit is subject to scepticism on the part of many scientists and doctors. This probably accounts for the very low esteem many doctors seem to have for mind body exercises, meditation, hypnosis, visualization techniques etc which sometimes aim to influence the function of the body and heal disease.

This article will show that the mind-body connection is one of the most investigated phenomenon in medicine, that it is in fact a tool that most doctors use and that there is increasingly more research which show the physiological processes involved.

... Body - Mind Medicine

The Placebo Response

Most medical research projects today which are investigating the usefulness of drugs would not be accepted for publication if the drug was not being compared to the placebo response. The placebo response is so powerful that many illnesses may respond to the administration of a pill with no active ingredients. This is true not only for functional problems like indigestion, headaches etc but also for far more serious diseases like arthritis and cancer. In discussing the placebo response most investigators will refer to the work of Beecher³ who as early as 1955 showed that placebos provided satisfactory relief in 35,2% of cases. What is much more interesting than the figure of 35,2% is the actual breakdown of what this figure represents. He collected 28 reports in which a placebo was compared to a drug in the treatment of pain control. Beecher found that the placebo effectiveness rate varied from 15 to

The body under stress can manufacture its own analgesic/ tranquilizing effect

58% in the different studies. Even these figures do not give the full story. The placebo effectiveness on an individual level was occasionally even more effective than drugs, even in organic disease.

Another study by Backman et al⁴ in 1968 reporting on the treatment of ulcers and several other gastrointestinal disorders showed a placebo improvement rate of 92%.



Fig 1. A Human Body-Emotions-Mind-Spirit System. Open outwards to the environment and inwardly to spiritual dimensions.

Moerman⁵ collected 32 papers in which the placebo was compared to Tagamet in the treatment of peptic ulcer and found a mean placebo response of 45% with a range of 8% to 83%. He made the observation that what seemed to vary was not so much the drug response but the placebo response in the various trials ie the drug response was fairly constant in all groups. The placebo response varied and this accounted for the statistical differences. In other words it was the poor placebo response in some of the trials that accounted for the statistically significant overall Tagamet response. Was it possible therefore that the trials were showing not the effectiveness of Tagamet but a poor placebo response?

Other studies have shown different placebo or drug effectiveness rates depending on the physician involved. The same antacid treatment for ulcers in one hospital had a 79% effectiveness rate while in another hospital the rate was 17%.⁶ In

another study, one physician was three times more effective than another in alleviating pain using inert treatment.⁷

Substantial placebo effectiveness has been demonstrated in syndromes as diverse as pain, hypertension, wound healing, depression, anxiety, rheumatoid arthritis, warts, acne and peptic ulcers.⁸

Having seen some of the facts and without even knowing the results of some more recent research work, one may well be surprised at the apparent illogical resistance to mind-body discussion and the possibilities of using this relationship for healing purposes. As Moerman points out, physicians and medical historians consistently over-rate placebo effectiveness in primitive medicine and underrate it in modern medicine.

The problem with the placebo response is its variability. Attempts to identify the placebo responders have been unsuccessful.⁹ Patients can respond favourably to placebos even

Patients may even develop addictions to placebos!

knowing what they are.¹⁰ Others may develop addictions to placebos.¹¹ This unpredictability has created an atmosphere of scepticism with regard to the placebo response and lack of enthusiasm from investigators to research such a response.

It is indeed a paradox that the recent impetus for modern research projects has come from one of the most ancient of healing techniques ie acupuncture.

... Body - Mind Medicine

Acupuncture and Endorphines

Most of the early reports emanating from China in this century regarding the effectiveness of acupuncture were treated with scepticism. It was only after Western doctors travelling to China reported seeing major operations being performed under acupuncture anaesthesia without the use of any drugs, that anyone in the West began to take these reports seriously. Serious research work carried out by Prof Han Jisheng of Beijing¹² university and others soon showed that certain chemicals were involved which were secreted by the brain and pituitary gland. These chemicals were called endorphins because they mimicked closely the actions of opium and heroin in their effects on the brain. It seems that the body under certain conditions of stress is able to manufacture its own analgesic/tranquilizing effect. This

What one experiences emotionally is reflected in the physical body as various biochemical reactions

should not really surprise us. The human body is unique in the incredible number of feedback responses it has to bring an imbalance back to normal. Wartime accounts of mortally wounded soldiers whose indifference to their agonies often puzzled frontline observers. It is possible that religious trance states which permit devotees to fire walk or pierce their flesh demonstrated the analgesic actions of these substances.

The discovery of endorphins not only

made acupuncture acceptable to modern western medicine but also opened up research which led to the discovery of a whole range of chemicals which at first were called neurotransmitters and later immunomodulators.

