

## Recognition of the *Innate* Phenomenon In the Medical Literature

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**The body's innate properties are not unique to chiropractic. Innate is a prolific term also used in current and earlier medical literature. As an abstract concept, innate is put forward as the best available explanation of a phenomenon for a range of biological activities which project certain inherited intelligence in humans and other organisms. This review seeks to explore the wider use of the term "innate" in the literature. The term has been extensively used in medicine, particularly in relation to the immune system. The example of sophistication of an innate immune response signifying a form of communication suggests a degree of intelligence at a cellular level.**

### Introduction

There is overwhelming recognition in the literature of an innate response in humans, birds, and other organisms, with over 18,600 listings retrieved under a PubMed title search for "innate," and 134,590 in a general search.<sup>1,2</sup> [1,2] As an indication of the interest in this area, there were some 120 listings for the month of May 2018 alone. Notably, the term homeostasis is often associated with and indicative of a body's intuitive drive for health and preservation.<sup>3-6</sup> [(3-6)]

There seems to be general recognition of an innate immune initiative of the spontaneous protopathic response in seeking to maintain homeostasis.<sup>4,7-10</sup> This is not conscious physiological function and is thought to augment "the protection offered by anatomical and physiological barriers."<sup>11</sup>

Three of the body's innate abilities are

healthy survival, tissue repair (the ability to self-heal), and the neutralization of untoward input or threats to that process. There is, however, a grey area in both medicine and psychology in differentiating innate from acquired characteristics.<sup>12</sup>

The intuitive response to the reduction or neutralization of extraneous biological threats (self-healing) or disturbed physiology appears to be a natural biological property. Excitants are confronted by the activation of innate responses.<sup>13</sup>

Innate immune properties appear to overlap with, and to seem integrated with, the autonomic nervous system (ANS). Kox and colleagues found that "Acute activation of the sympathetic nervous system attenuates the innate immune response." The role of the ANS has also been noted in the manipulative sciences.<sup>14-25</sup>

In chiropractic, the reduction of noxious somatosensory activation seeks to augment natural neural innate responses by eliminating or reducing irritants such as pathophysiological noxious somatosensory reflexes. In turn, these can activate somato-autonomic reflexes.<sup>26</sup> The removal of somatosensory irritants supported by a

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healthy diet, exercise, minimal stress, and adequate rest are thought to facilitate optimal innate physiological function.<sup>27,28</sup>

## Review

Apart from an immune response, an innate element has been associated with a range of other biological activities. These include acute inflammation,<sup>29</sup> tissue injury,<sup>29</sup> behavior,<sup>30-31</sup> psychology,<sup>32,33</sup> atherosclerosis,<sup>34</sup> ischemia,<sup>35</sup> innate (instinctive) behaviors,<sup>36,37</sup> memory,<sup>38</sup> and fear and threats,<sup>39,40</sup> as well as the sucking and grasp reflexes in infants, and early number competency<sup>41</sup>.

Following injury or exposure to pathogens, the body's instinctive response seeks to heal or defend itself without conscious acknowledgement of its own inherent ability. As such, its existence must be assumed as a physiological property in a similar way that the body's energy cannot be physically demonstrated as an entity.

There are numerous examples of what is considered innate behavior throughout the animal kingdom as well, with this phenomenon being noted in spiders, birds, caterpillars, dolphins and bees.<sup>36,42</sup>

Some 110 years ago, D.D. Palmer philosophized about the body's innate properties in his 1910 textbook. This included specific reference to an *innate nervous system*.<sup>43(p.491-502)</sup>

## Innate

In assessing the term *innate*, it is appropriate to review synonyms and definitions. These indicate a natural biological property that tends to be taken for granted as a normal function.

The *Cambridge English Dictionary* defines "An *innate* quality or ability as one that you were born with, not one you have learned." The *Merriam-Webster Medical Dictionary* defines innate as "existing in, belonging to, or determined by factors present in an individual from birth."

