

Emotions

The Heart of Health

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The word “**heart**” conjures up positive images of emotions such as love, kindness, gratitude and sincerity. For some, it may also bring to mind negative thoughts like grief, loneliness, misery and fear. The word has long been embedded in our everyday language, and is widely used in many expressions “heart-warming”, “heart sore”, “heart-to-heart” etc to convey the human aspect of our emotional and physical nature. By contrast, other organs like the kidneys, liver or lungs, although indispensable for life, have nothing like the same gravitas as the metaphorical heart when describing powerful emotions and qualities, and are rarely, if ever, called upon.

Traditionally, the heart is the defining icon of emotions, courage and humanity. Back in the time of Hippocrates and other pioneers of Tibb, the heart was seen as one of the three major faculties (alongside the brain and the liver). This trio of major organs together controlled virtually every aspect of the body’s physical and mental activity. Although the role of the heart in pumping blood through the body was recognised and accepted, the actual details of the mechanisms involved and the circulation route were not to be identified until well into the future. In addition, the Vital Faculty, seated in the heart, was thought to be responsible for not only our emotional states, but also for the various mechanisms which dealt with the outside world. Emotions, or feelings, are after all the body’s response to an outside situation or event, real or imagined.

This image of the central role of the heart was shattered by advances in knowledge of the precise workings of the circulatory system beginning in the 17th century. The heart was unceremoniously relegated to a mere blood pump, admittedly a very complex and sophisticated one. Its role in emotions was discounted in favour of the brain. Worse was to come. The brain was promoted to overall master of the body, with the heart but one of the servants. The brain commands; the heart obeys, and responds immediately by changing rhythm, rate or force of contraction.

Recently there has been a revival of interest in the working of the heart, encouraged by the arrival of new technology. We now know, for example, that there is a dynamic and continuous two-way exchange of information between the heart and the brain. We also know that the heart is no mere blood pump, but has other properties only recently uncovered. For one, the heart is self-regulating, in that it acts like an endocrine gland, secreting a number of hormones (adrenaline, for example), which can influence blood flow features. The heart also secretes the hormone oxytocin, previously thought confined to the brain alone. This hormone, beloved of mothers-to-be, is responsible for uterine contractions in childbirth, and bringing on lactation to nourish the newborn baby. Interestingly, this same hormone - dubbed the “love hormone” is considered to be central for social attitudes like trust, empathy and pair-bonding, as well as certain emotions like anxiety, envy and calmness.

Many researchers now consider that the heart has its own “built-in brain”. Studies show that the heart is capable of crunching masses of data arising from all parts of the body, and transmitting this information to the central nervous system by several different pathways. It can also claim to possess memory. Interestingly, one site in the brain involved is a structure called the amygdala, identified as a critical part of emotion forming and processing. By doing so, the heart seems capable of influencing the body’s tissues and organs by virtue of its influence on the unconscious, nervous system, which exists to regulate most body activity.

There is also the intriguing - and to some people, bizarre - observation that when a heart is surgically transplanted, some emotions and behaviours typical of the donor are picked up by the recipient. For example, a teetotal recipient surprisingly takes to drinking beer after receiving a heart from an alcoholic donor. Other transplants involving kidney, lung, pancreas or other organs do not seem to show this strange phenomenon.

How relevant is this to the health context? Overall, the heart is arguably the part of the body that influences our quality of life. We do know that positive emotions like joy, empathy and love help create harmony in the heart, and contribute to a happier, healthier and even longer life. However, negative emotions like uncontrolled anger, constant worry and crippling depression can have the opposite effect, with serious consequences for the person's physical wellbeing.

Tibb has long accepted that a person's emotional state features as a major influence in health and disease. It includes this amongst the major Lifestyle Factors, alongside food, breathing, sleep, exercise and toxin elimination. A sound emotional state is regarded as an important aspect of encouraging personal wellness, and active measures to limit the effects of negative emotions on a person's health are part of the range of therapies offered.

There is now a wealth of clinical evidence connecting the heart to emotional turmoil. For instance, the risk of heart disease rises strikingly in people troubled by frequent episodes of anger or worry. In addition, highly anxious men are up to six-times more likely to suffer sudden cardiac death. Another study suggests that people prone to chronic worrying are at much greater risk of having a coronary attack. Interestingly, the risk posed by emotional stress in the appearance of heart disease and cancer is greater than that by smoking, high blood pressure and cholesterol levels. Also, people who are in control of their emotional states are much less likely to die in a given period than those who are not coping emotionally.

We also know that sincere, positive feelings boost the immune system, while negative emotions often have the opposite effect. This goes some way in explaining why people who are in thrall to negative emotions are much more prone to developing illnesses and chronic diseases.