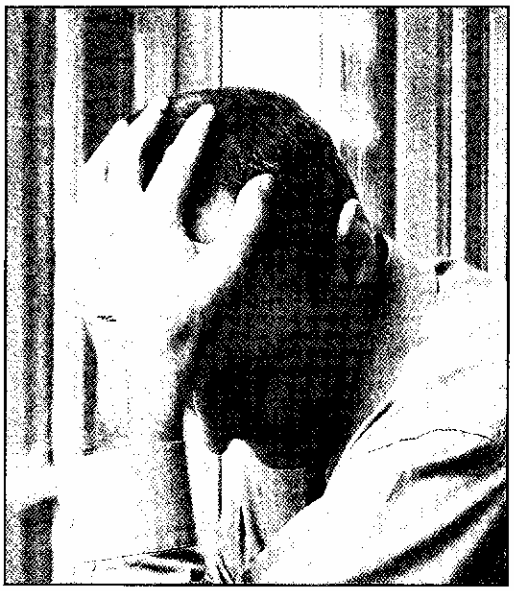
Co-Morbid States Are the Rule—Not the Exception—in Pain Practice



Depression, anxiety, coping, somatization, sleeplessness, and hypochondriasis—among other co-morbidites—are prevalent in the chronic pain population and, left untreated, are associated with greater risk for poor outcomes.

By Murray H. Rosenthal, DO, FAPA

Anyone who treats chronic pain patients knows that the multiple complexity of this condition is not always obvious. As pain evolves from the acute to the chronic state—whether neurogenic or neuropathic in origin —it alters neuronal pathways, impacts mood and interferes with sleep. What drives these changes, the condition? The treatments? The patient's beliefs? Anxiety and/or mood disorders? Genetic loading? Poor sleep?

The purposes of this article are:

1) the need to understand our patient before we can understand their pain,
2) a brief overview of several co-morbid elements that drive the expression of pain, independent of the original insult, and
3) to assist the physician and their staff with a conceptual model for consideration of a multimodal approach.

Limitations of the Physician-Patient Interchange

Our thesis is that treatment begins with the initial physician-patient interchange and must include an understanding of how our patients express their subjective symptomatic experience. This mutual understanding helps us quantify what we are hearing and ensure that our treatments are in sync with how our patients experience their pain.

There are studies that demonstrate that predictors of treatment outcome can be dependent, in part, on the patient's verbalizations. For example, Galli et al[1] have shown that a patient believing that pain could have serious consequences on one's life (IPQ[2] subscale consequences) is one of the most important predictors for treatment outcome. They concluded that beliefs about pain are important predictors for treatment outcome—even when controlled for pain and mood. Further, both baseline pain-related disability and baseline pain intensity were only minor predictors for pain and mood—providing further evidence that severity of chronic pain is predicted mainly by psychological variables.

While we are not advocating that patients be treated with placebos, the placebo response may hold a key to how patients perceive and respond to treatment. Morton et al[3] looked at the response of healthy, non-pain, volunteers to a sham laser procedure. Pre test they were given the State Trait Anxiety Inventory (STAI)[4] to distinguish between state and trait anxiety; Marlow–Crowne Social Desirability Scale (MCSDS)[5] measuring the subjects apparent social desirability tendency to give answers to make the respondent look good; the Eysenck Personality Questionnaire-Revised (EPQ-R)[6] to specifically measure neuroticism and introversion/extraversion; and finally the Revised Life Orientation Test (LOT-R)[7] to measure dispositional optimism.

Their findings suggest that placebo effects are moderated by a reduction in state anxiety which, in turn, decreases pain perception. However, it was unclear as to whether this reduction in anxiety is a cause or the consequence of the placebo response. Their results suggested that a placebo response in the first session was associated with a trend towards a decrease in state anxiety prior to starting the repeat session (see Figure 1).

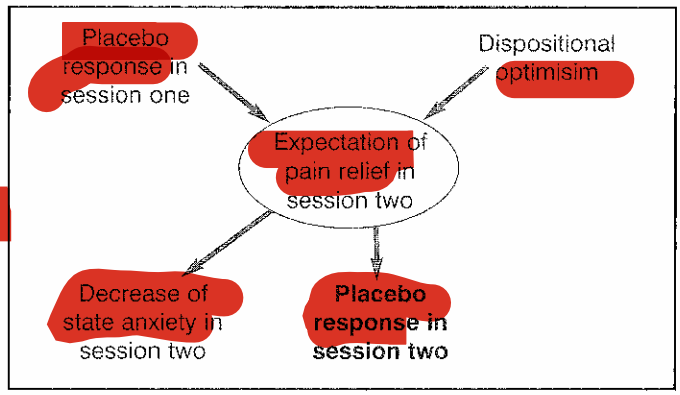


FIGURE 1. *Effect of optimism on the placebo response in a repeat session for subjects with high dispositional optimism. Adapted from from Martin, et al[3]*

Can our understanding of how a patient expresses their understanding of their illness and what they expect from treatment result in better outcomes? How does their history contribute to what they tell us about their pain and their expectations for recovery? Is there a way to use this information to amplify our results?

Let's begin with the opposite: what do we know impedes treatment response? Celestin et al[7] examined pretreatment psychosocial variables as predictors of outcomes following lumbar surgery and spinal cord stimulation. In a review of 753 study titles, 25 studies were identified, of which none were randomized controlled trials and only four spinal cord stimulation studies met inclusion criteria. Despite the large number of studies reviewed, the authors reported that the methodological quality of the studies varied and identified some important shortcomings. However, a positive relationship was found between one or more psychological factors and poor treatment outcome in 92.0% of the studies reviewed.

They found that self-reported levels of depression, anxiety, coping, somatization and hypochondriasis were found to be associated with greater risk for poor outcome in most studies and in the expected direction—e.g., higher pre-surgical levels of distress, somatization, etc., were generally associated with less treatment-related benefit. These findings were in agreement with past reviews. Pre-surgical levels of variables within the categories of pain and functional activity limitation were *less* (my emphasis) useful in predicting treatment outcome.

In their review of the literature, they noted that creating treatment paradigms based upon a patient's expressed level of pain and limitations of function appears to be a poor predictor of outcome. Knowing the patient's emotional state, coping skills, potential for optimism or use of hypochondriasis appears to be a better predictor of outcome.

What do we know about how the impact of these emotional states effect the body's tolerance for pain? Our historic emotional programming evolves from the balance between our nature and our nurturing. The genetics of mood disorders and anxiety disorders are well enough established that they need no extensive discussion here. However, how we ask the questions and probe about historic data in these areas is critical.

Self report forms are mostly normalized in our language, English. Questions such as, "Are you depressed? Do you feel anxious?" may not translate cross-culturally, and sometimes not even inter-generationally.

Noguera, et al[9] had Spanish patients with cancer complete the Hospital Anxiety and Depression Scale (HADS)[10] and six Verbal Numerical Scales (VNS) exploring the level of anxiety using the terms ansioso (anxious), nervioso (nervous), or intranquilo (uneasy/disquiet), and the level of depression using the terms deprimido (depressed), desanimado (discouraged), or triste (sad). He found that the Spanish word, 'desanimado,' or discouraged, had a greater correlation to describing patients' mood than depression. This study was limited in scope but underscores the point that what we think a patient means may not be what they are expressing. This example is given to stress that the interviewer must review the family history in patients with divergent cultures and ages in a way that captures the information accurately. Understanding the verbiage of mood and anxiety disorders isn't the only challenge. Knowing how those conditions are perceived in some cultures—for example, having

a consequence to a family's community standing—is critically important.

Yang[11] describes the issue of losing 'face' in Chinese society as it applies to mental illness, in general, and schizophrenia, in particular. The take-home lesson is clear as it relates to acquiring information from a patient from a different culture. Without properly understanding that the information is culturally embarrassing, you are less likely to get the genetic history you need.

Why is this important? Even in the absence of a prior history for anxiety and/or depression, chronic pain drives the same neuronal pathways that exist in these states. Genetic loading may presensitize such patients to the full clinical expression of these disorders even in the absence of a prior personal history. Without such information, these symptoms can easily be ascribed to pain and thus the underlying cause may be neglected. Such co-morbidity is well known to confound the treatment of chronic pain.

Role of Stress and Depression

In his review article recently published in *Dialogues Clin Neurosci*, Dunman[12] states that the discovery that stress and depression, as well as other psychiatric illnesses, are characterized by structural alterations, and that these changes result from atrophy and loss of neurons and glia in specific limbic regions and circuits, has contributed to a fundamental change in our understanding of these illnesses. These structural changes are accompanied by dysregulation of neuroprotective and neurotrophic signaling mechanisms that are required for the maturation, growth, and survival of neurons and glia. Conversely, behavioral and therapeutic interventions can reverse these structural alterations by stimulating neuroprotective and neurotrophic pathways and by blocking the damaging, excitotoxic, and inflammatory effects of stress. Lifetime exposure to cellular and environmental stressors and interactions with genetic factors contribute to individual susceptibility or resilience.

How much do the symptoms of pain and common psychiatric conditions overlap? Enough that pain itself could qualify as a psychiatric condition (see Table 1).

Developmental issues (the nurturing side of the equation) are likewise critically important physiologically as well as psychologically. Early childhood trauma plays a major role in pains' impact on the brain and a patient's verbal-cognitive expressions. There is often over-whelming guilt and shame that makes communication of emotionally intense material very difficult.

Paras et al[13] performed a systematic review and meta-analysis of 23 eligible studies covering 4,640 subjects. She found there was a significant association between a history of sexual abuse and lifetime diagnosis of functional gastrointestinal disorders, nonspecific chronic pain (psychogenic), and chronic pelvic pain. There was no statistically significant association between sexual abuse and a lifetime diagnosis of fibromyalgia or headache.

When analysis was restricted to studies in which sexual abuse was defined as rape, significant associations were observed between rape and a lifetime diagnosis of fibromyalgia, chronic pelvic pain, and functional gastrointestinal disorders. Her findings support the findings of others: a history of sexual abuse is associated with lifetime diagnosis of multiple somatic disorders.

Green et al[14] studied 101 consecutive female patients presenting to a multidisciplinary pain center for management of chronic pain. Outcomes included a measure of sexual or physical abuse history using the Drossman Sexual–Physical Abuse Survey that measures levels of anxiety, health care utilization, substance abuse, and somatic symptoms. Forty-eight percent of the sample reported a history of physical abuse (PA) or sexual abuse (SA), and the remainder reported SA (37%) or PA (23%) alone. The women who reported abuse had increased pain, physical symptoms, anxiety symptoms, and mental health care utilization compared to non-abused women (see Table 2). The women who reported abuse were also more likely to smoke and abuse street drugs. Women who reported both PA and SA were more likely to report head pain when compared to those who reported only PA or SA.

This study and other like this one point to the need for a high index of suspicion in the chronic pain female. There are real physiologic mechanisms at work that keep the effects of abuse anchored emotionally and impede the treatment of co-existent chronic pain.

Pain Symptons	Psychiatric Symptoms
Irritability	Irritable
Fatigue	Fatigue
Tension	Sad/depressed
Dysphoria	Hopeless
Somatic focus	Fearful
Poor sleep	Anergy
Concentration decreases	Appetite changes
Avoidant	Poor sleep
Hopelessness	Poor concentration
Hyper-vigilance	Avoidant
Catastrophizing	Hopelessness
Decreased self care	Hyper-vigilance
Physiologic manifestations	Physiologic manifestations
Increased disability	Decreased self care
Changes in neural networks with under-treatment	Increased disability
Suicidal	Changes in neural networks with under-treatment
	Suicidal

TABLE 1. *Overlap of pain symptoms and common psychiatric conditions. After Dunman.*

Role of Sleep

DSM IV lists PTSD as an anxiety disorder, but PTSD also has elements of depression and needs no prior genetic history of either depression or anxiety to become chronic if un- or under-treated. PTSD's impact on sleep has some controversy depending upon the population and the parameters being studied. Given the link between pain and PTSD, and how PTSD alters sleep, sleep must be a primary focus of discussion with the chronic pain patient.

