

**NUTRI-SPEC**



89 Swamp Road  
Mifflintown PA 17059  
800-736-4320  
717-436-8988  
Fax: 717-436-8551  
[NutriSpec@nutri-spec.net](mailto:NutriSpec@nutri-spec.net)  
[www.nutri-spec.net](http://www.nutri-spec.net)

**THE NUTRI-SPEC LETTER**

Volume 36    Number 10

## REVITALIZE YOUR BRAIN & HEART

From: Guy R Schenker, D.C.  
October, 2025

Dear Doctor -----

You may survive 30 days without food; you can perhaps last for 3 days without water; but after only 3 minutes without adequate oxygen perfusion, your life is in severe peril. And long before that 3-minute deadline is approached --- in fact, after no more than 30 seconds of declining oxygen perfusion, or of rising or falling carbon dioxide, alarm signals are triggered in every Immuno-Neuro-Endocrine monitoring system.

In response to O<sub>2</sub> or CO<sub>2</sub> variations that even come close to the limits of physiological range, adaptative actions are demanded at every level of biological organization. From the systemic level of Sympathetic/ Parasympathetic Balance and the Hypothalamic-Pituitary-Adrenal Cortex Axis, all the way down to the glycocalyx that lines every cell of your body broadcasting urgent warnings to every other cell in its intercellular network, penetrating deeply, even as the intracellular communication of mitochondrial signaling molecules lights up. Why the extreme reaction to shifts in O<sub>2</sub>-CO<sub>2</sub> circulation and perfusion?

In last month's Letter we introduced the concept of the Pulse Rate/Breath Rate Ratio (PBR). The PBR represents your body's ---

**QUEST FOR CARDIO-RESPIRATORY SYNCHRONY.**

Somehow ---

### **ALMOST MAGICALLY ---**

the inputs arising from the mitochondria, up through immune system surveillance, spreading up through the communication line to and from Sympathetic & Parasympathetic centers, and to and from the HPA Axis --- are integrated with no clear-cut chain of command. The PBR both ---

### **AFFECTS AND REFLECTS ---**

all synergistic checks and balances, activators and inhibitors --- somehow mysteriously maintaining constant vigilance in the protection of your brain and heart.

Somehow --- incomprehensibly --- your body “knows” that O<sub>2</sub>-CO<sub>2</sub> exchange in your heart and brain ---

### **DARE NOT BE JEOPARDIZED.**

Your body never stops “thinking” about, and maximizing, oxygen delivery to enhance heart and brain function. But no single metabolic pathway leads to the life-defending adaptations in PBR.

The PBR affects and reflects an interwoven matrix of communication lines both causing and reacting to Sympathetic/Parasympathetic defense, along with HPA Axis activation. But are the autonomic nervous system and HPA Axis reactivity at the top of the command chain as the overseers? Or, are these over-arching systemic metabolic regulators at the bottom of the hierarchy --- dependent upon receptors at the tissue level, cell level, and mitochondrial level?

The BPR matrix is analogous to a high-level professional or college athletic team. The team has an Offensive Coach, training the athletes in scoring skills and tactics; a Defensive Coach, schooling the players in skills and strategies to stop the opponent; and a Conditioning Coach, maintaining all competitors at their maximum physical performance level. Are these coaches at the top of the team hierarchy truly the driving forces behind victory? Or, when in the heat of competition, is it extraordinary moves by individual players --- acting either in solo or in teamwork --- whose 5-Star effort and skill at a critical moment in a game determines win or lose? And --- is it, then, the performance of players on the field that actually ultimately controls the coaching actions perceived as necessary?

Notice in the above analogy, there is no mention of a Head Coach. So it is with your PBR. The “Head Coach” identity is inherent in the very essence of the PBR --- instantaneous integration of an all-pervasive communication web --- such that every fiber of the web “feels” and “knows” all that is felt and perceived by all. The result is moment-to-moment maximization of Pulse Rate-Breath Rate Synchrony. The brain and heart remain continuously protected and guided.

Another analogy might be to compare your PBR control to Artificial Intelligence. At this instant in time, as you sit there reading this, all aspects and all levels of your physiology are instantaneously aware of unfathomable quantities of information --- from which the PBR reflects its primal role as guardian effector of your brain and heart action.

