Everything You NEED to KNOW About Red Light Therapy for Energy Transcript

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What Is Red Light Therapy and Can It Boost Energy?

Red light therapy, red light devices, red near infrared, it's all over the internet, social media, etc. Is [snorts] there anything to that and would it help with energy? This is a real common question that we get here at the channel and so let's break it down.

I'm Dr. Anderson and I use this channel to answer questions just like this.

The Science Behind Light as Medicine

So, how do we go about figuring out if light as a therapy could help you feel better, say energy-wise or in any other way? Well, the first thing is is there's actually a robust amount of science on photodnamic therapy and light as medicine. The next thing is there's a robust amount of data that tells us about the penetration of different light rays through the skin. This has become very important.

How Light Penetrates the Skin

If you think that you're going to use light and get it into the body, then you would need that light wavelength to be able to penetrate through your skin as long as you still have skin on your body and that you're using external source. So sometimes you'll see people with external devices.

You see things that look like a helmet. You see things that might look like a pad, you know, you put over your shoulder or over your chest or something.

Types of Red and Near-Infrared Devices

You might see like a stand lamp looking thing that you aim at a sore joint or any other type of external device. People also will use red near infrared in a whole body setting like in a light bed for example. So the real question is if we'll get into this a little bit later but if for the sake of argument we know what wavelengths there are and we know what power what wattage and power are being delivered between the device and the skin. Number one, does it get through the skin? And then number two, does it do anything when it gets there? Well, the first thing is yes. Red and near infrared light, which when people say red light therapy, they usually mean both. Red and near infrared light do penetrate through the skin. Red a little shallower and near infrared a little deeper. Now, depending on the wattage of your device and the frequency, you can penetrate with red light maybe up to a centimeter maybe in.

Now, if that's on the back of your hand, that's pretty deep because there's not much in there. If that's in a fleshier part of your body, it's going to get through your skin and into the subcutaneous where there's lots of blood flow and things. So, red is going to get in there a little bit. And then near infrared is going to go deeper and depending on the wattage and the type of device, etc., it's going to go somewhere between two and up to 5 cm deep. Now, that's a reasonable amount of depth to get into internal organs.

How Deep Red and Near-Infrared Light Goes

So when we say red light therapy or red near infrared therapy, first question answered is is there data to show it gets inside? Answer is yes. Red a little ways, near infrared a little further.

What Happens When Light Reaches the Tissues

Now next question is once it gets there okay big deal. We got red light or near infrared going into the body. Does it do anything? Well, the reason I mentioned that with red you're getting into the area where you have a lot of

capillary blood flow and then with near infrared you're getting deeper to more capillary blood flow and potentially muscle and other organs etc.

Effects on Mitochondria and Energy Production

You're going to have changes that occur to the body because of the red and red light going in especially into the bloodstream where it is going to change some of the metabolism especially in the mitochondria of the area. Now, if it's going in and it's getting into your muscle, say skeletal muscle that moves you around, that's why red near and Fred are sometimes used in healing and sports recovery stuff like that.

Red Light Therapy in Recovery and Illness

But as we saw in research showed in COVID in patients who were hospitalized, if they put direct exposure like a vest on the patient and they had a red near infred array in there, they could decrease the amount of time they were in the hospital due to the lung problems etc. So here you're not so much worried about muscle and things as getting to the organs underneath which again a pad right on the chest you're going to have decent penetration. So indeed when you get in and when the red and near infrared white light wavelengths get into the bloodstream and the muscle and the other organ tissues you start to have more mitochondrial function.

Circulation and Inflammation Benefits

There's a couple of pathways why it does that. Mitochondria make the energy for your body. So that's going to be good for a number of things. And the other thing that it does which improves its efficacy is it improves the circulation in the area. So remember I said earlier that even with red you're going say a centimeter or so you're getting into a lot of capillary beds. If you improve the circulation then you're going to improve the blood flow of the red light treated blood and its ability to get to the local tissues that it's percolating through and have an effect on them. Same with near infrared. It's just going to go deeper, improve the blood flow. You get more of that mitochondrial activation, etc. So, in addition to improving blood flow, it also can reduce inflammation. Now, as with all things, there are better and worse, you know, time periods and stuff like that, which we'll talk about later.

How Red Light Therapy Can Improve Energy

But the bottom line is if you're going to do any physical sort of treatment to improve in an area, maybe you injured it, maybe you want to help out with, you know, recovering from a cold or COVID or something or whatever, then the improvement of circulation and the modulation of inflammation and improvement of mitochondrial function are all going to be beneficial to you.