The role of, and alterations in, sleep in all chronic illnesses cannot be understated. Disturbed phase 2/3 and REM sleep decrease pain threshold, impact immunity, decrease insulin sensitivity, and undermine the condition under treatment.

Pain Symptoms Among Nonabused, Physical Abuse, Sexual Abuse, and Multiple Abuses				
	Percent "Yes" in Each Group			
	Nonabused (n=47)	Physical (n=10)	Sexual (n=16)	Multiple (n=17)
Pain Symptoms				
Pelvic	13	10	31	41
Abdominal	11	10	38	44
Stomach	11	10	25	47
Back	36	80	75	76
Head	17	70	75	94

TABLE 2. *Pain symptoms among non-abused women compared to physically- and sexually-abused women. Adapted from Green.*[14]

Mellman[15] performed a meta-analysis on 20 PSG studies of PTSD and found increases in stage 1 (onset of sleep cycle-light sleep), decreased stage 3 sleep (restorative, delta wave sleep), and increased REM density. REM is rapid eye movement state where active dreaming appears to occur.

Roth et al (2007) showed that with the fragmentation of REM sleep there is evidence for increased arousals and awakenings from this stage of sleep with PTSD. These arousals coincide with increases in heart rate variability, increases in circulating catecholamines, and increases in cortical activity on EEG. The effects of this condition on the HPA axis are self-evident.

Roehrs et al[16] expanded on the observations that disturbed sleep is observed in association with acute and chronic pain and that some data suggest that disturbed and shortened sleep enhances pain. They studied healthy, pain-free, individuals using modest reductions of sleep time and specific loss of rapid eye movement (REM) sleep and showed that these effects produced hyperalgesia the following morning. Specifically, the loss of four hours of sleep and specific REM sleep loss resulted in hyperalgesic the following day. These findings imply that pharmacologic treatments and clinical conditions that reduce sleep and REM time during the normal sleep cycle may increase pain. Sleep and pain generate disturbances in each other and that cycle keeps pain thresholds low. Pain can also amplify anxiety and depressive symptoms as well as impair neuro-cognition.

The culprit is not only pain, however. Many of the medications we prescribe impair sleep. There are many articles that detail a wide variety of effects of CNS drugs on the structure of sleep. We must first inquire about sleep in such a way to eliminate the major primary sleep disorders such as sleep apnea, restless leg syndrome, etc. Short acting opioids are more disruptive to sleep than long acting ones. Benzodiazepines do not restore normal sleep and, especially the short acting drugs in this class, disrupt the normal stages of sleep. The report that a patient has slept for six to eight hours does not mean that they have had restorative sleep.

We argue that, in the equation of pain treatment, sleep is the "holy grail." Clearly, sleep has direct effects on pain tolerability and the pulsing of neuro-hormonal events critical to maintaining health. And there is a strong cognitive behavioral component that is affected by, and affects, sleep.

Affleck et al[17] did a sleep diary study of 50 fibromyalgia patients and recorded sleep quality, pain intensity, and attention to pain on a computer programmed as an electronic interviewer. As you would expect, a poor night's sleep was followed by a more painful day. What is most interesting, however, was that, even in the absence of significant changes in pain during the day, the mere anticipation through increased attention to pain impacted sleep that night. The implications for cognitive–behavioral interventions are clear.

Addiction

Addiction is a major problem for our patients, our society, and the sanctity of our practices. Determining addictive or diverting behavior is simply not possible without monitoring. Our laboratory has several papers (in press) showing that confirmatory testing of all negative values from Point of Care Testing (POC) in the office offers substantial proof that there are patients who take more than we prescribe. Without such information, regardless of the provider, we just can't predict who they are.

In one sample of over 4,000 patients, we detected that 28% were taking unprescribed benzodiazepines and double the number detected by POC were using cocaine. The Substance Abuse and Mental Health Services Administration (SAMHSA) has recently lowered the cutoffs values for detecting abusable drugs and those changes will become apparent in the next year.

We will examine, in future articles, the issues surrounding drug abuse and the possibility it may be a form of self-medication for co-morbid conditions such as depression and anxiety. Unfortunately, after these drugs have been used for extended periods, it is often difficult to make this determination until patients are detoxified from the offending agent.

Summary

This article has attempted to bring together information from divergent fields that impacts our care of these very complicated patients. Recent changes to reimbursement and regulations governing our practice have stressed the pain physician in ways similar to what we have described in our patients. You are not alone in your frustration on how best to care for your patients. Hopefully this has stimulated your thinking and will raise questions we can all benefit by discussing.

Murray Rosenthal, DO, FAPA is a board-certified psychiatrist and a Fellow of the American Psychiatric Association. For 26 years he conducted over 450 clinical trials in all areas of CNS research and was Medical Director and CEO of California Clinical Trials, a multi site clinical trials company in Southern California. He has lectured internationally, appeared on local and national TV, published several articles and co-authored a book on Accelerating Clinical Trials.

Dr. Rosenthal is currently the Chief Medical Officer of Millennium Laboratories, a company devoted to the support of the chronic pain physician. Dr Rosenthal's commitment to our field comes, in part, from his own clinical experiences and as a former chronic pain patient.

References

1. Galli et al. *European Journal of Pain*. 2009; in press.

2. Weinman J, Petrie K J, Moss-Morris R, and Horne R. The Illness Perception Questionnaire: A new method for assessing the cognitive representation of illness. *Psychology and Health*. 1996. 11: 431–445.

3. Morton DL, Watson A, El-Deredy W, and Jones AK. Reproducibility of placebo analgesia: Effect of dispositional optimism. *Pain*. Nov 2009. 146 (1-2): 194-198. Epub 2009 Aug 18. PubMed PMID: 19692178.

(References continued on page 60)

References for Spontaneous Remission and Placebo Effects in Gait and Mobility Disorders

There are several well-documented cases in the medical literature where individuals unable to walk, or unable to walk unaided, experienced rapid improvements in mobility either through spontaneous remission or as a result of placebo effects. The following references provide detailed accounts of such phenomena:

- Weinstein, E. A., & Kahn, R. L. (1955). "The Symptom of the Nonorganic (Hysterical) Paralysis." Psychosomatic Medicine, 17(1), 39–43.
- Sharpe, M., & Faye, C. (2006). "Non-epileptic and functional neurological disorders: Conversion disorder and dissociation." In: Halligan, P. W., Bass, C., & Marshall, J. C., eds. Contemporary Approaches to the Science of Symptoms. Oxford University Press, pp. 260–277.
- Stone, J., Warlow, C., & Sharpe, M. (2012). "The symptom of functional (psychogenic) leg weakness: A clinical and magnetic resonance imaging study." Journal of Neurology, Neurosurgery & Psychiatry, 83(3), 307–309.
- Loeser, J. D. (1975). "Placebo walking: An unusual conversion reaction." Neurology, 25(7), 637–640.
- Binder, L. M., & Salinsky, M. C. (1987). "Conversion reactions in neurology." Seminars in Neurology, 7(3), 222–229.
- Cole, W. H., & Everson, T. C. (1956). "Spontaneous Regression of Cancer: Preliminary Report." Annals of Surgery, 144(3), 366–383.
- Beecher, H. K. (1955). "The Powerful Placebo." JAMA, 159(17), 1602–1606.
- Benedetti, F., Mayberg, H. S., Wager, T. D., Stohler, C. S., & Zubieta, J.-K. (2005). "Neurobiological mechanisms of the placebo effect." Journal of Neuroscience, 25(45), 10390–10402.
- Kaptchuk, T. J., Kelley, J. M., Conboy, L. A., Davis, R. B., Kerr, C. E., Jacobson, E. E., ... & Lembo, A. J. (2008). "Components of placebo effect: Randomised controlled trial in patients with irritable bowel syndrome." BMJ, 336(7651), 999–1003.

These references illustrate the profound potential for the mind to produce dramatic physical changes in mobility, as seen in spontaneous remission and placebo responses. Such cases demonstrate parallels to the physiological changes observed across identities in Dissociative Identity Disorder.

Documented Cases of Physiological Changes Across Identities in Dissociative Identity Disorder

Exploring Mind-Body Phenomena in Dissociative Identity Disorder With References

Introduction

Dissociative Identity Disorder (DID), previously known as Multiple Personality Disorder, is a complex psychiatric diagnosis characterized by the presence of two or more distinct identities or personality states that alternately control an individual's behavior. Over the decades, numerous anecdotal and clinical reports have described not only psychological but also dramatic physiological changes occurring between identities. These phenomena have sometimes included changes in physical conditions such as blood glucose levels, visual acuity, and mobility.

This document summarizes some of the most notable and well-documented cases, with complete references where possible. Due to the sensitive nature and rarity of such phenomena, literature is limited and often anecdotal, but medical and psychiatric literature provides several remarkable examples.

Blood Sugar Variation in Diabetes

One of the most frequently cited physiological changes is the fluctuation of blood glucose levels in individuals with DID who also have diabetes mellitus. There have been case reports where one identity shows normal blood glucose while a diabetic identity exhibits hyperglycemia.

- Case Example: In a case series described by Dr. Bennett Braun, a diabetic patient with DID was observed to have normal blood glucose levels when in one identity, but when switching to another, their blood sugar would rise to pathological levels. Insulin requirement also varied depending on which identity was in control.
- Reference: Braun, B. G. (1983). "Psychophysiologic phenomena in multiple personality disorder." Psychiatric Clinics of North America, 6(1), 75-86.

Visual Acuity and Other Sensory Changes

There are documented cases where individuals with DID experience changes in vision and other sensory capacities between identities.

- Case Example: Dr. Frank W. Putnam's work includes references to individuals whose vision changes between identities—one may require glasses, while another does not.
- Reference: Putnam, F. W. (1989). Diagnosis and treatment of multiple personality disorder. Guilford Press. See Chapter 2 for specific cases.

Additional Note: Dr. Ralph Allison also reported cases where color blindness appeared in one identity but not in another.

Reference: Allison, R. B. (1974). "Mental status changes in multiple personality." American Journal of Clinical Hypnosis, 16(4), 219-228.

Mobility and Neurological Function

Occasionally, DID patients display changes in mobility or neurological symptoms, such as loss or restoration of the ability to walk.

- Case Example: There are anecdotal accounts (Braun, 1983) of patients presenting with conversion symptoms—such as paralysis—in one identity and full mobility in another. While these reports are rare and sometimes difficult to objectively verify, they are notable for their dramatic demonstration of the mind-body connection.
- Reference: Braun, B. G. (1986). "Treatment of Multiple Personality Disorder: A Case Study and Review." Psychiatric Clinics of North America, 9(1), 27-45.

Dermatological and Other Physiological Changes

There have also been reports of skin conditions such as allergies, rashes, and scars appearing or disappearing between identities.

- Case Example: Ludwig, Brandsma, Wilbur, et al. (1972) reported differences in allergic responses and scars between identities.
- Reference: Ludwig, A. M., Brandsma, J. M., Wilbur, C. B., Jameson, D. H., & Bendfeldt, F. (1972). "Clinical observations on the multiple personality disorder." Journal of Nervous and Mental Disease, 154(1), 1-9.

Critical Appraisal and Limitations

While the above cases are described in reputable literature, it is important to note that rigorous, controlled studies are lacking, and much of the data is anecdotal, based on case reports. The rarity and complexity of DID, combined with the difficulty of objectively measuring rapid physiological changes, mean that these phenomena remain controversial within the scientific community.

Conclusion

Documented cases suggest that dramatic physiological changes—from blood sugar normalization to changes in vision, mobility, and even dermatological responses—can occur in individuals with DID, associated with the switching of identities. While mechanisms for these changes are not fully understood, they illustrate the profound impact of psychological states on physical health.

References

- Braun, B. G. (1983). "Psychophysiologic phenomena in multiple personality disorder." Psychiatric Clinics of North America, 6(1), 75-86.
- Putnam, F. W. (1989). Diagnosis and treatment of multiple personality disorder. Guilford Press.