From your clinical perspective as a Nutri-Spec practitioner, you must understand that your PBR most intimately affects and reflects balance/coordination/synchrony between Sympathetic and Parasympathetic Balance. While both the Pulse Rate and the Breath Rate affect Sympathetic/Parasympathetic balance, they also reflect Sympathetic/Parasympathetic feedback. Breathing drives, and is driven by, Sympathetic/Parasympathetic reactivity. But in analyzing your own health and the needs of your patient, looking at the PBR gives you far more clinically valuable information than looking at either the Pulse Rate or the Breath Rate alone.

Furthermore, the PBR gives you far more information than the common metric of Heart Rate Variability (HRV), which is a well-documented and researched medical parameter, and an indicator you can get from fitness watches and phone apps. Research shows that PBR gives relevant clinical information on health needs to which the HRV is not sensitive.

Why do you not hear much about the PBR? Groundbreaking research was done almost entirely in Germany beginning in the second half of the 20<sup>th</sup> century. Only in the last 10 years has all that research been translated into English, and the research expanded worldwide. With Nutri-Spec, you are at the forefront of those applying this valuable metric to enhance your own health and increase the Adaptative Capacity of your patients.

In last month’s Letter, we gave you a clinical metric to help you begin integrating the PBR with the clinostatic pulse rate response. The change in Pulse Rate from sitting to supine, by the established physiological law that the Parasympathetic System activates and Sympathetic activity declines when we assume the supine position --- gives you a clear, unequivocal indication of Parasympathetic Tone. Such ---

### **SPECIFICITY IN A CLINICAL PARAMETER ---**

is rare.

Now, with the PBR, you can combine that specificity with the ---

### **SENSITIVITY ---**

of the PBR. ----- Read on to learn how you can very simply apply the highly sensitive PBR with the highly specific supine-to-sitting pulse rate to quickly determine any patient's Sympathetic/Parasympathetic Imbalance ...

First, you need to know the normal ranges for the sitting Pulse Rate (Pa) minus the supine Pulse Rate (P1) difference, as well as the (Pulse Rate / Breath Rate) = (P1 / B1) PBR.

Here is your simple procedure for evaluating Autonomic Nerve Balance:

- Patient sits relaxed on the exam table in a position from which he/she can lie supine without first standing up or scooching along the table.
- Count the resting Pulse Rate for 30 seconds. This is your patient's Pa.
- As soon as the patient is settled in the supine position, place your hand a couple of inches below the xiphoid and count the Breath Rate for 30 seconds. This is your patient's B1.
- At exactly the 30-second mark, begin counting the Pulse Rate for 30 seconds. (If you are attempting to use a pulse oximeter, take your reading at exactly the 60-second mark after the patient becomes supine.) This is your patient's P1.
- Normalize your 2 Pulse Rates and the Breath Rate to 60 seconds by doubling them.
- If the supine Pulse Rate drops between 1 and 3, e.g.,  $(Pa - P1) =$  falls from  $Pa = 68$  to  $P1 =$  somewhere between 65 and 67, you likely have a perfectly capable Vagus Nerve that is in perfect balance with Sympathetic reactivity.
- If P1 subtracted from Pa drops 4, and very definitely if it drops more than 5, there are only two possibilities. Either the patient has excess Parasympathetic activity, or the patient is suffering from thyroid insufficiency.

- If the supine Pulse Rate does not drop, or even rises, then you likely have a Vagus Nerve that is being dominated by Sympathetic (Adrenergic or Noradrenergic) Stress.

At this point you have a very specific indication of Parasympathetic Imbalance (the Pulse Rate dropping 4 or more) and a generally good indication of the likelihood of a Sympathetic Stress Imbalance (the Pulse Rate failing to slow). But, to definitively distinguish between patients who are Parasympathetic, Sympathetic, or reasonably balanced, you must incorporate the sensitivity of the PBR.

All you need to do is divide the P1 by B1. For example,  $PBR = (P1 / B1) = (66 / 14) = 4.7$ .

