

Part #4 - Why is there so much confusion and contradiction over Light Therapy?

**The literature available on light therapy is not only confusing but contradictory
(Basford, 1993)**

First let me assure you that the confusion is not accidental but very strategically laid out with the intent of keeping the public ignorant of the truth. Why? Because it is profitable.

I feel the need at this point in the series to discuss the darker side of light therapy. It is very unfortunate that we have so many individuals that feel the need to deceive so many others to make a profit. However the term "Let the buyer beware" was coined for a reason. So how do you propagate such confusion? This is easy, just tell a lot of lies and stick to them. To rebut all the lies would take forever as there are so many. So this article will attempt to discuss a few of the ways that you can be deceived by the current literature and research.

The first way to deceive someone is in the terminology you use such as "Light Therapy". Technically light therapy could be anything from laying in the sun to picking out a color for your room to lighting a match in a dark place or even some surgical laser procedures. By using such a broad term and referring to it as a specific term is a lie in itself. It would be like saying ball instead of defining what type of ball such as bowling ball or football etc. Because even though all Ping-Pong balls are balls, not all balls are used to play Ping-Pong. They are not interchangeable any more than different forms of light therapy are interchangeable.

The next way to deceive someone is to use your own definitions to common words. Without standards of definitions then words are meaningless. This is why we have dictionaries, so we know exactly what words mean. In light therapy, different manufactures make up definitions to words to suit their own needs. Unfortunately most people are not familiar with words utilized in light therapy so they don't know when they are being lied to. However, when they hear 3 different manufactures use three different definitions to the same word or phrase, then they become confused and are not sure who or what to believe. With each article we will either specifically define each term in the article or begin the article with a list of definitions for all terms utilized in that article.

The next way to deceive someone is to make up words that don't even exist and then make up a definition for it that also does not exist. As ridiculous as this sounds it occurs much more than you think. Everything from the names they use for their units to what they say their units are doing to the body. For example: "Near Infrared" This is a term that many manufactures use to describe the wavelength that their LED or laser therapy units utilize. Especially when someone asks about the potential adverse reactions of Infrared. According to the normal English language the term near infrared should mean a wavelength that is somewhere near infrared but not infrared. A wavelength just above or below the infrared wavelengths. But that is not the case here. The actual definition of Near Infrared are the infrared wavelengths that are closer to red than the rest of the infrared wavelengths. To me this is Near Insanity and I have no idea how this definition came into being. It kind of makes sense knowing that the furthest infrared wavelengths are called FAR infrared but since few people, even the sales people, know what the red, near infrared, far infrared or the infrared wavelengths are they believe that near infrared is not infrared so the properties of infrared do not relate to the near infrared wavelengths. No wonder there is so much confusion.

Another way of deceiving someone is when you quote research that was performed by different types of therapy units which have nothing to do with your therapy system. This logic would be like taking the therapeutic results from brain surgery and claiming the same results for removing a wart. Technically they are both surgical procedures, so they should have the same therapeutic benefits, right? Again this is near insanity but if you don't call them on it no one knows the difference.

And the best way to deceive someone or everyone is with the wonderful internet. Anyone can get on the internet and say anything they want and take no responsibility for their statements. Unfortunately most people have a tendency to believe everything that is on the internet like it has been proven and documented. When in truth, much of what is on the internet is just a way of spreading the above lies. To make it even worse, many articles you find on the internet are from information that is found on the internet that was not based on facts but just someone else's ideas. So you can see how this can get out of hand very quickly and if you are not aware of the proper research you can become misinformed or deceived very quickly.

One of the cleverest ways to deceive the public is to make claims that are true but to promote them as good when they are actually not. I have always been a firm believer that quality research statistics never lie. However, the statisticians that evaluate the statistics seldom get it right. The first reason for this is that the organization that is funding the research has a preference to the outcome or apparent outcome. True science dictates that everyone involved in the research be impartial. Once this no longer exists then the research is automatically corrupted. The other is that the statisticians drawing the conclusions don't know if the results they got were bad or good they just stated the facts. Which leaves the organization funding the research to determine if it was a good or bad result. Either way, the individuals of the funding organization are left with drawing the final conclusions which they are usually not qualified and extremely bias which leads to corrupted results. However, the good news is that most of this research is published in detail somewhere. So if you know where to find it, and how to read it the truth is readily available. But you have to always be very careful when you only read what they want you to read.

I will give you one personal example. I had the opportunity to have a specific scientific study run on our first model laser. The study was performed at a prestigious university following strict scientific protocols. This was arranged through a friend of a friend as you can't just walk in and have these kind of studies performed. They performed a series of tests on live cells and I was not told the exact parameters of the study but the end result was determined by the amount of specific wound healing chemicals the cell was stimulated to produce.

The logic for this test was this. Does a specific laser have the capacity to stimulate cells to produce specific wound healing chemicals to speed the healing of injuries? If yes then the laser passed with a positive certification as a wound healing laser. If it didn't then the laser failed this component for wound healing. This is simple and straight forward and seems to make logical sense.

When the results came back they said our laser failed the test for wound healing. They were very apologetic and said that it probably had other beneficial properties so don't feel too bad.

Well I didn't feel bad at all after I asked a single question. That question was "what would cause a cell to release these chemicals?" The answer was simple, any stress or injury to the cell. I was very pleased to know that our laser did not stress or injure the cells and not surprised that the infrared lasers that did pass the test did damage and stress the cells. Of course this conclusion was based on the true parameters of their study. In my opinion their logic for this test was completely wrong which is surprising since there were multiple PHDs that set the parameters for this test.

The reason for this story is this. Just because a company brags about what their laser will stimulate the body into doing does not necessarily mean that it is a good thing. In fact, it may be

similar to this story and what they are bragging about may actually be how their laser is damaging the body, not helping it.

The object of this material is that even though you have the results of a quality research study you can still be deceived if you are not fully aware of all the parameters of the study or what all the results actually mean for the health of your patients. And I see this countless times when I read literature and brochures on the internet.

So how do you protect yourself from the lies and know what to believe. Fortunately most lies are simple to spot if you know what to look for and are looking for them. Unfortunately most people are trusting and are not looking for the lies so they are easily deceived and confused by those that are trying to do so.

The facts about Light Therapy are not confusing, simple enough for the least educated individuals to fully understand, and it is all logical. These facts have been well documented for over 60 years with tens of thousands of research studies and reports. Furthermore all the terms and properties have been closely defined either in texts or standard medical dictionaries.

Unfortunately this information and these definitions are not readily found because again it profits few manufactures to let the truth be known. Even worse, most manufactures don't even know the truth themselves as they are just manufactures of electronic equipment, not medical researchers, scientists, or doctors.

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