- Allison, R. B. (1974). "Mental status changes in multiple personality." American Journal of Clinical Hypnosis, 16(4), 219-228.
- Braun, B. G. (1986). "Treatment of Multiple Personality Disorder: A Case Study and Review." Psychiatric Clinics of North America, 9(1), 27-45.
- Ludwig, A. M., Brandsma, J. M., Wilbur, C. B., Jameson, D. H., & Bendfeldt, F. (1972). "Clinical observations on the multiple personality disorder." Journal of Nervous and Mental Disease, 154(1), 1-9.

Spontaneous Remission and the Placebo Effect Across Medical Conditions: A Comprehensive Reference

Understanding Natural Recovery and the Power of Belief in Healing

Introduction

Spontaneous remission and the placebo effect are two phenomena that have long intrigued medical professionals, researchers, and patients alike. Both have profound implications for the understanding of disease progression, treatment efficacy, and the interpretation of clinical trial outcomes. While spontaneous remission refers to the unexpected, unexplained improvement or cure of a disease without targeted medical intervention, the placebo effect describes the beneficial outcomes arising from a patient's expectations, rather than from any specific physiological action of a treatment. This document aims to provide an exhaustive reference to both concepts, synthesizing evidence from a range of medical conditions and exploring their underlying mechanisms, clinical significance, and implications for medical practice.

Spontaneous Remission

Definition and Historical Context

Spontaneous remission is defined as the partial or complete disappearance of disease symptoms in the absence of any effective medical treatment. Historically, reports of such cases date back centuries, often attributed to miraculous or mysterious causes. Modern medicine acknowledges spontaneous remission as a real, albeit poorly understood, phenomenon that can occur across a wide spectrum of illnesses.

Medical Conditions Associated with Spontaneous Remission

- Cancer: Certain cancers, such as neuroblastoma in infants, renal cell carcinoma, and malignant melanoma, have shown documented cases of spontaneous remission. Neuroblastoma, for example, can regress entirely in some children without aggressive intervention, while rare cases of remission have been noted in adult cancers as well.
- Autoimmune Diseases: Conditions like multiple sclerosis (MS) and rheumatoid arthritis can have unpredictable courses, with some patients experiencing remission periods without changes in therapy.
- Infectious Diseases: Viral infections such as hepatitis B and C, or even HIV in rare cases (known as "elite controllers"), can show reductions in viral load or symptoms without medical intervention.

- Psychiatric and Neurological Disorders: Episodes of depression, anxiety, or psychosis may spontaneously resolve, particularly in response to life events or changes in psychosocial circumstances.
- Dermatological Conditions: Psoriasis and eczema have been observed to clear up without apparent cause, sometimes following stress relief or environmental changes.
- Allergies and Asthma: Symptoms may recede, especially as children grow older or with the removal of environmental triggers.

Mechanisms of Spontaneous Remission

The exact biological processes responsible for spontaneous remission are not fully understood, but several theories have been proposed:

- Immune System Modulation: Some remissions may result from a sudden, robust immune response targeting diseased cells or pathogens.
- Genetic Factors: Variations in disease expression due to genetic changes or epigenetic mechanisms may contribute to the cessation of symptoms.
- Environmental or Lifestyle Changes: Unintentional improvements in diet, stress levels, or exposure to toxins can sometimes lead to remission.
- Unknown Biological Factors: There remains a category of spontaneous remissions with no clear biological explanation, suggesting the existence of yet-undiscovered mechanisms.

Clinical Significance

Spontaneous remission plays a critical role in interpreting clinical outcomes and designing treatment protocols. Its existence necessitates careful control groups in clinical trials to distinguish genuine treatment effects from natural recovery. Furthermore, knowledge of possible spontaneous remission influences physician decision-making regarding the initiation, withdrawal, or continuation of therapies.

Notable Cases and Literature

- Neuroblastoma: Studies have documented spontaneous regression in stage 4S neuroblastoma, with survival rates approaching 90% without aggressive treatment.
- Renal Cell Carcinoma: Case reports exist of metastatic renal cell carcinoma regressing following events such as surgical removal of the primary tumor.
- Malignant Melanoma: Rare instances of complete remission have been documented, sometimes coinciding with autoimmune reactions.

The Placebo Effect

Definition and Historical Background

The placebo effect describes the phenomenon where patients experience health improvements after receiving a treatment that is inert or non-specific. This effect is rooted in the patient's

expectations, conditioning, and psychological state, rather than the pharmacological or physiological impact of the treatment itself.

Mechanisms of the Placebo Effect

The placebo effect is multifaceted and can be explained by several psychological and neurobiological processes:

- Expectation and Conditioning: Patients who anticipate benefit from a treatment may experience actual symptom relief due to positive expectation.
- Endorphin Release: Placebo administration has been shown to stimulate endorphin and dopamine release, improving pain and mood.
- Classical Conditioning: Repeated associations between treatment rituals and symptom relief can create conditioned responses, amplifying placebo effects.
- Patient-Provider Interaction: Confidence in the care provider and the therapeutic setting enhances the placebo effect.

Medical Conditions Responsive to Placebo

The placebo effect is particularly pronounced in conditions where subjective experience is central to disease expression:

- Pain Disorders: Chronic pain syndromes, migraine, and fibromyalgia show significant placebo responses, sometimes rivaling active therapies.
- Mood Disorders: Depression and anxiety disorders can improve remarkably with placebo, highlighting the importance of hope and expectation.
- Functional Disorders: Irritable bowel syndrome (IBS) and chronic fatigue syndrome frequently respond to placebo interventions.
- Parkinson's Disease: Placebo administration has been shown to increase dopamine release and motor function in affected individuals.
- Asthma and Allergies: Placebo inhalers and pills can improve perceived symptoms, even though they do not affect objective measures like lung function.

Clinical Trial Implications

The placebo effect underpins the necessity for randomized controlled trials (RCTs) in medicine. Double-blind, placebo-controlled studies allow researchers to separate the genuine effects of an intervention from those attributable to expectation or natural recovery. The magnitude of the placebo response varies by condition, treatment modality, and patient population. In some studies, up to 30–50% of patients report improvement with placebo.

Ethical Considerations

While the placebo effect can be harnessed for therapeutic benefit, its use raises ethical questions. Deception or withholding effective treatment in favor of placebo is generally considered unacceptable. However, open-label placebo studies (in which patients are informed they are receiving a placebo) have shown promise in conditions like IBS, suggesting the power of ritual and expectation can be beneficial even without deception.

Notable Research and Examples

- Placebo Surgery: Studies in knee osteoarthritis have revealed that sham surgeries can yield similar improvements to actual procedures, underscoring the placebo response.
- Antidepressant Trials: Meta-analyses have demonstrated that a substantial portion of antidepressant efficacy can be explained by placebo responses, especially in mild-to-moderate depression.
- Parkinson's Disease: Placebo administration triggers measurable neurochemical changes, including dopamine release, directly affecting motor symptoms.

Comparison and Interaction Between Spontaneous Remission and Placebo Effect

The distinction between spontaneous remission and the placebo effect lies in causality: spontaneous remission occurs without intervention, while the placebo effect requires patient belief in some form of treatment. Nonetheless, both phenomena highlight the limitations of purely mechanistic models of disease and underscore the importance of psychosocial and environmental factors in healing.

Clinical trials must be designed to account for both phenomena. In uncontrolled studies, observed improvements might be due either to spontaneous remission, placebo effect, or both—making it vital to maintain rigorous methodological standards.

Conclusion

Spontaneous remission and the placebo effect are cornerstones of medical epistemology, challenging assumptions about disease course and therapeutic efficacy. Awareness of these phenomena enhances clinical decision-making, research design, and the compassionate care of patients. Recognizing their influence is essential for interpreting medical outcomes, setting realistic expectations, and ensuring ethical treatment strategies.

Further Reading and References

- Spontaneous Remission: An Annotated Bibliography – Office of Cancer Communications, National Cancer Institute.
- The Placebo Effect in Clinical Practice – Oxford University Press.
- Placebo Effects: Understanding the Mechanisms in Health and Disease – Cambridge University Press.
- Clinical Evidence and Placebo Responses – The Lancet, BMJ, and JAMA articles.

In addition to the compelling physiological changes documented in Dissociative Identity Disorder and hypnosis, similar and other physical phenomena have also been associated with the placebo effect. The placebo response demonstrates how belief, expectation, and psychological factors can

produce genuine alterations in physical state, including symptom resolution, pain relief, and changes in measurable biological parameters.

Complete references for these phenomena include:

- Beecher, H. K. (1955). "The Powerful Placebo." Journal of the American Medical Association, 159(17), 1602–1606. This seminal study quantified the impact of placebo in clinical trials, revealing significant rates of symptom improvement and physical change attributable to patient expectations alone.
- Benedetti, F., Mayberg, H. S., Wager, T. D., Stohler, C. S., & Zubieta, J.-K. (2005). "Neurobiological mechanisms of the placebo effect." Journal of Neuroscience, 25(45), 10390–10402. This article explores how placebos can alter brain function and physiology, including changes in pain perception, immune response, and motor symptoms.
- Price, D. D., Finniss, D. G., & Benedetti, F. (2008). "A comprehensive review of the placebo effect: Recent advances and current thought." Annual Review of Psychology, 59, 565–590. The authors discuss a variety of physical phenomena—including the reduction of pain, improvement of Parkinson's disease symptoms, and modulation of hormonal release—documented in placebo studies.
- Kaptchuk, T. J., & Miller, F. G. (2015). "Placebo effects in medicine." New England Journal of Medicine, 373(1), 8–9. This review highlights the breadth of physical changes associated with placebo, such as alterations in heart rate, blood pressure, and even the remission of certain medical conditions.
- Moerman, D. E., & Jonas, W. B. (2002). "Deconstructing the placebo effect and finding the meaning response." Annals of Internal Medicine, 136(6), 471–476. This paper describes cases where the placebo effect produced observable changes in physical health, emphasizing the power of meaning and expectation.

These fully documented accounts of the placebo effect further illustrate how psychological and psychosocial factors can provoke significant physiological changes, mirroring those seen in dissociative phenomena and under hypnosis. The convergence of these lines of evidence continues to challenge and enrich our understanding of the mind-body connection.

References and Discussion: Adverse Physical or Psychological Effects Induced by Suggestion

The Power of Suggestion and Its Impact on Health and Function

Introduction

The phenomenon in which adverse physical or psychological conditions are brought about or worsened by suggestion is well-documented in medical and psychological literature. These effects—often termed "nocebo responses," "psychogenic symptoms," or "expectation effects"—describe real, measurable changes in individual health that arise not from organic pathology alone, but from social and psychological cues, beliefs, and verbal suggestion.

Nocebo Effect: The Negative Counterpart to Placebo

The nocebo effect represents the harmful outcomes caused by negative expectations, warnings, or suggestions. Patients can develop symptoms such as pain, nausea, or fatigue simply because they are told to expect them, even if exposed only to inert treatments.

- Benedetti, F., Lanotte, M., Lopiano, L., & Colloca, L. (2007). When words are painful: Unraveling the mechanisms of the nocebo effect. Neuroscience, 147(2), 260-271. doi:10.1016/j.neuroscience.2007.02.020
- Colloca, L., & Miller, F. G. (2011). The nocebo effect and its relevance for clinical practice. Psychosomatic Medicine, 73(7), 598–603. doi:10.1097/PSY.0b013e3182294a50

Example: Induced Sickness from Suggestion

Negative comments such as, "You look ill," may cause individuals to feel unwell or develop physical symptoms. Social feedback has been shown to impact stress levels and symptom reporting.

- Barsky, A. J., & Klerman, G. L. (1983). Overview: Hypochondriasis, bodily complaints, and somatic styles. American Journal of Psychiatry, 140(3), 273-283. doi:10.1176/ajp.140.3.273

Psychogenic Illness and Mass Psychogenic Events

Mass psychogenic illness (MPI), sometimes called "mass hysteria," describes outbreaks of symptoms among groups, often triggered by suggestions, rumors, or perceived threats.

