

## **PAAM Medical Letter, Vol. 9(2), May 31, 2022**

Note from the PAAM Administrator: Thank you for subscribing to the PAAM Medical Letter. It recently came to my attention that you may not have received the most recent issue. I have now updated our records so that you should continue to receive the Medical Letter for the remainder of the year. Previous issues are linked at the bottom of this email. Thank you again for supporting PAAM!

Dear Colleagues!

Welcome to another edition of the PAAM Medical Letter. As your non-profit organization, PAAM appreciates your support. Thank you for keeping your annual dues or subscriptions up to date! I hope this edition meets your needs and interests.

Please note: This Letter is for your thoughtful consideration and personal research and is not to be taken as something dogmatic to believe in nor promote as something official from PAAM or the international anthroposophic medical movement.

### **Meditation**

#### Meditative Verses

Now that the sun is more clearly out in strength in the northern hemisphere and is still out in the southern hemisphere, it seems apropos to start with a verse about our connection to the sun and then bring in meditations about the nature of the human being and how to behold ourselves.

In my heart  
Sun-strength shines  
In my soul  
World-warmth works.  
I will to breathe  
The strength of the sun  
I will to feel  
The warmth of the world.  
Sun-strength fills me  
World-warmth penetrates me.  
- Rudolf Steiner, CW 268, 1923

Create soul-goodness  
From strength of will.  
Weave soul-beauty  
Through pure feeling.  
Engender soul-light  
Out of wisdom's truth.  
Behold thyself, O Man, seeking  
In weaving truth  
In creative beauty

In engendered goodness.  
- Rudolf Steiner, unknown citation

Ecce Homo

In the heart weaves feeling,  
In the head shines thinking,  
In the limbs wells strength in willing.  
Weaving illumining,  
Strengthening weaving,  
Illumining strengthening:  
Thus, this is Man.  
- Rudolf Steiner, Verses and Meditations, Rudolf Steiner Press, 2004  
Calendar of the Soul

Verse #8 Pentecost

There grows the senses' power  
In unison with the Gods' creating;  
It presses down thinking's power  
To a dreamy dullness.  
When godly being  
Seeks to unite itself with my soul  
Must human thinking  
In dream existence humbly rest content.  
Virtues of the Month

Taurus (April 21-June 1): Equilibrium, inner balance becomes progress.  
Gemini (May 21-July 1): Perseverance becomes faithfulness.

## Medical and Relevant Literature

**Attachment 1:** This is an English translation of an article on human warmth that appeared recently in the German medical journal, *Der Merkurstab*, with the following citation: Penter R., Die menschliche Wärme als Brücke von leiblichen und seelisch-geistigen Prozessen. *Der Merkurstab. Zeitschrift für Anthroposophische Medizin* 2021;74(4):333-348. DOI: <https://doi.org/10.14271/DMS-21384-DE>. The journal and author have kindly allowed the English translation by Branko Furst, MD, for use solely in the PAAM Medical Letter. Please do not put this article up on any website! Thank you. Most of the references are in German, but some of them are in English, and where possible, the available English titles are given for cited German works of Rudolf Steiner.

As the title suggests, this is a 30-page anthroposophic medical article on human warmth being a bridge between physical and soul-spiritual processes—a key concept in AM. Warmth has a dual nature as the fire/heat element and the warmth ether, and manifests both physically, as physical warmth that we perceive externally and internally, as well as supersensibly as soul-spiritual warmth. Since the 'I'-organization lives in warmth, our ego experience will also be affected by hot or cold conditions; we experience a paralysis of thought and will in a cold environment and a slackness of them in a hot environment. Both temperature extremes constrict the human ego activity. We need a proper internal

warmth environment for our feeling of healthy 'I' presence, for our executive functions, intentions, moral perceptions, and judgments. As Reiner Penter shows, these experiences are all intimately related, weaving and connecting, with each other. He helps us recognize and clarify our experiences in various situations that involve warmth or cold. The actual essence ("the being") of warmth is paradoxical. It is neither spatial nor non-spatial, neither temporal nor non-temporal, neither material nor non-material, but warmth is oriented to and penetrates the spatial, it is oriented to the temporal and penetrates the soul, and, according to Steiner, it has a mobile tendency to materialize and dematerialize. When something or someone inwardly "moves" or enthralls us, we often have a will to move, and in that will we experience preheat or activation heat before there is any muscular activity! Warmth also has some characteristics of the human 'I'-organization since they both can selflessly enable transformations, formations, differentiations, and communications in the organism, but also both can be dissolving and destructive when excessive. Thus, warmth, in its characteristics and qualities, becomes an image of the spiritual. These are only some of the insights and experiences that Penter brings out and develops in his article. Lastly, he also discusses his perspectives on Steiner's Warmth Meditation ("How do I find the good?") given to medical students and young physicians at the Christmas Course in January 1924. The text of the meditation is printed in a book by Michaela Glöckler and Ralph Heine and also in a book by Peter Selg (ref 17). For the imaginative soul exercise connected with the text, please request this from an experienced AM physician who has been given the full meditation.