So when we do red near infrared light therapy and people do it in sequence then if you take the benefits of circulatory improvement immune modulation more mitochondrial activity etc. You put that all together the person can start to feel better either they will recover more quickly maybe from a illness injury infection etc.

Maybe they will have an improvement overall in their energy and their quality of life due to an improvement in energy and they may recover from say training and athletic events etc. So all of those things can be downstream benefits from red near infrared light therapy.

Ideal Wavelengths for Red and Near-Infrared Light

What I normally recommend to people if in during COVID when people were locked down, we had a lot of people, you know, ordering pads off the internet and so we would try and advise them on what to look for in a in a red near infrared pad. And now there's so much available to get, but if you're at a clinic using it, you're they're going to have higher grade pads and maybe more power and things of that nature. But the bottom line is you can find red plus near infrared units that have both wavelengths. Number one, usually you're looking there at somewhere between 630 and 660 nanometers for the red end and then around 840 to 860 for the near infrared end. And those will be your two wavelengths. So red, near infrared. The next thing is your controller. Usually it'll have the option to rotate

between red near infrared. That's what we use for most things. And then the power and the wattage. You just want to make sure that you have enough wattage so that it's actually sending out enough light power to get through. And that's something that's a little bit more advanced. But the better quality pads, you'll notice they all have about the same wattage actually.

How Often to Use Red Light Therapy

Now, as far as implementing it, and again, this, as our disclaimer says, is not medical advice. It's just what know we do with people and you should check with your healthcare provider or a phototherapy provider. But what we will tend to do with people is to try and get them to do regular light sessions. Now with the real acute people like back during the covid lockdowns if you remember the earlier variants had a lot of pneumonia pneumminitis and chest problems right so based on our knowledge of phototherapy but also a first a very good theoretical paper and then an actual human intervention trial using chest applied near infrared light. We started mimicking that with people. we'd have them get a pad and either big enough to wrap around their chest and lay on it or lay on it and do one side then turn over and do the other side either way. But during those days, if they had chest symptoms with, let's say, their COVID or COVID recovery, we do it every day. We start with once a day and then go to twice a day. If you're just not in that type of an acute situation, but you're looking for the benefits of the, you know, improved immune function and blood flow and mitochondrial function. If you can do it every day, great. But if you can do it at least three days a week, it will be more helpful than if just did it one day a week. The next thing is the amount of time per session.

Session Length and Timing Tips

This is can be highly individualized, but we usually have people start and do a test run at 5 to 10 minutes. Normally, people are fine at that. And most sessions will run somewhere between 20 and 30 minutes.

Some people will go longer, but most red light near infrared sessions are at least 20 or 30 minutes long. Like I said, if you're more acute, we might do it morning and midday or something like that. If it's more just doing it for chronic things or recovery, once a day is fine. Now, we generally have people do the test out in the morning because for some people, it really amps them up.

Why Some People Feel Energized or Relaxed

The new energy they get is really well felt. And if you do that right before bed, that might be a problem. So, always test it out during the day. But there's a divide between people and their response to red near infrared. Some of the people it amps them up and makes them more energetic. Other people fall asleep as soon as you put them in the red light bed or under the red light lamp or in the red light pad. And a lot of that has to do with the fact that their metabolism is shifting. Their mitochondrial activity is shifting, their circulation is shifting, and in a lot of these cases, this is somebody whose brain has been waiting for a reason to kind of go offline and rest.

So if it makes you sleep, then you could do it at any time you would like to. But on the off chance, or not really off chance, on the chance that it might wake you up too much, don't do it right before bed until you know you're either one of the people that jazzes up and wakes up or you're one of the people that puts asleep. If it puts you to sleep, do it at night. No problem. And then like all other things, you know, number one, make sure you've got good devices to use.

Safety, Device Quality, and Final Tips

Number two, make sure you're using them roughly, you know, in a regular basis and for the right amount of time. And then number three, if you are doing this for any medical type purpose of recovery from a surgery or trauma or infection or something or improvement of some body function, etc., make sure you're working with somebody who does phototherapy and can monitor you or give you feedback at least as far as how it's going. All right. Well, there's our primmer update on red light therapy.

Final Thoughts on Red Light Therapy

Red near infrared is really what we're talking about when we say red light therapy. I'm Dr. A. Thanks for visiting the channel. Please subscribe. Doesn't cost you anything. It helps the channel out. Comment, like, share, do all the stuff. Here's some other videos we'll put up at the end. And I'll see you guys on the next video.