A search using the term innate in the title box of PubMed in December 2020 found that there were 18,588 listings that

covered 1,859 pages. The 'timeline' window displays only 184 entries from 1814 to 1995 - approximately one per year, then rapid growth in numbers to the present day.<sup>1</sup>

The range of synonyms for *innate* also convey a deeper appreciation of this fundamental but latent facility.<sup>44,45</sup> They include:

Basic	Built-In	Congenital
Deep-Seated	Essential	Fundamental
Inbred	Inborn	Inbuilt
Ingrained	Ingrown	Inherent
Inherited	Instinctive	Intrinsic
Intuitive	Natural	Organic
Quintessential	Spontaneous	Unlearned
Untaught		

In further examples, it has been proposed that instinct, behavior and recuperative powers are also examples of innate capabilities.<sup>46-48</sup>

In order to seek further clarity, it is worth considering antonyms for *innate*.<sup>49,50</sup> These include:

Accidental	Acquired	Conditioned
Cultivated	Extrinsic	Incidental
Learned	Unnatural	

Sweet and Mansell<sup>51</sup> recognize wound healing as an innate property and nominate a cut as an example. They suggest this as empirical evidence of *inherent physiological healing system*.

A group of 51 sociologists reported that emotions are not considered an innate ability.<sup>52</sup>

## Innate Intelligence

*Innate intelligence* has been defined by Ayan as "that intelligence which resides within the body of every living thing. The best example of this is pregnancy. The first system to develop in-utero is the nervous system. This then becomes the conduit by

which our amazing bodies may begin to develop and differentiate.”<sup>53</sup>

The following synonyms for *innate intelligence* essentially place the term in a clearer perspective.<sup>54,55</sup>

Common sense Faculties Intellectual gifts

Nous Senses Wits

The term “*innate intelligence*” is listed thirteen times on PubMed with just five of these listings in chiropractic journals.<sup>56</sup> Two of eight medical citations of the term are dated 2018, and the earliest in the index is 2003 by Scarneas and Stern.<sup>57</sup> This is some 93 years after Palmer first published the term.<sup>43(pp.491)</sup> It is suggested here that this is not a spiritual element; it is fundamental physiology.

Morgan claims that use of the term “innate intelligence remains an untestable enigma that isolates chiropractic and impedes its acceptance as a legitimate health science.”<sup>58</sup> It is difficult to reconcile this view, given the medical papers that recognize the term and the huge volume that recognize human innate responses.

Other biological facilities of spontaneous instinctive behavior which cannot be physically demonstrated may include falling asleep, the sense of a physical presence, and circadian rhythm. In addition, Patnaik states clearly that “Responses of living cells to their environment suggest that they possess some ‘innate intelligence’.”<sup>59,60</sup>

Gottfried, a medical doctor, stated, “. . . there's this innate intelligence to our bodies that is so powerful, and I feel that we have developed all these ways to create obstacles to that innate intelligence.”<sup>61</sup>

Weingartner defines innate intelligence as “the intelligence wired into you that governs every single act in your body. Every single chemical reaction, every tissue formation, and every bacterial invasion that is fought off is controlled and coordinated by this innate intelligence. Every living thing has an innate intelligence.”<sup>62</sup>

As intelligence has been identified as the *ability to perceive* as one of its properties, innate may be identified with a num-

ber of synonyms for intelligence which include.<sup>63,64</sup>

Acuity Capacity Cleverness  
Discernment Perceptiveness Perspicacity  
Sagacity

It is suggested that if intelligence is innate, then innate has intelligence.

### Innate Immune System

As an indication as to the recognition and activities regarding the hypothesis of *innate immunity*, there are two journals listed on PubMed that incorporate the term: *The Journal of Innate Immunity* and *Innate Immunity*. Both have published hundreds of papers over a decade.<sup>1,65-68</sup>

Innate immunity is a significant part of the medical model. Lamotte states, “The innate immune system springs into action as the first line of defense, followed by the adaptive immune system, which sends killer T-cells, antibodies and other soldiers into combat.”<sup>69</sup>

The innate immune response has been described further as “the body's first line of defense against infection. It is nonspecific and so reacts the same way to anything that the body identifies as foreign or non-self. . . . These are the physical, physiological, chemical and biological barriers that make up the innate immune response.”<sup>70,71</sup>

*Stedman's Medical Dictionary* (2002) defines *innate immunity* as “Immunity that occurs naturally as a result of a person's genetic constitution or physiology and does not arise from a previous infection or vaccination. (Also): genetic immunity inherent immunity native immunity natural immunity nonspecific immunity.”