- Jones, T. F., & Craig, A. S. (2000). Mass psychogenic illness: A brief review of the literature. Southern Medical Journal, 93(4), 427-429. doi:10.1097/00007611-200093040-00020

- Wessely, S. (1987). Mass hysteria: Two syndromes? Psychological Medicine, 17(1), 109-120. doi:10.1017/S0033291700012992

Functional Neurological Symptom Disorders (Conversion Disorders)

Functional neurological symptom disorder (FND) manifests as physical symptoms—such as paralysis, gait disturbance, or sensory loss—without corresponding neurological disease, often linked to psychological factors and suggestion.

- Stone, J., Carson, A., & Sharpe, M. (2005). Functional symptoms in neurology: Management. Journal of Neurology, Neurosurgery & Psychiatry, 76(suppl 1), i13–i21. doi:10.1136/jnnp.2004.048256
- Edwards, M. J., Adams, R. A., Brown, H., Pareés, I., & Friston, K. J. (2012). A Bayesian account of 'hysteria'. Brain, 135(11), 3495–3512. doi:10.1093/brain/aws129

Suggestion-Induced Disability

Patients who receive negative or alarming prognoses about illnesses such as Parkinson's or Multiple Sclerosis may experience symptom progression disproportionate to their underlying disease due to psychological reinforcement.

- Moerman, D. E., & Jonas, W. B. (2002). Deconstructing the placebo effect and finding the meaning response. Annals of Internal Medicine, 136(6), 471–476. doi:10.7326/0003-4819-136-6-200203190-00011

Clinical Observations

- Patients with FND may develop symptoms after exposure to negative health information, not consciously feigning but experiencing genuine distress and disability. See: Stone, J. et al. (2005).

Historical and Literary References

The role of suggestion in health has been recognized since the 19th century, with early studies by Jean-Martin Charcot and Sigmund Freud on "hysterical paralysis" and symptom induction via hypnosis.

- Ellenberger, H. F. (1970). The discovery of the unconscious: The history and evolution of dynamic psychiatry. Basic Books.
- Mitchell, S. W., & Putnam, J. J. (1895). Studies in Hysteria. Macmillan.

Mechanisms Behind Suggestion-Induced Symptoms

Researchers continue to study how expectation, attention, social context, and conditioning contribute to suggestion-induced symptoms.

- Petrie, K. J., & Weinman, J. (1997). Perceptions of health and illness: Current research and applications. Harwood Academic Publishers.
- Enck, P., Benedetti, F., & Schedlowski, M. (2008). New insights into the placebo and nocebo responses. Neuron, 59(2), 195–206. doi:10.1016/j.neuron.2008.06.028

Conclusion

The mind's power to influence the body is profound. Suggestion, whether intentional or accidental, can induce or exacerbate physical and psychological symptoms. Awareness of these effects is crucial for clinicians and the general public alike.

Key Terms for Further Reading

- Nocebo effect
- Functional Neurological Symptom Disorder
- Psychogenic illness
- Conversion disorder
- Mass psychogenic illness

The Physical Consequences of Emotional PTSD Without Physical Trauma

Understanding the Mind-Body Connection and Its Role in Physical Illness and Pain

Introduction

Post-Traumatic Stress Disorder (PTSD) is traditionally associated with harrowing experiences involving physical threat or harm, such as combat, physical assault, or natural disasters. However, a growing body of research has illuminated that PTSD can also stem from emotional or psychological trauma—even in the absence of direct physical injury. This form of emotional PTSD can profoundly impact the body, leading to a range of physical illnesses, chronic pain conditions, and other somatic symptoms. The connection between psychological trauma and physical health is both complex and crucial, reflecting the deep interdependence of the mind and body.

Understanding Emotional PTSD

PTSD is a psychiatric disorder that occurs in individuals who have experienced or witnessed traumatic events. While much attention has been paid to trauma involving physical harm, emotional trauma—such as the loss of a loved one, emotional abuse, witnessing violence, or severe neglect—can be equally devastating. Emotional PTSD may manifest in symptoms such as:

- Intrusive memories and flashbacks
- Nightmares and sleep disturbances
- Hypervigilance or exaggerated startle response
- Avoidance of people, places, or activities related to the trauma
- Negative changes in mood or cognition

Importantly, these symptoms can occur even if the trauma did not entail a direct physical threat.

The Mind-Body Connection

The interplay between emotional trauma and physical health is increasingly recognized. Multiple studies and clinical observations indicate that emotional distress can translate into physical symptoms—a phenomenon often referred to as somatization. The physiological mechanisms underlying this connection include dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, chronic activation of the stress response, and alterations in immune function.

Neuroendocrine Pathways

Emotional trauma affects the body's stress response systems, most notably the HPA axis. Chronic activation of this axis leads to elevated levels of cortisol and other stress hormones, which can disrupt bodily systems and contribute to a variety of health problems (Yehuda, 2002).

Immune System Dysregulation

Prolonged psychological stress and PTSD have been associated with immune dysfunction. This can manifest as increased inflammation, susceptibility to infections, and the development of autoimmune diseases (Pace & Heim, 2011).

Autonomic Nervous System Dysfunction

Emotional trauma can alter the balance between the sympathetic ("fight or flight") and parasympathetic ("rest and digest") branches of the autonomic nervous system, leading to symptoms such as headaches, gastrointestinal complaints, and chronic pain (Lanius et al., 2010).

Physical Illnesses Linked to Emotional PTSD

A range of physical illnesses have been documented in association with emotional PTSD, even in the absence of direct physical trauma.

Chronic Pain Disorders

Individuals with emotional PTSD may experience chronic pain syndromes, such as fibromyalgia, chronic back pain, or tension headaches. Research suggests that the prevalence of chronic pain is significantly higher in PTSD sufferers than in the general population, and that emotional distress can both trigger and exacerbate pain (Sharp & Harvey, 2001).

Cardiovascular Disease

Studies have linked PTSD—even when arising from non-physical emotional trauma—to an increased risk of heart disease, hypertension, and stroke. The chronic stress response can contribute to arterial inflammation and other risk factors for cardiovascular disease (Edmondson et al., 2013).

Gastrointestinal Disorders

Emotional trauma can lead to gastrointestinal complaints, such as irritable bowel syndrome (IBS), bloating, abdominal pain, and nausea. The gut-brain axis, a bidirectional communication system between the central nervous system and the gastrointestinal tract, plays a key role in translating emotional distress into physical discomfort (Kolacz & Porges, 2018).

Autoimmune and Inflammatory Disorders

Dysregulation of the immune response following emotional trauma may lead to an increased risk of autoimmune conditions such as lupus, rheumatoid arthritis, and multiple sclerosis, as well as elevated markers of inflammation (O'Donovan et al., 2015).

Other Somatic Symptoms

Common somatic symptoms associated with emotional PTSD include:

- Chronic fatigue
- Muscle tension
- Dizziness
- Sexual dysfunction
- Sleep disturbances

Theories and Mechanisms

Several theories attempt to explain why emotional trauma leads to physical illness:

Allostatic Load

Allostatic load refers to the cumulative burden of chronic stress on the body's systems. When the stress response is persistently activated, the body undergoes wear and tear, increasing susceptibility to disease (McEwen, 1998).

Central Sensitization

Chronic exposure to stress hormones can alter pain processing in the central nervous system, making individuals more sensitive to pain and other somatic symptoms (Woolf, 2011).

Psychoimmunology

The emerging field of psychoimmunology explores how psychological states influence immune function. Emotional trauma can change immune markers, making the body more vulnerable to infections and chronic diseases (Irwin & Cole, 2011).

Clinical Implications and Treatment

Recognizing the physical consequences of emotional PTSD is vital for holistic healthcare. Treatment approaches often require a combination of psychological and medical interventions, including:

- Cognitive Behavioral Therapy (CBT) and trauma-focused therapies to address underlying psychological distress
- Pharmacotherapy for mood, anxiety, and pain symptoms when indicated
- Somatic therapies (such as yoga, mindfulness, or EMDR) to integrate mind and body healing
- Collaborative care involving mental health professionals, primary care physicians, and pain specialists

Conclusion

Emotional PTSD, even without direct physical trauma, can lead to a wide spectrum of physical illnesses and chronic pain conditions. Understanding the bidirectional relationship between mind and body is essential for effective treatment and prevention. Continued research and integrated care models are needed to address the complex needs of individuals suffering from the aftermath of emotional trauma.

References

- Edmondson, D., et al. (2013). Posttraumatic stress disorder and risk for coronary heart disease: A meta-analytic review. American Heart Journal, 166(5), 806-814.
- Irwin, M. R., & Cole, S. W. (2011). Reciprocal regulation of the neural and innate immune systems. Nature Reviews Immunology, 11(9), 625-632.
- Kolacz, J., & Porges, S. W. (2018). Chronic diffuse pain and functional gastrointestinal disorders after trauma: Polyvagal theory implications for treatment. Frontiers in Psychiatry, 9, 419.
- Lanius, R. A., et al. (2010). The impact of early life trauma on health and disease: The hidden epidemic. Cambridge University Press.
- McEwen, B. S. (1998). Protective and damaging effects of stress mediators. New England Journal of Medicine, 338(3), 171-179.
- O'Donovan, A., et al. (2015). Elevated risk for autoimmune disorders in individuals with PTSD: A population-based study. Biological Psychiatry, 77(4), 365-374.
- Pace, T. W. W., & Heim, C. M. (2011). A short review on the psychoneuroimmunology of posttraumatic stress disorder: From risk factors to medical comorbidities. Brain, Behavior, and Immunity, 25(1), 6-13.
- Sharp, T. J., & Harvey, A. G. (2001). Chronic pain and posttraumatic stress disorder: Mutual maintenance and outcomes. Clinical Psychology Review, 21(6), 857-877.
- Woolf, C. J. (2011). Central sensitization: Implications for the diagnosis and treatment of pain. Pain, 152(3), S2-S15.
- Yehuda, R. (2002). Post-traumatic stress disorder. New England Journal of Medicine, 346(2), 108-114.

Summary of Several and Diverse Psychosomatic Illnesses: An Overview with References

An In-depth Review of Psychosomatic Disorders

Introduction

Psychosomatic illnesses are conditions in which psychological factors—such as stress, anxiety, or depression—significantly affect or even cause physical symptoms. These illnesses, though their manifestations are physiological, stem from intricate interactions between the mind and body. Such disorders demonstrate the powerful influence of mental and emotional states on physical health, and they remain a subject of interest and importance in both clinical medicine and psychology. This document provides an overview of several diverse psychosomatic illnesses, summarizing their features, causes, and management. Complete academic references are included to support each section, ensuring a scholarly and comprehensive account.

Understanding Psychosomatic Illnesses

Psychosomatic illnesses do not represent a single disease but a category of conditions wherein psychological distress precipitates or exacerbates bodily symptoms. The term itself is derived from the Greek words ‘psyche’ (mind) and ‘soma’ (body), highlighting the interconnectedness of mental and physical health.

Common mechanisms include:

- Stress-induced changes in hormonal balance (e.g., cortisol, adrenaline)
- Alterations in immune function
- Neurobiological pathways involving the autonomic nervous system

Reference: Lipowski ZJ. "Somatization: The concept and its clinical application." American Journal of Psychiatry, 1988;145(11):1358-1368.

Examples of Diverse Psychosomatic Illnesses

Psychosomatic illnesses manifest across many medical specialties. Below, several representative conditions are described, each illustrating the diversity and complexity of this field.

1. Irritable Bowel Syndrome (IBS)

IBS is a common gastrointestinal disorder characterized by abdominal pain, bloating, and changes in bowel habits. Psychological stress and emotional disturbances are recognized as key contributors to symptom onset and severity.

Features:

- Recurrent abdominal discomfort
- Altered stool frequency and consistency
- Associated anxiety or depression

Psychosomatic Connection:

Stress exacerbates gastrointestinal symptoms by increasing gut sensitivity and altering motility. There is a bidirectional relationship between the brain and the gut, often called the “gut-brain axis.”

