Module IX

Module IX: Counting in Base 2: *How to apply it and why to use it*

(The following is an excerpt from Dr. Allen's paper entitled, "*Counting in Base Two"* from the Proceedings of the International College of Applied Kinesiology.)

"The human nervous system is binary. Its fundamental principle is "all-or-none"; it is either on or off, there is no in between. This provides for appropriate and focused afferentation. That same principle exists when counting in base two. This module will describe that counting procedure and discuss several ways to use this binary counting system in clinical practice.

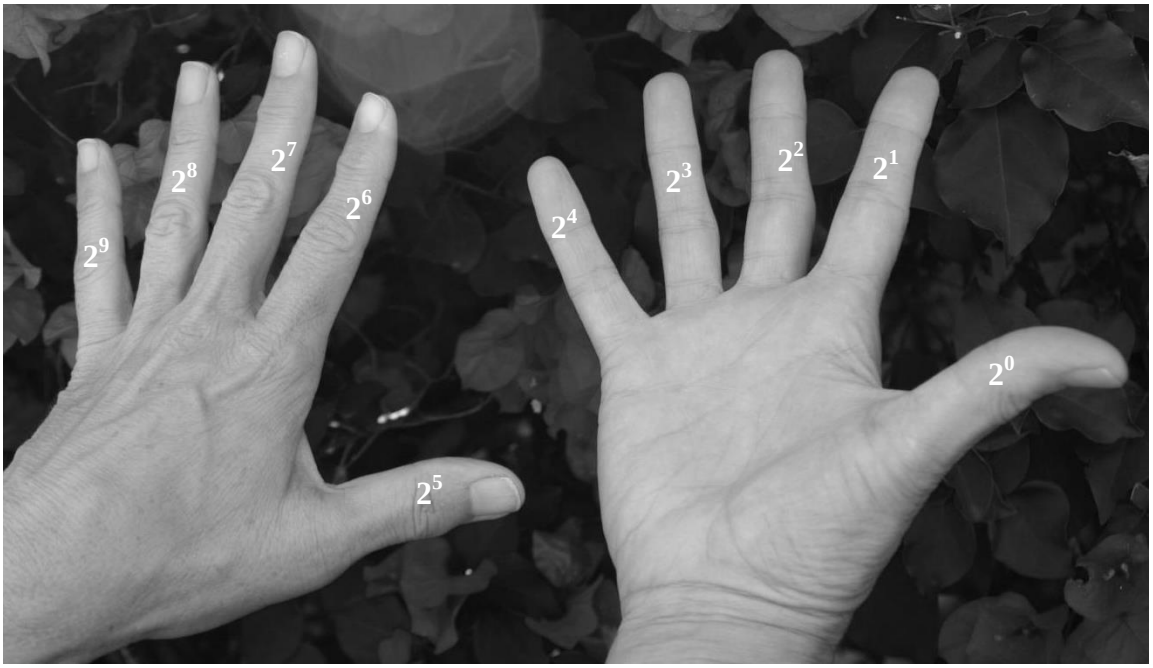
"Q: How many numbers are there in base 10? People often answer 10, and they count 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. Well, that is wrong. There are ten numbers, but they are 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9. Each of these numbers is in the one's column. Zero is a placeholder while the number speaks for itself. To get to 10 requires that there are zero ones and a one in the ten's column. Twelve is represented by a one in the ten's column and a two in the one's column. (See example below)

…Etc	Tens	Ones
	1	0
	1	2

"Here is another question: How many numbers are in base five? The right answer is five, and they are 0, 1, 2, 3, 4, and 5. Six is represented by a one in the five's column and a one in the one's column. Seventeen is noted by putting a three in the five's column and a two in the one's column. Three times five is 15 and two times one is two. Adding those gives 17. (See next example)

…Etc	Fives	Ones
	1	1
	3	2

"Now, how many numbers are in the base two? The answer is two. What are they? They are 0 and 1. This system is binary. A computer runs on the same system. To represent the number five requires 2 twos and 1 one, or two times two, plus one.



“The base two can also be uniquely notated with exponents. So, another way to designate one in base two is with a superscript – two to the zero power (2^0). Any number to the zero power is equal to one.

To make some sense of all this, consider that your right thumb represents two to the zero power (2^0). Since any number to the zero power is equal to one, your right thumb represents the number one. Your right index finger represents two to the first power (2^1), or two, one time – two.”

This counting technique is valuable for evaluating muscle function. It can be used to confirm muscle function, evaluate mineral need, consider certain disease states, and many other uses. This is an exciting module and progressive to the consideration of digital neurological applications.