**Attachment 2:** In the context of warmth, it is important to have an article that reviews the AM views of fever and their scientific validity to date. This is a scoping review by David Martin, MD, published in 2016. David extracted 13 statements made about the benefits of fever in the AM literature and then provided the research where it documents their validity in an appropriate context, where there are possible exceptions and where the data is sparse or contradictory. This is a good reference article to have and can help counteract fever phobia in parents and the public at large, as well as provide evidence in the medical literature that the conventional treatment of fever with antipyretics (and indiscriminate use of antibiotics) is not evidence based. Attachments #1 and #2 provide complementary information to give a more complete AM view of the various states of warmth.

**Attachment 3:** This is a technical review of the role of fever and thermal regulation in affecting the immune system. While technical, the article does provide helpful figures and illustrations that summarize the important points made in the article. Most of the research on fever and hyperthermia's effect on the immune system have been done on animals (largely in mice). Nevertheless, because of the similarity of murine and human immune systems, the results likely apply fairly well to humans. If you have the time, it's worthwhile to read. I will summarize some key points of the article: 1) The fever response has a definite survival advantage for many animal species, including humans, despite its high metabolic cost. In addition, the use of antipyretics correlates with a 5% increase in mortality in patients with influenza and negatively affects outcome in hospital ICUs. However, fever is not universally beneficial, especially in cases where hyperinflammation or encephalopathy/neurologic damage is present, then there can be an increased risk of tissue damage. In these cases, lowering the temperature may be beneficial. 2) Pyrogenic cytokines, especially IL-6 (but also IL-1, TNF-alpha, etc.), the putative final mediator of the febrile response, prostaglandin E2, and heat shock proteins are all key substances that mediate a fever response and activate the innate immune system (macrophages, neutrophils, and dendritic cells) to work more effectively. While not mentioned in the article, the complement system and natural killer cells are also part of the innate immune system and likely are enhanced by temperature elevation (at least NK cells, for sure). 3) The site where the inflammatory mediators act is in the median preoptic nucleus of the hypothalamus where the temperature set point is set and from where the sympathetic nervous system is stimulated to release norepinephrine. Norepinephrine increases thermogenesis in brown fat and causes vasoconstriction to reduce passive heat loss. The

neurotransmitter, acetylcholine, is released in muscles to start shivering which increases metabolic rate and heat production.4) Activated macrophages and dendritic cells act as antigen presenting cells in lymphoid tissue to then activate the cytotoxic CD8+ effector T cells of the adaptive immune system. After about a week, activated B cells (from antigen presenting cells) produce antibodies to further help in clearing any pathogens that brought on the initial febrile response. 5) Externally applied hyperthermia and fever (range 38-42C) help increase cytotoxic CD8+ T cells to attack cancer tumor cells and decrease the numbers of immunosuppressive T regulatory cells. This temperature range of moderate hyperthermic therapy is being used as an adjuvant treatment to target the tumor microenvironment. This may also be another way mistletoe therapy works in cancer treatment. 6) There is likely a negative feedback loop where the continued fever or hyperthermia leads to a decrease in the proinflammatory state caused by cytokines to decrease tissue damage and return to homeostasis.

**Attachment 4:** This attachment is another very technical review article in the journal, Current Medicinal Chemistry, that gives a narrative review of the evidence that points to the redox potential (balance between chemical reduction and oxidation) at various tissue and compartments that regulates via signaling both the innate immune system and fever. Free radicals (reactive oxygen species (ROS), reactive nitrogen species (RNS) and their derivatives) have functional and regulatory roles in virtually all intracellular and intercellular processes. Despite the common view that free radicals are damaging (oxidative stress) and should be avoided with antioxidants, the authors show that the referenced studies overwhelmingly show that some appropriate level of free radical formation is necessary for proper signaling of many processes and is highly regulated. In this article they focus on redox factors in fever and the innate immune system. Of course, excessive, unbalanced, and unregulated oxidation in cells and tissues leads to high free radical formation and is damaging. The complement system (part of innate immunity), platelets, coagulation, wound repair, lipid peroxidation, cytokines and chemokines, toll-like receptors, prostaglandins, heat shock proteins, hypoxia-inducible factors, and the febrile response with immune activation are all shown to be regulated by the redox potential intraand extracellularly. The authors go into the mechanistic detail around these processes and feel that they show that the redox potential is extremely important for normal physiological processes and for immune function. Antioxidants, free amino acids, and various proteins also have a physiologic role in regulating free radical capture capability or their compartmentalization to bring about a balanced redox potential. This review article gives more information about innate immune system functioning in various conditions than does attachment #3.