Reference: Mayer EA, et al. "The neurobiology of stress and gastrointestinal disease." Gastroenterology, 2001;120(3): 795-809.

2. Tension-Type Headache

Tension-type headaches are the most prevalent primary headache disorder, manifesting as a diffuse, pressing pain often linked to psychological stress.

Features:

- Mild to moderate, non-throbbing pain
- Sensation of tightness or pressure
- Heightened during stressful periods

Psychosomatic Connection:

Muscle tension and heightened pain perception, triggered by emotional distress, are primary mechanisms. Chronic forms often coexist with anxiety and depressive symptoms.

Reference: Bendtsen L. "Central sensitization in tension-type headache—possible pathophysiological mechanisms." Cephalalgia, 2000;20(5):486-508.

3. Psychogenic Non-Epileptic Seizures (PNES)

PNES are episodes that resemble epileptic seizures but are not associated with abnormal electrical activity in the brain. They arise from psychological conflict or trauma.

Features:

- Sudden episodes of convulsions, altered awareness
- Absence of EEG abnormalities
- Often associated with a history of psychological distress or trauma

Psychosomatic Connection:

These episodes serve as a physical expression of psychological stress, typically found in individuals with underlying emotional or interpersonal conflicts.

Reference: Reuber M, et al. "Psychogenic non-epileptic seizures: clinical characteristics and diagnostic approach." The Lancet Neurology, 2003;2(7):463-470.

4. Somatic Symptom Disorder

Somatic Symptom Disorder (SSD) encompasses various unexplained physical symptoms that cause significant distress and impairment, often without identifiable medical cause.

Features:

- Multiple, chronic physical complaints (pain, fatigue, gastrointestinal distress)
- Excessive thoughts, feelings, or behaviors related to symptoms
- Coexisting anxiety or depressive disorders

Psychosomatic Connection:

Individuals with SSD tend to amplify and misinterpret normal bodily sensations, often correlating with high levels of psychological distress.

Reference: American Psychiatric Association. "Diagnostic and Statistical Manual of Mental Disorders," 5th Edition (DSM-5), 2013.

5. Psychogenic Pruritus (Itching)

Pruritus or chronic itching with no identifiable dermatological cause may be linked to psychological triggers such as anxiety, depression, or obsessive-compulsive traits.

Features:

- Persistent itching sensation
- Absence of skin pathology
- Symptoms fluctuate with emotional states

Psychosomatic Connection:

The skin is highly responsive to emotional stimuli, as both the nervous and immune systems are involved in pruritic responses. The itch can become a somatic focus during psychological distress.

Reference: Schneider G, et al. "Psychosomatic pruritus." Hautarzt, 2006;57(9):812-820.

6. Functional Neurological Symptom Disorder (Conversion Disorder)

Formerly known as “conversion disorder,” this involves neurological symptoms (weakness, paralysis, sensory loss, movement disorders) that cannot be explained by medical evaluation.

Features:

- Motor or sensory deficits (e.g., paralysis, blindness)
- Symptoms often follow psychological stress

- Physical examination usually normal

Psychosomatic Connection:

Conversion symptoms are thought to be a symbolic manifestation of inner psychological conflict, with physical symptoms providing relief from emotional distress.

Reference: Stone J, et al. "Functional neurological symptoms: assessment and management." Journal of Neurology, Neurosurgery & Psychiatry, 2005;76(suppl 1):i13–i18.

7. Psychogenic Cardiovascular Symptoms

Chest pain, palpitations, and shortness of breath often have a psychosomatic component, especially in the context of panic disorder or anxiety.

Features:

- Episodes of chest discomfort, rapid heartbeats
- Normal cardiac workups
- Symptoms linked to acute stress or anxiety

Psychosomatic Connection:

The autonomic nervous system mediates cardiovascular responses to psychological stress, leading to real physical sensations without organic pathology.

Reference: Barsky AJ, et al. "Chest pain, palpitations, and benign cardiac anxiety." Annals of Internal Medicine, 1998;128(9):740-748.

Diagnosis and Management

Diagnosis of psychosomatic illnesses requires a multidisciplinary approach, involving:

- Detailed medical and psychological history
- Exclusion of organic disease
- Assessment of psychological stressors

Management strategies typically combine psychological interventions (such as cognitive-behavioral therapy), stress reduction, pharmacotherapy when appropriate, and patient education.

Reference: Creed F, Henningsen P, Fink P. "Guidance for the management of somatoform disorders in primary care." Current Opinion in Psychiatry, 2011;24(2):139-146.

Conclusion

Psychosomatic illnesses are a testament to the profound and multifaceted connection between mind and body. Far from being imaginary or “just in the head,” these conditions have real physical manifestations, often disrupting daily life. Recognition and compassionate management of psychosomatic disorders enhance patient care and reduce unnecessary medical interventions.

Complete References

- Lipowski ZJ. "Somatization: The concept and its clinical application." American Journal of Psychiatry, 1988;145(11):1358-1368.
- Mayer EA, et al. "The neurobiology of stress and gastrointestinal disease." Gastroenterology, 2001;120(3): 795-809.
- Bendtsen L. "Central sensitization in tension-type headache—possible pathophysiological mechanisms." Cephalalgia, 2000;20(5):486-508.
- Reuber M, et al. "Psychogenic non-epileptic seizures: clinical characteristics and diagnostic approach." The Lancet Neurology, 2003;2(7):463-470.
- American Psychiatric Association. "Diagnostic and Statistical Manual of Mental Disorders," 5th Edition (DSM-5), 2013.
- Schneider G, et al. "Psychosomatic pruritus." Hautarzt, 2006;57(9):812-820.
- Stone J, et al. "Functional neurological symptoms: assessment and management." Journal of Neurology, Neurosurgery & Psychiatry, 2005;76(suppl 1):i13–i18.
- Barsky AJ, et al. "Chest pain, palpitations, and benign cardiac anxiety." Annals of Internal Medicine, 1998;128(9):740-748.
- Creed F, Henningsen P, Fink P. "Guidance for the management of somatoform disorders in primary care." Current Opinion in Psychiatry, 2011;24(2):139-146.

In addition to the compelling physiological changes documented in Dissociative Identity Disorder and hypnosis, similar and other physical phenomena have also been associated with the placebo effect. The placebo response demonstrates how belief, expectation, and psychological factors can produce genuine alterations in physical state, including symptom resolution, pain relief, and changes in measurable biological parameters.

Complete references for these phenomena include:

- Beecher, H. K. (1955). "The Powerful Placebo." Journal of the American Medical Association, 159(17), 1602–1606. This seminal study quantified the impact of placebo in clinical trials, revealing significant rates of symptom improvement and physical change attributable to patient expectations alone.
- Benedetti, F., Mayberg, H. S., Wager, T. D., Stohler, C. S., & Zubieta, J.-K. (2005). "Neurobiological mechanisms of the placebo effect." Journal of Neuroscience, 25(45), 10390–10402. This article explores how placebos can alter brain function and physiology, including changes in pain perception, immune response, and motor symptoms.
- Price, D. D., Finniss, D. G., & Benedetti, F. (2008). "A comprehensive review of the placebo effect: Recent advances and current thought." Annual Review of Psychology, 59, 565–590. The authors discuss a variety of physical phenomena—including the reduction of pain, improvement of Parkinson's disease symptoms, and modulation of hormonal release—documented in placebo studies.
- Kaptchuk, T. J., & Miller, F. G. (2015). "Placebo effects in medicine." New England Journal of Medicine, 373(1), 8–9. This review highlights the breadth of physical changes associated with placebo, such as alterations in heart rate, blood pressure, and even the remission of certain medical conditions.
- Moerman, D. E., & Jonas, W. B. (2002). "Deconstructing the placebo effect and finding the meaning response." Annals of Internal Medicine, 136(6), 471–476. This paper describes cases where the placebo effect produced observable changes in physical health, emphasizing the power of meaning and expectation.

These fully documented accounts of the placebo effect further illustrate how psychological and psychosocial factors can provoke significant physiological changes, mirroring those seen in dissociative phenomena and under hypnosis. The convergence of these lines of evidence continues to challenge and enrich our understanding of the mind-body connection.

Research on the intersection of false memories and somatization has revealed how memory distortions can influence the experience and reporting of physical symptoms. For instance, studies have shown that suggestive therapeutic techniques may inadvertently contribute to the development of false somatic memories, which can manifest as medically unexplained symptoms. This link is especially relevant in the context of dissociative disorders, where individuals may develop detailed but inaccurate recollections of trauma that become integrated into their physical symptomatology.

Complete References:

- Geraerts, E., Merckelbach, H., Herron, W., & Markowitsch, H. J. (2007). The potential impact of false memories on mental health: False memories and dissociation. Psychological Science, 18(6), 475-481. [URL]
- Loftus, E. F., & Davis, D. (2006). Recovered memories. Annual Review of Clinical Psychology, 2, 469-498. [URL]
- Brown, D., Scheflin, A. W., & Hammond, D. C. (1998). Memory, Trauma Treatment, and the Law. W.W. Norton & Company.
- Heaps, C. M., & Nash, M. R. (2001). Comparing recollective experience in true and false autobiographical memories. Journal of Experimental Psychology: Learning, Memory, and Cognition, 27(4), 920-930. [URL]
- Kirmayer, L. J., & Looper, K. J. (2006). Abnormal illness behaviour: Physiological, psychological and social aspects of misattribution of symptoms. Social Science & Medicine, 62(7), 1907-1916. [URL]

False Memories: Understanding the Phenomenon and Its Implications in Legal Contexts

How Suggestive Questioning Can Shape Witness Accounts

Introduction to False Memories

False memories are recollections of events that did not actually occur or are distorted versions of real experiences. Psychologists have long studied how individuals can be led to remember things inaccurately, sometimes with great confidence and vividness. These phenomena are essential to understand, not only in clinical settings but also within legal and investigative contexts.

The Nature and Formation of False Memories

False memories can arise spontaneously or be implanted through suggestion. The human memory is reconstructive, not a perfect recording. Each time a person recalls an event, that memory is

susceptible to change. External influences such as media, conversations, or authority figures can subtly reshape memories, sometimes leading individuals to believe in entirely fabricated scenarios.

Classic Psychological Experiments

Elizabeth Loftus's research is foundational in the study of false memories. In her groundbreaking experiments, Loftus demonstrated that people's memories could be altered by the wording of questions. For example, in her famous car crash study, participants were asked how fast cars were going when they "hit" or "smashed" each other. The verb "smashed" led to higher speed estimates and even false reports of broken glass.

- Loftus, E. F., & Palmer, J. C. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. Journal of Verbal Learning and Verbal Behavior, 13(5), 585–589.

Police Questioning and Creation of False Memories

The way police or investigators frame questions to witnesses plays a crucial role in memory formation. Suggestive or leading questions may inadvertently or intentionally implant details that witnesses later recall as genuine.

Techniques That Influence Memories

- Leading Questions: Questions that contain assumptions or suggest a particular answer can introduce new information into memory. For example, "Did you see the red car run the stop sign?" assumes the presence of a red car and a violation.
- Repetition and Feedback: When witnesses are asked the same question multiple times or given feedback that aligns with their answers, they may become more confident in those memories, even if they are false.
- Misinformation Effect: Exposure to incorrect details after the event (such as hearing others' accounts or reading news reports) can lead to the incorporation of these details into one's own memory.

Case Studies and Legal Implications

The risk of false memories is particularly high in child witness interviews, where suggestive questioning has led to wrongful convictions. The McMartin preschool trial in the United States is an example, where repeated and leading questions resulted in children describing events that were later found to be unsubstantiated.

- Ceci, S. J., & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. Psychological Bulletin, 113(3), 403–439.

Best Practices in Witness Interviewing

To minimize false memory formation, law enforcement agencies and researchers have developed recommended protocols:

- Use open-ended questions that do not suggest answers.
- Allow witnesses to recount events in their own words without interruption.
- Record interviews to preserve the original account.
- Provide proper training to interviewers in cognitive interviewing techniques.