All this is developing into a completely new field of research called psychoneuroimmunology

Happiness is not confined to the brain, but is experienced by many other cells of the body

which has developed into such fields as psychoneurocardiology and psychoneurogastroenterology etc.^{13,14}

This research has also demonstrated a possible biochemical basis for the placebo response. Not only is the system able to produce its own analgesics but it is able to stimulate or suppress its immune system,¹⁵ produce its own tranquilizer and stimulants. Diazepam works because there are receptor sites for its molecules. It is unlikely that these receptor sites were made with Roche Pharmaceuticals in mind. It must be that the body is able to produce its own endodiazepam-like molecule.

Neurotransmitters and Immunomodulators

The brain works together with the pituitary gland to release hormones such as ACTH. This hormone in turn stimulates the adrenal cortex to release hormones such as cortisol which is known to suppress the activity of cells in the immune system. Under certain conditions of stress

adrenalin is secreted by the adrenal cortex with all its known effects on the body. It is not the adrenal cortex which is interested in the stressful situation, but the person. As a result of the particular mental-emotional stance taken by the individual, a chain of reactions occur leading to the release of adrenalin from the adrenal gland. Many other neurotransmitters have been discovered since the early discovery of endorphins, eg serotonin and encephalins. These neurotransmitters appear to act as messengers from the brain to the body.

What one experiences emotionally is reflected into the physical body as various biochemical reactions. What came as a real surprise to scientists however, was the fact that lymphocytes¹⁶ also have receptors on their surface to receive sex hormones and stress hormones and endorphines. This suggests that lymphocytes can be influenced by the

In a depressed person physiological changes have been noted which might affect immune responses

brain and nervous system and that immunity may be affected by the person's emotional state. Happiness is then not confined to the brain but is experienced by many other cells of the body; and likewise, when a person is depressed, physiological changes that might affect immune responses have been noted.¹⁷ Others have shown a connection between stress and the immune system.¹⁸

After they have been activated by the presence of a foreign material in the

... Body - Mind Medicine

appropriate examination but also requires the Doctor to answer all the patient's questions in a positive and optimistic way. The patient should feel inspired by the doctor's presence and leave always hopeful that something beneficial can be done. In terms of what has been said above regarding the unpredictability of the healing response, there can be no such thing as false hope. Hope

The more positive the patient's attitude, the better the healing response

always has to do with healing and possible stimulation of the immune system. The more attention paid to the above factors, the less will be the need perhaps to rely on the use of drugs to achieve a healing response.

Conclusion

The placebo response has to do with patient's attitudes, Doctors' enthusiasm and the symbols used. These can all be used to the benefit of the patient and healing of the disease process. Now that there is greater understanding regarding the physiological responses that are taking place in the above situations medical doctors can perhaps better understand and appreciate the "miraculous healing" that may happen during pagan, Christian or other religious ceremonies.

Statistics have shown how important this response is but its unpredictability also suggests that there are going to be many problems when scientists try to investigate this

phenomenon. Science can only measure what its tools are able to measure. The rest passes through the sieve. That which passes through contains the secrets which will no doubt be revealed in the future.

That is why it is necessary to repeat experiments in different circumstances, over different lengths of time, by scientists with different points of view.

In the meantime, the GP is well placed to take advantage of our understanding of the placebo response. Its unpredictability should only add to his enthusiasm. If the recent discoveries of quantum mechanics are anything to go by, then it will always remain a mystery. It seems that it is not possible to measure all the dimensions of any moment. Space and time are no longer absolutes or separate dimensions. Subatomic particles are not physical objects but are bundles of energy creating dynamic patterns which are continually changing into one another.²⁴

It is important to recognize that at some level, human beings are made up of subatomic particles. At that

The doctor's attitude affects the outcome of the treatment

level they are subject to the laws of quantum mechanics and not the mechanistic laws formulated by Newton. Perhaps by trying to measure man according to one set of criteria only, we limit our results and exclude that which does not fit.²⁵ The exceptions to the rule, the spontaneous

recoveries despite all odds, the remissions etc should teach us humility with regard to the possibilities to expect from human illness and the results of treatment. Statistics never give us information about the individual patient. The individual patient and his responses are not predictable. Do medical doctors therefore decide to treat the patient as a statistic in order to make the results predictable or do they treat him as a unique individual working through a process in a multi-dimensional world? If they choose the latter way then doctors and healers are not separate from the disease-healing process. They will grow and change with their patients and heal their own wounds as they assist and hold a hand out to those that come to share their processing with them.

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