In a further elucidation, “Innate immunity refers to nonspecific defense mechanisms that come into play immediately or within hours of an antigen's appearance in the body. These mechanisms include physical barriers such as skin, chemicals in the blood, and immune system cells that attack foreign cells in the body.”<sup>72</sup>

Khaitov (2006) stated in a paper on the physiology of innate immunity, “The mechanisms of innate immunity functioning (is) the first row of counteraction (resistance) to infectious agents are reviewed.”<sup>73</sup>

## Homeostasis

Homeostasis is the state of instinctively maintaining a stable and optimal physiological state. It involves a wide range of biological functions one of which is now thought to include social sciences.<sup>74</sup> Homeostasis may be based largely on the concept of empiricism. It seeks to maintain a biologically stable and balanced physiology in order to survive and thrive.<sup>75</sup>

Innate immunity is intimately related to homeostasis which **is** seeks to establish and maintain. Guia and colleagues state that “innate lymphoid cells are involved in the maintenance of homeostasis and the regulation of immunity.”<sup>76</sup> Under the heading *Post-modern healthcare: collaboration and integration*, the medical doctor Peters presented a detailed case for a blending of vitalism and mechanistic models towards homeostasis in healthcare.<sup>77</sup> Rankin and Artis discuss cell to cell communication and review the integration of “mammalian immune system senses and interacts with other complex organ systems to maintain tissue and whole-body homeostasis, as well as regulating physiology throughout the body as such functions as tissue repair, thermogenesis, and metabolic states.”<sup>78</sup>

## Discussion

Apart from instinctive innate responses there are also behavioral innate responses. This rather extensive list includes such biological homeostatic processes as blinking, shivering, yawning, and the withdrawal reflex of pulling one’s hand away from a sharp point or hot plate.<sup>78</sup>

In 1983, Jänig stated that the autonomic and somatic nervous systems operate hand in hand with the ANS, innervating the smooth muscles of all organs and glands to

maintain homeostasis and allostasis. Allostasis is the *process* to attain or strive **to attain** homeostasis. As such, it is one of the body’s innate properties.<sup>79</sup>

Jänig also **states** that homeostasis is dependent upon the physiology of the autonomic and neuro-endocrine systems, and that these operate in adapting to unpredictable environments and within a physiological dynamic range. It is noted however that current understanding is not clear as to *how* these changes occur.<sup>79(p.87-89,111-144)</sup>

## Vertebral Subluxations

Like gravity, subluxations or a headache, there can be limited ‘hard evidence’ as to their existence, but there is the strong experiential, clinical, and circumstantial evidence as to the physiology and pathophysiology involvement with innate functions. The existence of subluxations may be assessed under similar circumstances to that of innate behaviour although it is suggested here that empirical and research evidence is overwhelmingly indicative of this clinical finding.

Medicine recognizes the body’s innate properties in relation to the immune system. It has however been critical of chiropractors who claim that by manually normalizing functional aspects of the body, its innate ability – its natural tendency - to heal and strive towards homeostasis, is a natural biological property. A paper on innate and innate intelligence with the vast majority of reference citations drawn from medical papers should serve to neutralize reservations of those who feel innate is not a factor in relation to chiropractic.

By removing the sensory irritation to tissue as in noxious irritation, signs and symptoms, or tissue damage, must allow or help the tissue to recover more rapidly. The body’s ability to recover is an innate property. If exacerbating factors are removed - an infection for example, the tissue begins to heal. Similarly reopening a wound would delay healing.

As with other innate functions, a mechanism by which removal of spinal subluxa-

tions facilitates innate healing is yet to be identified, even though the clinical benefits and effects are apparent. The concept is subject to the best current available explanation in the absence of evidence to the contrary.

## Conclusion

This review discusses the recognition of the term *innate* in the literature, a term that has been widely used in medicine

There appears to be a certain resistance to the term innate when used by the chiropractic profession, but we suggest this is an assumed position not an informed one given the volume of evidence in its recognition.

The fundamental concept of chiropractic is to restore physical and physiological function, through optimal neurological restoration where manually possible. This may include easing of pain, improve mobility, neutralize somatosensory noxious neural input and improve the body's physiological functions be that articular (somato), systemic (visceral) or neurological. Because of the inherent biological allogenic capabilities, removal of such impediments and irritants must assist in the natural trend to restore homeostasis. Without these properties, the body would not heal injuries or recover from illnesses.

It is suggested here that one of the roles of chiropractic spinal care is to seek to facilitate the innate state of normal function. Such a hypothesis is not so different from the role suggested for innate ability cited in the medical literature here in relation to immune function, behavior, and physiology.

*Innate* should therefore be applicable when appropriate in other health fields.

## Notes

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