Conclusion

False memories are a well-documented psychological phenomenon, particularly sensitive in legal settings. Suggestive questioning, misinformation, and repeated retrieval can profoundly alter what a witness “remembers.” Awareness and proper techniques are essential to ensuring that justice is not compromised by inaccurate recollections.

Keywords: Acupuncture, self-healing, imagery, psychoneuroimmunology, Neuro-Linguistic Programming, Neuro-Associative Conditioning, hypnotherapy, meditation, guided imagery

CLINICAL PERSPECTIVES

Using the Power of Belief in Acupuncture and Holistic Medicine: Case Studies

David Vachon
1214 Spruce Street
Berkeley, California 94709 U.S.A.

Abstract: Drawing on his experience in acupuncture, psychoneuroimmunology and Neuro-Linguistic Programming, the author provides practical techniques and case studies on how to help patients discover unhealthy beliefs and how to empower them to create healthy alternatives. The techniques can be easily integrated into the therapeutic routine and are useful for enhancing the patient's general ability to meet life's challenges.

I. Belief: The Force That Heals or Slays

We are what we think. All that we are arises with our thoughts. With our thoughts, we make our world. —The Buddha

TO UNDERSTAND the power of belief as it relates to our state of health, it is useful to examine what drives human behavior. Fundamentally, everything we do in life is based on our need to avoid *pain* or our desire to gain *pleasure* in some form. These two forces are basic functions built into our systems to help us fight for survival. Consequently, either pain or pleasure, alone or in combination, are the controlling motivation behind all of our actions, thoughts and desires. For instance, we do not seek money, sex, power, etc. for themselves. We seek them for their potential to give us a sense of security, of being loved, of success, etc.—to achieve pleasure. Conversely, we attempt to stay away from fire, critical people, embarrassing situations, etc. so that we don't experience burns, feeling rejected or threatened, etc.—to avoid pain.

In order to instantly evaluate the pleasurable or painful potential of any situation, we have developed "shortcuts" to enable us to act quickly and safely, without having to mentally and emotionally shift through endless possibilities before taking action. For instance, if we cut ourselves and start to bleed, we will automatically try to compress the wound to stop the bleeding, without first pondering the significance of this red, warm liquid now flowing from our insides and staining our clothes. Such shortcuts are generalizations derived from previous experiences—either our own

Please address all correspondence and reprint requests to: David Vachon, 1214 Spruce Street, Berkeley, California 94709 U.S.A.

or other people's—and are called beliefs. Without them, we could not function in this world. However, due to their generalizing effect, they can also make us overlook vital alternative choices in all aspects of our life and thus, some beliefs can serve to totally paralyze us. For example, if someone has had a "bad" experience with an acupuncturist, he might generalize the negativity of that experience and extend it to all acupuncturists, or, even worse, to all forms of holistic health. By doing so, he has cut himself off from a vast field of positive experience and healing.

II. Creating Healthy Beliefs

The belief that becomes truth for me . . . is that which allows me the best use of my strength, the best means of putting my virtues into action. —André Gide

The concept that the mind and the body are two inseparable parts of the human experience dates back many centuries. In the first half of this century a new science evolved based on the theory that diseases could be caused primarily by a dysfunctional communication between the mind and the body. This new science was called "psychosomatics."[1] One of its pioneers, Milton Erickson, the father of hypnotherapy, discovered that patients in deep trance when given the suggestion, could actually create lasting blisters on their skin. After countless experiments, Erickson concluded that the subconscious mind could be tricked into new "beliefs."[2]

Continuing research into how consciousness, mental and emotional states affect health and the immune system ("psychoneuroimmunology") has resulted in the development of creative processes, or "tools," for focusing mental activity, thus enabling access to the subconscious in order to restore health. Investigators have documented cases in which patients using such techniques have cured themselves[3] —by changing their *beliefs* they have accessed the power to heal.

These techniques for transforming beliefs are extremely varied and limited only by the imagination of the patient and clinician, who are now using laughter, meditation, guided imagery, dreamwork, biofeedback, positive thinking and language transformation, self-hypnosis, etc. The techniques presented in this report were derived from Neuro-Linguistic Programming (NLP) and Neuro-Associative Conditioning (NAC).[4]

Understanding the way beliefs empower or disempower people's lives provides the practitioner with additional choices with which to assist his patients' healing. The following set of psychological tools can be used by any practitioner while conducting the original interview or during treatment; they take only a few minutes to implement and can be easily integrated as part of the diagnostic and therapeutic routine.

They can because they think they can. —Virgil

1. *Help your patients realize that they are not their beliefs.* Beliefs are created by us, some consciously by our past experiences, but most beliefs are absorbed unconsciously from our early relationships and contacts. These sources include our:

- Caretakers: parents, relatives, nannys or baby-sitters, teachers, priests, etc.
- Peers: playmates, classmates, coworkers, teammates, etc.
- Authority figures: teachers, coaches, police, employers, etc.
- Role models: movie stars, political, civic or religious leaders, athletes, etc.
- Mass media in general: television, advertisements, publications, etc.

But we are not our beliefs; we are much more than that. The purpose of a belief is simply to provide "a feeling of certainty about what something means,"[5] on which we base our actions and emotions. Beliefs are neither "true" nor "false," they are simply our own operational models or "compasses" with which to navigate through life.

All beliefs are not created equal! Some are very useful, for example: "I need to exercise regularly to be in top shape." But others can be very limiting or even destructive, e.g., "If I make the first move in a relationship, I might get ridiculed or hurt, so it is safer to keep my feelings to myself."

So what truly constitutes healthy or harmful beliefs? The Tibetan Buddhists have devised a code of personal conduct known as the Three Principles of the Path[6] which guide their everyday thoughts and actions: 1) Renunciation: engaging in activities for their own sake, without getting attached to the results; 2) compassion (Bodhishitta—that which cherishes all beings); and 3) correct ontological view (Shunyata—recognizing the interconnectedness of all things).

I have adapted these Tibetan precepts to a Western mode of thinking by suggesting to my patients that they evaluate their current beliefs about their health, diseases, and life in general according to the three following criteria:

a) Usefulness: Is it useful to me, does it satisfy all aspects of my personality?

b) Self-empowerment: Does it limit me in any way or does it expand my possibilities? and most importantly,

c) Ecology: What are the consequences of this belief for my lover, friends, family, colleagues, community, planet?

Thus, the above example, the belief that "it is safer to keep my feelings to myself," would pass the first criteria (its usefulness is to protect the patient from being emotionally hurt). However, it would surely fail the second criteria (it severely limits his interaction with people). Evaluation by the last criteria (ecology) would inevitably show that his fear of rejection would become a self-fulfilling prophecy by driving people out of his life if he cannot allow himself to be vulnerable in any relationship.

2. *Use the pain and pleasure principle:*

a) Ask your patients (do not tell them) what their current beliefs have cost them in the past, in the present, and what will they cost in the future (if they continue with the same beliefs) in terms of their health, relationships, career, job satisfaction, social and recreational enjoyment, etc. After they have pondered and answered, suggest that they have the power to change that today and that they can create a new set of beliefs which will better fit their aspirations and their life's purpose.

b) Ask, "What would you need to believe about yourself and about life in general in order to become the person you want to be?"

Case Study 1: A 44-year-old patient complained of chronic neck, shoulder and upper back tension. After several minutes of conversation he observed, "Anyway, people are always out there to *get* you; so you better *get* them first!" Through a series of questions about the cost of this belief, he began to consider that his chronic neck and shoulder rigidity might have something to do with his belief, that his body had learned to vocally suppress (neck) the expression of feelings and that he had struggled to keep these feelings from coming to the surface (chest and upper back, breathing).

Treatment strategy: The acupuncture treatment principle was to open the throat and heart chakras by needling CV-17 Tanzhong and CV-22 (Tiantu); facilitate the exchange of energy between the trunk and the head by using "Windows of the Sky" points, in this case: UB-10 (Tianzhu), SI-17 (Tianrong), and LI-18 (Futu); relax the Liver and sinews with UB-18 (Ganshu) and GB-34 (Yanglingquan).

In conjunction with the acupuncture sessions, the NAC method described in 2 (a and b) was used in which the patient was regularly prodded to arrive at a new, more empowering belief: "people probably do the best they can given their circumstances" and "the more I allow myself to experience the diversity of human emotions, the more I can get out of life!"

Results: His neck and shoulders were now relaxed, and the patient realized that

the onset of any sensation of tension in his neck or shoulders serves as a reminder to check his unexpressed feelings and emotions. The patient's chronic neck and shoulder tension were just symptoms; the real problem originated in his attitude. Once the attitude changed, the posture changed. (It is intriguing to note that the dictionary refers to both the physical posture and the mental mind set when defining "attitude"—a linguistic clue to the mind-body connection.)

3. *Change the meaning of your patient's life experiences in terms of "good" or "bad."* This offers the patient a way out of the pain/pleasure cycle. It is not a question of denying that something painful happened in the past, but to look at the experience with a more empowering question in mind: What is good about this experience? What have I learned? How can I use it?

Case Study 2: A 21-year-old rape victim sought treatment to ease her mental pain, fear of men and repulsion to being touched (even by women).

Treatment strategy: The acupuncture treatment focused on calming her Spirit. Additionally, during our first meeting I conveyed the idea that she was not to deny that she had been raped, but to decide right now that since the event was "always" in the past and cannot be changed, what she *could* change is how she felt about it. After all, there was no reason to suffer twice from it: once when the actual event occurred, and then again by carrying an emotional pain that affected every aspect of her life—her appearance, attitude, emotions, relationships, immune system, moods, confidence, career, etc.

Results: After three combined acupuncture and NAC treatments, the patient finally declared with a new sense of confidence that "because of what happened to me, I now have a unique understanding of what it feels like to be raped that will give me the opportunity to help other rape and molestation victims." She is now working successfully as a massage therapist and is studying to become a counselor.

4. The power of examples. This deceptively simple tool is quite effective if used appropriately. There are many different ways of shifting your patient's beliefs about herself or about her condition through the use of examples. Here are just a few.

a) Counter-examples. Belief systems are very often based on an "all-or-nothing" framework. Presenting the appropriate question, statement, story or metaphor to your patient might be all that is needed to make her question or even destroy her limiting belief. This presupposes that you have previously: i) Gathered some information about what references and experiences have contributed to create the presently-held belief; and ii) Agreed with your patient about the validity of her past experience—our role is not to argue with the truth of their beliefs, but simply to offer new references, new ways to look at their condition.

Case Study 3: A 29-year-old patient gave a history of pain and weakness in all his joints since 1988. A detailed history revealed that 1988 had been an extremely stressful year, both emotionally and physically, and that prior to that he had enjoyed a very active and healthy life. Since that time, he had undergone various tests for arthritis, rheumatism, and viral infection which had all been negative. His energy level was low. He was extremely frustrated by his condition which had forced him to give up his career as a musician, take a job that he resented, and has since cost him a great deal of time, money and energy while pursuing different therapies—all to no avail. The pain and frustration and bottled up emotions had actually contributed to creating the belief that he would probably never be able to do what he really wanted in life. Upon examination, the pulse was extremely wiry.

Treatment strategy: At this point, it is important to simultaneously relax the Liver and help him break his disempowering mind set. To this effect, he was asked, "Can you think of an incident when you were absolutely certain you would never be able to do something, but which you later achieved?" The operating presupposition is that human experience is such that his brain has stored hundreds of such references; it is only a matter of encouraging the patient to access them. After some consideration, he responded that he could only remember "one small incident of absolutely no significance: tying my shoes by myself for the first time as a young boy." He was then asked to think of other such experiences. He gradually remembered more and more significant experiences of personal triumphs.

Results: The transfer of these references to his conscious awareness had the effect of transforming his habitual stance from "Is it possible for me," to "What do I need to do to turn this possibility into a reality?" As the patient learned to relax himself and gain confidence in the healing potential of his positive efforts, the symptoms began to recede and he contemplated embarking on a whole new career.

b) Social proof. People tend to accept a behavior, a belief or an action as "more appropriate" when great numbers of people are doing it also.