Now, “the ultimate” --- combining the specificity of the Pulse Rate difference and the sensitivity of the Pulse Rate/Breath Rate ratio ----- Simply subtract the Pulse Rate Difference from the PBR. To illustrate:  $(Pa - P1) = (68 - 66) = 2$   
 $(P1/B1) = 66 / 14 = 4.7$      $4.7 - 2 = 2.7 = = =$  Your Sympathetic/Parasympathetic Balance metric for your patient is 2.7.

Normal range? ----- **Parasympathetic Imbalance = -3 or less;**  
**Sympathetic Imbalance = +4 or more.**

What does the research literature say about normal PBR? Studies show that the perfect PBR averages 4.5 over a period of 24 hours. That includes the sleep hours, when PR/BR drops to around 4.0. There is a diphasic cycle such that PBR rises from around 4.0 to a reference range between 5 and 5.4 between 8:30 AM and 11 AM. There is a trough shortly before noon to between 4.8 and 5.1. The diphasic peak is at 2-3 PM, between 5.3 and 6. There is a fall to a plateau between 5:30 PM and 9 PM of between 4.6 and 5.2. Later in the evening, the PBR slowly drops to between 4.1 and 4.3 at bedtime.

However, the PBR varies tremendously between individuals. The PBR is such a clear indication of what used to be called a person’s “constitution.” Today’s research describes these variations as different phenotypes. The phenotype is a combination of genetic tendencies, coupled with all the anatomical and physiological adaptations required over the individual’s life.

Several of the original German studies on PBR established as many as 7 distinct phenotypes related to various metabolic/health states. Fascinatingly, the PBR data collected across the full population is not distributed Normally (as a Bell Curve), but shows distinct integer peaks at 3.0, 4.0, 5.0, 6.0, and 7.0 --- each signifying a different phenotype, each with its own states of health/disease.

Where do you stand? Take 4 minutes and run the procedure on yourself. Take your Pulse Rate sitting at rest; lie supine and count your Breath Rate for 30 seconds, immediately after which you count your Pulse Rate for 30 seconds. Subtract the supine Pulse Rate from the sitting Pulse Rate, and subtract that from your supine Pulse Rate divided by your Breath Rate. Where do you stand? Sympathetic? Parasympathetic? Phenotype 3.0? 5.0?

For now, we are concentrating on the association between PBR and Sympathetic/ Parasympathetic Imbalances. But an investigation of the research literature, plus experience on many, many Nutri-Spec patients shows that the PBR analysis is relevant to Glucogenic/Ketogenic, Anaerobic/ Dysaerobic, Water/Electrolyte, and Acid/Alkaline Imbalances.

Since the PRB plays a role in all 5 Nutri-Spec Metabolic Balance Systems, it has relevance to you and the health of all your patients even if it does not show a Sympathetic/Parasympathetic stress pattern. If your PBR in a relaxed daytime state is not between 4.0 and 5.0, you can be sure it is involved in other Nutri-Spec Metabolic Imbalances. We will be going into great depth of all of those relationships in future Letters.

In the meantime, consider the research finding that, whichever integer value phenotype you fall under, that is the PBR toward which your body should move, either downward or upward, during daylight hours after a 10 to 20 minute supine rest. To illustrate: If your PBR determined by the procedure you just learned is 5.5, then after lying totally relaxed for 10 to 20 minutes, your PBR should either gravitate significantly toward 5.0 or climb significantly toward 6.0. The phenotype toward which you move during total rest represents what researchers call your “Normalized PBR.”

The first step toward health for you or any of your patients is to start moving the PBR closer and closer to a specific integer phenotype. Once that level of Pulse and Breath synchrony is reached, then your long-range health goal is to progress either up from below or down from above, approaching 4.0.

It is no exaggeration to call PBR your Nutri-Spec “Vitality Metric” --- a true indication of every patient’s VITAL RESERVES. Watch your patients’ PBRs Normalize --- through either your Nutri-Spec Metabolic Balancing or your Stage Of Life Inflam-aging Defense (SOLID) Plan.

October SPECIAL = 1 bottle **FREE** with every 5 you buy of Complex S & Complex P, **IF** you report a Sympathetic/Parasympathetic metric calculated for either yourself or a patient.