**Attachment 5:** This is a recent 2022 English translation of a document put out by the Goetheanum Leadership on anthroposophy and racism. Nowadays there are all sorts of accusations about anthroposophy and Rudolf Steiner having a central racist doctrine. This is a 15-page document that gives an historical overview and context of the accusations and their sources, as well as the responses from anthroposophical quarters. Much, but not all, of the accusations come from a confusion about what Steiner's evolutionary spiritual view really is, from not taking his statements in context and from not understanding how he was using the word "race" (that stems from the misleading theosophical literature that Steiner found unsatisfactory but still used at times). It appears that some radical quarters of the Left have accused Steiner of being racist and fascist, while Right-wing fascist groups have accused him of not being in accord with their fascist and racist ideology. As many of you may know, Steiner presciently stated that the term "race" has little-- and increasing less validity-- in our post-Atlantean 5th cultural age and will become obsolete and completely meaningless by the next 6th cultural age that starts about 3573 CE. There are many helpful references in the document, several of them in English for those who want to go further, that give more content and specifics. Nevertheless, the document gives important counterpoints to the racist and fascist accusers and shows that the General Anthroposophical Society is becoming more global-international and is slowly losing its initial

German and European centrism. SteinerBooks has just published Peter Selg's book, *Anthroposophy and the Accusation of Racism: Society and Medicine in a Totalitarian Age*. It promises to be a good one. Peter Selg is a physician, a member of the General Anthroposophical Section in the School for Spiritual Science at the Goetheanum, a researcher, and head of the Ita Wegman Institute for Basic Research in Anthroposophy in Arlesheim, Switzerland, and he has a comprehensive knowledge of anthroposophy. He is the author of numerous books on various relevant anthroposophical topics and social issues. In the field of medicine, we also must look at our unexamined racial categories and associations we learn about and use both consciously and unconsciously.

Attachment 6 and Attachment 7: These two attachments are NEJM Perspective articles on the racialization of medicine (*Racial Biology and Medical Misconceptions*, #6) and on the need to go beyond current and restrictive notions of diversity (*Beyond Diversity—Time for New Health Models*, #7). In their own way, both opinion pieces argue to let go of antiquated views that associate a disease with a particular racial or ethnic background and, by critical introspection, look at how medical and social research has been biased and needs to take into account the rich available information to develop new models of health. Both articles are under three pages and give a sampling of modern medicine's current thinking in confronting bias and racism.

Attachment 8: A review article giving an overview of the current literature on natural and hybrid immunity's protection against SARS-CoV-2 reinfections has just appeared in February 2022. It summarizes the epidemiological and observational studies (the only type of studies available) on reinfection rates. Data on Omicron reinfection rates depending on the type of immunity protection are not available. More time is necessary to look at reinfections rates from Omicron. The studies, of variable strengths and weaknesses, show a range of reinfection protection between 77%-97.5%, depending on the variant exposure, and show that protection is of comparatively long duration. It has been documented that even mild or asymptomatic SARS-CoV-2 infection, will induce a robust humoral and cellular immune response (Kojima N, Klausner JD. *Lancet Infect Dis*, Jan 2022, 22:12-14, doi.org/10.1016/s1473-3099(21)00676-9). In a recent Swedish study, this robust natural immune response also has documented protection for up to 9 months against reinfections in the vast majority (95%) of those who seroconverted from asymptomatic to severe disease, and were also in the ongoing setting of high exposure risk to SARS-CoV2 (Haverall S, et al. *J of Int Med*, 2022, 291:72-80). Accumulating evidence seems to be confirming the biological plausibility that those reinfections are significantly less severe than primary SARS-CoV-2 infections; by and large, natural immunity protection from hospitalizations and deaths remains quite high (~ 90%). The authors' conclusion is: "In conclusion, natural immunity acquired after SARS-CoV-2 infections appears to be highly effective in terms of protection against reinfections and, more importantly, against COVID19 serious outcomes. Efficacy seems to be equal or higher compared to individuals receiving two doses, but data aren't fully consistent. Hybrid immunity, i.e., immunity achieved by SARS-CoV-2 infection plus vaccination, appears to be most protective. These conclusions must be viewed in light of the limitations of our work that was not based on a pre-specified and registered systematic review and meta-analysis, but rather attempted to provide an evolving, up-to-date topical review on several inter-related questions to update and extend the work of previous reviews." From other recent medical literature, it is clear that 1-2 boosters of a gene based COVID vaccine can help boost protection in the short term, but then the protection against infection seems to wane relatively rapidly (~3 months). This is likely because the gene based COVID vaccines targeting the spike protein antigen are still for the non-circulating original Wuhan virus strain, and that current Omicron genetic variants are so different antigenically. Nevertheless, vaccine-induced immunity, like natural immunity, seems to still provide high protection against serious outcome (hospitalization and deaths).

On behalf of the PAAM Board, and to you, our valued colleagues,

Ricardo R. Bartelme, M.D.  
Emeritus Assistant Professor  
Department of Family Medicine  
University of Michigan Medical School  
Ann Arbor, Michigan, USA 48109