Case Study 4: A 43-year-old patient sought treatment for chronic depression and low energy. Besides the administration of herbs and acupuncture, it was recommended that she engage in a regular physical exercise program. She offered strong resistance to the idea, arguing that she was already too tired to make it through the day, and that she simply did not believe that "sweating it out" would make her any happier.

Treatment strategy: Acupuncture was given to tonify her energy, calm her Spirit, and strengthen her Kidneys (will). During our first meeting, I also asked her if she knew people who exercised regularly, to which she answered that she did. She was then asked, "Do you know anybody who exercises regularly who is always depressed and tired?" She was silent for a minute or so, and finally responded that she could not think of anybody in that situation.

Results: After a few more acupuncture sessions, she took up walking and light jogging. Her energy has increased, and she reported at a 6-month follow-up that she felt more grounded and emotionally stable.

5. *Commitment and consistency:* Human beings are creatures of consistency. Once an individual has made a choice or taken a stand, he will encounter personal and interpersonal pressures to behave consistently with that commitment. Those pressures will compel him to respond in ways that justify his earlier decision.[7]

For instance, this basic psychological trait can be identified at the core of co-dependency issues in relationships. An individual will endure a partner's abuse, neglect and promises, etc., for extended periods of time (sometimes for a lifetime) that have become part of their dysfunctional relationship primarily as an unconscious effort to justify his earlier decision to get involved in the first place. After all, society equates consistency with honesty, rationality, and stability, whereas inconsistency bears the stigma of confusion, dishonesty, or even mental illness.[8]

An interesting corollary to this is that people can be asked to make small incremental commitments in a new direction, which will gradually induce them to realign their beliefs around their new behavior-identity in order to achieve consistency. This psycho-sociological phenomena has been abundantly used and abused by salespeople ("try a free sample at home"). This technique can yield extraordinary results when sensitively applied in a clinical setting.

Case Study 5: A 37-year-old patient complained that she was unable to lose

weight, although she had tried many different diets and exercise programs. She invariably rewarded her efforts by eating fatty and sweet foods, thereby starting the whole cycle again. During the initial interview, she disclosed that one of her core values was integrity and honoring one's word.

Treatment strategy: I begin by asking her if she was serious about wanting to lose weight (I let her know that acupuncture and herbs can only assist her, not make the decision for her), and what was her ideal weight goal and deadline for achieving it. She indicated that she was very determined to lose 15 pounds within the next three months. The acupuncture treatment (to calm the Spirit, sedate the Stomach, regulate the endocrine system, and transform the Dampness, both through body acupuncture and ear tacks) was designed to help her control the craving, increase her energy, strengthen her will, and facilitate the elimination process.

In conjunction with the acupuncture, I asked her to write a list of the people for whom she had the greatest respect in her life. The list typically included her husband, her best girlfriend, her supervisor at work, her mother, etc. I then suggested that since she was absolutely committed to losing this excess weight within 90 days, would she not object to sharing this very commendable intention with the people on her list. She had no hesitation about it. I then requested that she write a letter to each person on the list, pledging her absolute commitment to reach her new weight within three months and to maintain the new weight afterwards; she was then to date and sign the letter, and hand-deliver it to each person.

Results: A follow-up nine months later confirmed that she had achieved and maintained her ideal weight, because "each time I saw a piece of sweet or fatty food approach my mouth, I immediately saw in my mind the disappointed look on one of my friend's face, as he or she was holding my letter, and that image was unbearable!"

6. *Change the time frame.* This is a temporal shift that can be elicited through a question, a statement or an action on the part of the therapist. This technique was often used by master hypnotherapist Milton M. Erickson to weaken the sense of certainty about a particular disempowering belief that someone may have, and to enable them to explore emotions that their habitual time frame prevents them from experiencing. In *Know How: Guided Programs For Inventing Your Own Best Future*, some of the founders of NLP (Neuro-Linguistic Programming) suggest asking a single question in a variety of time frames to elicit an instant re-evaluation of what one holds to be most important in their life.[9] For example: "If you had just found out that because of a rare disease you had only one week to live, how would you spend your time? This pain-associating question forces the individual to re-examine his belief in his ability to achieve the goals and priorities he had originally identified. Next, they ask the same question but with one year instead of one week. Finally, they ask: "If, because of an unprecedented breakthrough in biomedical research, your life span had now been extended to two hundred years, what now becomes important to experience and accomplish?"

III. Conclusion

Flexibility is power. —A. Robbins

In this brief presentation, I attempted to convey the idea that "beliefs" and "belief systems" are not sacred cows that should be revered unquestionably. They are very individual concepts that people develop starting from their first few hours on earth. They are generated each time a strong emotional impression is created in one's psyche. As one grows, he forms, adapts and changes beliefs about the world, thereby deriving a sense of identity. The danger comes when:

1) The individual thinks he *is* his beliefs or his behavior. Beliefs or behaviors

should be seen as a set of tools to further one's personal growth. We own these tools, they do not own us. When they become outdated, or do not fit a new situation, or break down (as when faced with an overwhelmingly strong counter-example), they should simply be replaced by new ones.

2) The individual gradually loses his ability to experiment, question, and change his beliefs. The striking paradox is that the more experiences one accumulates, the fewer risks one seems to be willing to take, therefore the fewer choices one may have. This form of emotional arthritis leads to mental rigor mortis, the ultimate absence of choices!

In their first book, Bandler and Grinder[10] point out that if you have only one choice, you are a robot. If you have two choices, you have a dilemma. If you have three choices, you have flexibility. The more choices with which we empower our patients, not just physically relieving the symptoms by removing the energetic causes of excess, deficiency or stagnation, but also psychologically, the better equipped they become to meet life's challenges in sickness and in health.

About the Author

A staff acupuncturist at Quan Yin Healing Arts Center in San Francisco, the author is founder of the Immune Power Foundation (IPF), faculty member of the National Holistic Institute, and a translator specializing in Oriental medicine. Born and educated in France, he received a master's degree in communication from Grenoble University and a bachelor's degree from the Academy of Chinese Culture and Health Sciences in Oakland, California. He hold certificates in massage therapy and Neuro-Associative Conditioning.

Workshops

The author is the founder of the Immune Power Foundation (IPF), a nonprofit research and educational institution dedicated to research and dissemination of ancient and modern knowledge for self-healing and self-empowerment. The IPF offers workshops and educational material for people with deficient or compromised immune systems. For information regarding the "Nine Steps to Awaken Your Immune System" workshops see the Meeting Calendar in this issue or contact: IPF, PO Box 9863, Berkeley, California 94709-0863 U.S.A. Tel: (510) 841-4739.

Endnotes

1. Schwarz J: Consciousness and the immune system, in Serinus J (ed): *Psychoimmunity and the Healing Process: A Holistic Approach to Immunity and AIDS.* Berkeley, Celestial Arts, 1986, pp. 3-6.
2. This is an example of the placebo effect. As Norman Cousins noted, "Drugs are not always necessary. Belief in recovery always is." (Cousins N: *Anatomy of an Illness as Perceived by the Patient.* Los Angeles, Cancer House, 1979.)
3. See Bibliography.
4. For a definition and history of the science of Neuro-Linguistic Programming (NLP) and Neuro-Associative Conditioning (NAC), clinical applications, as well as a selected bibliography, please see Vachon, D.: West meets east: The art of subconscious healing in traditional Chinese medicine and acupuncture. *Amer J Acupun*, 1991; 19(1): 37-57.
5. Robbins A: *The Neuro-Associative Conditioning Systems Professional Certification Training Manual.* Robbins Research Int'l, La Jolla, 1990, p. BS CNA 7.
6. These principles were expounded by some of the most eminent seers including Tsong Ka Pa, in: *Lam Rim Chen Mo*, 15th century.
7. Festinger L, Riecken HW, Schater S: *When Prophecy Fails.* Univ. of Minnesota Press, Minneapolis, 1974; Milgram S: *Obedience to Authority.* Harper and Row, New York, 1974; Milgram S, Sabini J: On maintaining norms: A field experiment in the subway. Unpublished manuscript.
8. Cialdini R: *Influence: The New Psychology of Modern Persuasion.* Quill, New York, 1984, pp. 66-114.
9. Cameron-Bandler L, Gordon D, Lebeau M: *Know How: Guided Programs for Inventing Your Own Best Future.* Real People Press, Moab, Utah, 1985, pp. 16-17.
10. Bandler R, Grinder J: *Frogs Into Princes.* Real People Press, Moab, Utah, 1979.

Selected Bibliography

Psychoimmunology

Ader, R. (ed): *Psychoneuroimmunology.* New York, Academic Press, 1981.

Benson, H.: *The Mind/Body Effect.* New York, Simon & Schuster, 1979. →

Borysenko, J.: *Minding The Body, Mending the Mind.* New York, Bantam Books, 1987.

Cannon, W.B.: *Bodily Changes in Pain, Hunger, Fear and Rage,* ed 2. N.Y., Appleton-Century, 1934.

Chopra, D.: *Quantum Healing: Exploring the Frontiers of Mind/Body Medicine.* New York, Bantam Books, 1989.

Cousins, N.: *Head First: The Biology of Hope and the Healing Power of the Human Spirit.* New York, Penguin Books, 1989.

Dossey, L.: *Space, Time and Medicine.* Boston, Shambhala Publications, 1982.

Fox, E.: *Power Through Constructive Thinking.* San Francisco, Harper & Row, 1968.

Hay, L.L.: *You Can Heal Your Life.* Santa Monica, Hay House, 1984.

Harrison, J.: *Love Your Disease.* Santa Monica, Hay House, Inc., 1989.

Heckler, R.S.: *The Anatomy of Change: East-West Approaches to Body/Mind Therapy.* Boston, Shambhala Publications, 1984.

Jaffee, D.T.: *Healing From Within.* New York, Alfred Knopf, 1980.

Jampolsky, G.: *Love Is Letting Go of Fear.* Millbrae, Celestial Arts, 1979.

Joy, B.: *Joy's Way: a Map for the Transformational Journey.* Los Angeles, J.P. Tarcher, 1979.

Krippner, S., Villoldo, A.: *The Realms of Healing.* Berkeley, Celestial Arts, 1990.

Locke, S. and Colligan, D.: *The Healer Within: The New Medicine of Mind and Body.* New York, E.P. Dutton, 1986.

Mendelsohn, R.S.: *Confessions of a Medical Heretic.* Chicago, Contemporary Books Inc., 1979.

Miller, E. and Lueth, D.: *Self-Imagery.* Berkeley, Celestial Arts, 1986.

Murphy, J.: *The Power of Your Subconscious Mind.* New York, Bantam Books, 1982.

Pearsall, P.: *Superimmunity: Master Your Emotions and Improve Your Health.* New York, McGraw-Hill, 1987.

Pelletier, K.: *Mind as Healer, Mind as Slayer.* New York, Delta, 1977.

Schwarz, J.: *Voluntary Controls: Exercises for Creative Meditation and for Activating the Potential of the Chakras.* New York, E.P. Dutton, 1978.

Serinus, J. (ed): *Psychoimmunity & the Healing Process: A Holistic Approach to Immunity & AIDS.* Berkeley, Celestial Arts, 1986.

Siegel, B.: *Love, Medicine and Miracles.* New York, Harper & Row, 1986.

Silva, J.: *The Silva Mind Control Method.* New York, Pocket Books, 1977.

Simonton, C., Mathews-Simonton, S., Creighton, J.L.: *Getting Well Again.* New York, Bantam Books, 1980.

NLP, NAC and Ericksonian Hypnotherapy.

Bandler, R., Grinder, J.: *Frogs into Princes: Neuro-Linguistic Programming.* Moab, Real People Press, 1979.

Bandler, R., Grinder, J.: *Trance-Formations: Neuro-Linguistic Programming and the Structure of Hypnosis.* Moab, Real People Press, 1981.

Bandler, R., Grinder, J.: *Patterns of the Hypnotic Techniques of Milton H. Erickson,* vol. 1 and 2. Cupertino, Meta Publications, 1976.

