

Commentary

Implementations of Evolutionary Medicine in Current Life

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Description

By utilising the well-established evolutionary framework and the numerous techniques and tools already accessible, particularly in the domains of evolutionary genetics and population genetics, evolutionary medicine focuses on understanding health and illness from an evolutionary viewpoint. Understanding health and illness has typically centred on pinpointing the molecular and physiological causes of a disease and, based on this understanding, suggesting methods for easing and reversing the disease symptoms. Understanding the underlying causes of illness why evolution has sculpted these processes in ways that may make us prone to a certain disease has largely been neglected or disregarded in all of this. However, the human species is one where this query is particularly pertinent.

First of all, compared to modern humans, early humans lived as hunter-gatherers in tiny tribal groupings, which is a radically different lifestyle and environment. Due to this development, modern humans are more susceptible to various illnesses known as the “disease of civilization.” Second, as people evolved and dispersed around the globe, they came into contact with many local differences in dietary habits and illness, which led to a variety of selection pressures. Finally, drift and founder events furthered the genetic divergence of local populations’ vulnerability to certain illnesses in the locally diverging genomes. These selection forces left various marks on the locally diverging genomes. Evolutionary medicine is not unorthodox or unconventional. It is not a unique medical specialty. It doesn’t promote any certain diet, workout routine or medical procedure. Direct therapeutic advice based only on theory is not made. Make sure that any therapeutic recommendations made by an evolutionary physician are supported by rigorous scientific research, if they are only

based on theory, locate another physician. Standard mainstream medical science, which is suitably circumspect when offering therapeutic advice, includes evolutionary medicine. A fundamentally new type of question regarding illness is posed by evolutionary medicine. Evolutionary medicine also investigates why natural selection has given all of us features that make us susceptible to disease, rather than just how bodies function and why some individuals get sick. We have features that make us susceptible to sickness, and evolution explains why so many other parts of the body function so effectively. For instance, why certain people have back discomfort is a common question. The question of why back issues have plagued all hominid species ever since they first stood on two legs is another one raised by evolutionary medicine.

Diseases are not natural selection-shaped adaptations. Pneumonia, schizophrenia, epilepsy, and cancer are all useless. An error that is both frequent and hazardous is trying to explain illnesses as if they are adaptations. However, many illness symptoms, including pain, fever, nausea, coughing, and exhaustion, are adaptations. For sound evolutionary reasons, the systems that control these defences are prone to malfunctions that result in chronic pain, anxiety problems, and a host of other ailments. Doctors who comprehend how selection shaped regulatory mechanisms work may be able to more effectively decide when it is safe to use medications to treat fever and cough. However, evolution is a basic science that mostly contributes to new knowledge that results in novel therapies, much like genetics and microbiology. New chemotherapy techniques that significantly lengthen the lives of cancer-stricken mice have been developed as a result of evolutionary models that examine the evolutionary rivalry between cells in a malignancy. The growing epidemic of au-

toimmune disorders including diabetes, multiple sclerosis, and Crohn's disease must be understood in the context of today's society.

The field of medical research and health care methods can benefit greatly from contemporary evolutionary study. On the other hand, to further their studies, evolutionary biologists are utilising the fast growing databases of medical genetic data. Information sharing between these two disciplines, which have previously operated nearly entirely independently, is beneficial to both. Improved health care is one of the long-term advantages of this synthesis of two important fields of study. To build the framework for future cooperation and investigation, recent initiatives to accelerate this link have brought together evolutionary biologists, medical professionals, anthropologists, and ethicists. The overlap's scope is very wide and has great potential. To address the vast

range of disorders caused by the environment and lifestyle, the medical sector has evolved. Doctors have gained greater knowledge regarding the connection between the environment and illness over time, including aspects like lifestyle and cleanliness. More recently, genomic research has made it possible to examine genetic variations among populations, giving rise to the promise of more effective personalised medication. Overall, it appears that without taking evolutionary knowledge into account, medicine is making enormous strides toward preventing, treating, and curing disease.

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Conflict of Interest

There are no conflicts of interest.