Bandler, R., Grinder, J.: *The Structure of Magic,* vols. 1 and 2. Palo Alto, Science and Behavior Books, 1975 and 1976.

Bandler, R., Grinder, J.: *Reframing: Neuro-Linguistic Programming and the Transformation of Meaning.* Moab, Real People Press, 1982.

Bandler, R.: *Using Your Brain for a Change.* Moab, Real People Press, 1985.

Bry, A., Bair, M.: *Directing the Movies of the Mind: Visualization for Health and Insight.* New York, Harper & Row, 1978.

Cameron-Bandler, L.: *They Lived Happily Ever After.* Cupertino, Meta Publications, 1978.

Cameron-Bandler, L., Gordon, D., Lebeau, M.: *Know How: Guided Programs for Inventing Your Own Best Future.* Moab, Real People Press, 1985.

Cameron-Bandler, L., Gordon, D., Lebeau, M.: *The Emprint Method: A Guide to Reproducing Competence.* Moab, Real People Press, 1985.

Cameron-Bandler, L., Gordon, D., Lebeau, M.: *Solutions: Practical and Effective Antidotes for Sexual and Relationship Problems.* Moab, Real People Press, 1985.

Cameron-Bandler, L., Gordon, D., Lebeau, M.: *The Emotional Hostage: Rescuing Your Emotional Life.* Moab, Real People Press, 1986.

Dilts, R., Cameron-Bandler, L., Bandler, R., et al: *Neuro-Linguistic Programming,* vol. 1. Cupertino, Meta Publications, 1980.

Farelly, F., Brandsma, J.: *Provocative Therapy.* Cupertino, Meta Publications, 1978.

Gordon, D.: *Therapeutic Metaphors: Helping Others Through the Looking Glass.* Cupertino, Meta Publications, 1978.

Gordon, D., Meyers-Anderson, M.: *Phoenix: Therapeutic Techniques of Milton H. Erickson.* Cupertino, Meta Publications, 1981.

Korzybski, A.: The role of language in the perceptual process, in Blake, R., Ramsey, G. (eds): *Perception: An Approach to Personality.* New York, The Ronald Press Co., 1951.

Laborde, G.Z.: *Influencing With Integrity.* Palo Alto, Syntony Publishing, 1983, p. 127.

Lankton, S.R.: *Practical Magic: The Clinical Applications of Neuro-Linguistic Programming.* Cupertino, Meta Publications, 1979.

Rosen, S.: *My Voice Will Go With You: The Teaching Tales of Milton H. Erickson.* New York, W.W. Norton, 1982. ❑

So strong is the connection between faith and well-being that more than 30 medical schools in the United States ... now offer courses on spirituality and medicine ...

they attend church? Read the Bible? Pray? The results of the study pleased but didn't surprise Hixson, who long suspected there was more to wellness than diet and exercise. Her study found that a high degree of religiosity correlated with low blood pressure — more so than any other measure.

Here's a sampling of other studies linking faith with health:

- A study done in 1989 by Dr. David Larson, founder of the National Institute for Healthcare Research, which explored the link between faith and well-being, found that smokers in Evans County, Georgia, who attended church regularly were four times less likely to have high blood pressure than smokers who didn't.
- A study published in the *American Journal of Psychiatry* in 1990 found that elderly women recovering from hip surgery were less depressed on discharge if they had strong faith.
- A 1988 study of patients in the coronary care unit at San Francisco General Hospital found that those who received prayers on their behalf had fewer cases of congestive heart failure and pnemonia.
- A study by Duke University Medical Center released in 1997 showed that people older than 65 who attended religious services regularly had stronger immune systems than those who didn't.
- A long-term study begun in 1965 in Alameda County, California, and updated last year, found that men and women who frequently attended religious services were 25 percent less likely to die early than those who attended infrequently. Frequent church attendees also exercised more, smoked less and stayed married longer.

So strong is the connection between faith and well-being that more than 30 medical schools in the United States, including Georgetown, Emory and Brown, now offer courses on spirituality and medicine, compared to just a handful a few years back. Faith is being labeled the "forgotten factor" in health care — a factor doctors can mine to lower health-care costs.

Sabina Sue Moran never forgot her faith, but she had forgotten how good church attendance made her feel. Not long ago, Moran returned to St. Luke's Lutheran Church in Connecticut after an absence of almost 20 years. She'd put church on the back burner while raising three children and keeping busy with their activities on Sundays. "I still talked to God on a daily basis even though I wasn't attending church," Moran recalls, "but not attending church left an empty spot in my life." Moran says since she's been back, she feels much better mentally and physically. "I feel teriffic," says the 59-year-old grandmother of five. "I feel nourished."

Plentiful anecdotal evidence, like Moran's, links church attendance to well-being. But formal studies linking faith to well-being are controversial. Prayer and belief are difficult items to quantify. Even so, an increasing number of clergy and scientists think there is a correlation between spirituality and well-being. "I'm persuaded by these studies that the link is clearly there," says the Rev. Thomas Droege, a Lutheran clergyman who taught theology at Valparaiso University

"Pastors today are more likely to be there as facilitators, to reflect on a patient's experience in light of their faith." - the Rev. Thomas Droege, Lutheran Theologian

and recently retired from the Cancer Center in Atlanta. "They're overreacting to me and to many in the medical community who are taking spirituality much more seriously than ever before."

Droege, 67, remembers that not too long ago Lutheran pastors visiting a sick parishioner in the hospital would offer a prayer for recovery and then read a portion of scripture, a procedure that tended to be very formal and did not invite participation from the patient. In contrast, notes Droege, a pastor today is far more likely to engage a patient in discussion, asking how he is handling the illness, how he is dealing with the enforced separation from family, how he is coping with possible financial insecurity. The pastor might then ask, "Has your faith been much help today?" After hearing the patient's answer, the pastor then may bring in some portion of the faith tradition. "Pastors today are more likely to be there as facilitators," says Droege, "to reflect on a patient's experience in light of their faith."

The hospital setting is a natural testing ground for researchers studying the link between faith and well-being, but few researchers have focused specifically on how minority groups use religion in the healing process. Dr. Wayne Thompson, 42, assistant professor of sociology at Concordia University, a Lutheran college in River Forest, Illinois, received a grant last year to study the connection between religion, health and rehabilitation in an urban public hospital that serves mostly blacks and Latinos. "There's a strong connection between prayer, meditation and healing," contends Thompson, who is working on the project with his wife, Gladys Hollant, an internist at Cook County Hospital in Illinois. Thompson and Hollant hope that as a result of the study, they can provide doctors and nurses in urban hospitals with guidelines on how to incorporate religious beliefs into the healing process.

Studying how faith impacts mental health has been the mission of Dr. Ken Pargament, professor of psychology at Bowling Green State University in Ohio, who has devoted much of his professional life trying "to get closer to the religious experience" — seeking whether it's church attendance, prayer or profound belief in God that seems to help people be well, get well and stay well.

Pargament has, at times, felt like he was swimming against the current because psychologists generally avoid religious issues, perhaps because they tend to be less reli-

Recommended READING

- *Is Religion Good For Your Health?* — by Dr. Harold Koenig
- *Prayer is Good Medicine* — by Dr. Larry Dossey
- *The Psychology of Religion and Coping: Theory, Research and Practice* — by Dr. Ken Pargament
- *Religion in Aging and Health* — by Jeffrey Levin

So strong is the connection between faith and well-being that more than 30 medical schools in the United States ... now offer courses on spirituality and medicine ...

they attend church? Read the Bible? Pray? The results of the study pleased but didn't surprise Hixson, who long suspected there was more to wellness than diet and exercise. Her study found that a high degree of religiosity correlated with low blood pressure — more so than any other measure.

Here's a sampling of other studies linking faith with health:

- A study done in 1989 by Dr. David Larson, founder of the National Institute for Healthcare Research, which explored the link between faith and well-being, found that smokers in Evans County, Georgia, who attended church regularly were four times less likely to have high blood pressure than smokers who didn't.
- A study published in the *American Journal of Psychiatry* in 1990 found that elderly women recovering from hip surgery were less depressed on discharge if they had strong faith.
- A 1988 study of patients in the coronary care unit at San Francisco General Hospital found that those who received prayers on their behalf had fewer cases of congestive heart failure and pnemonia.
- A study by Duke University Medical Center released in 1997 showed that people older than 65 who attended religious services regularly had stronger immune systems than those who didn't.
- A long-term study begun in 1965 in Alameda County, California, and updated last year, found that men and women who frequently attended religious services were 25 percent less likely to die early than those who attended infrequently. Frequent church attendees also exercised more, smoked less and stayed married longer.

So strong is the connection between faith and well-being that more than 30 medical schools in the United States, including Georgetown, Emory and Brown, now offer courses on spirituality and medicine, compared to just a handful a few years back. Faith is being labeled the "forgotten factor" in health care — a factor doctors can mine to lower health-care costs.

Sabina Sue Moran never forgot her faith, but she had forgotten how good church attendance made her feel. Not long ago, Moran returned to St. Luke's Lutheran Church in Connecticut after an absence of almost 20 years. She'd put church on the back burner while raising three children and keeping busy with their activities on Sundays. "I still talked to God on a daily basis even though I wasn't attending church," Moran recalls, "but not attending church left an empty spot in my life." Moran says since she's been back, she feels much better mentally and physically. "I feel teriffic," says the 59-year-old grandmother of five. "I feel nourished."

Plentiful anecdotal evidence, like Moran's, links church attendance to well-being. But formal studies linking faith to well-being are controversial. Prayer and belief are difficult items to quantify. Even so, an increasing number of clergy and scientists think there is a correlation between spirituality and well-being. "I'm persuaded by these studies that the link is clearly there," says the Rev. Thomas Droege, a Lutheran clergyman who taught theology at Valparaiso University

"Pastors today are more likely to be there as facilitators, to reflect on a patient's experience in light of their faith." - the Rev. Thomas Droege, Lutheran Theologian

and recently retired from the Cancer Center in Atlanta. "They're overreacting to me and to many in the medical community who are taking spirituality much more seriously than ever before."

Droege, 67, remembers that not too long ago Lutheran pastors visiting a sick parishioner in the hospital would offer a prayer for recovery and then read a portion of scripture, a procedure that tended to be very formal and did not invite participation from the patient. In contrast, notes Droege, a pastor today is far more likely to engage a patient in discussion, asking how he is handling the illness, how he is dealing with the enforced separation from family, how he is coping with possible financial insecurity. The pastor might then ask, "Has your faith been much help today?" After hearing the patient's answer, the pastor then may bring in some portion of the faith tradition. "Pastors today are more likely to be there as facilitators," says Droege, "to reflect on a patient's experience in light of their faith."

The hospital setting is a natural testing ground for researchers studying the link between faith and well-being, but few researchers have focused specifically on how minority groups use religion in the healing process. Dr. Wayne Thompson, 42, assistant professor of sociology at Concordia University, a Lutheran college in River Forest, Illinois, received a grant last year to study the connection between religion, health and rehabilitation in an urban public hospital that serves mostly blacks and Latinos. "There's a strong connection between prayer, meditation and healing," contends Thompson, who is working on the project with his wife, Gladys Hollant, an internist at Cook County Hospital in Illinois. Thompson and Hollant hope that as a result of the study, they can provide doctors and nurses in urban hospitals with guidelines on how to incorporate religious beliefs into the healing process.

Studying how faith impacts mental health has been the mission of Dr. Ken Pargament, professor of psychology at Bowling Green State University in Ohio, who has devoted much of his professional life trying "to get closer to the religious experience" — seeking whether it's church attendance, prayer or profound belief in God that seems to help people be well, get well and stay well.

Pargament has, at times, felt like he was swimming against the current because psychologists generally avoid religious issues, perhaps because they tend to be less reli-

Recommended READING

- *Is Religion Good For Your Health?* — by Dr. Harold Koenig
- *Prayer is Good Medicine* — by Dr. Larry Dossey
- *The Psychology of Religion and Coping: Theory, Research and Practice* — by Dr. Ken Pargament
- *Religion in Aging and Health* — by Jeffrey Levin