There is no easy way to say this, so I will just come out and say it:

there is a balance bracelet cock ring. I don't mean to be vulgar, but these are their terms. I'm serious, look:

The fine print states:

Power balance hologram increases your blood flow, energy and stamina levels through strong ion particles.

I received this as a "gift" from a family member of another skeptical colleague. I laughed incredulously at first, but the more I thought about it, the more I realized the velocity at which I had to thrust my head against an available desk.

Balance Bracelets By Any Other Name

Principally, balance bracelets do not work. No study has found any effects beyond placebo, they contradict scientific principles that are tremendously more rigorous, and the demonstrations used to prove their efficacy are unabashed parlor tricks. Moving on.

Without an evidential leg to stand on, it's pointless to argue the supposed benefits of "Power balance technology"—a hollow marketing ploy. Pseudoscience like this is a pinch in the ribs—the actual harm is minimal, but the irritation ceaseless. It's like getting your ear flicked on a cold day, by nonsense.

The Mojo band is not a Power Balance band, yet the print notes that it has a "power balance hologram." This is shameless piggybacking: one pseudoscience hiding in another's shadow. Can you imagine the marketing meeting (if there even was one)?

***Smith**: "Hmm…Those Power Balance bands were really successful. If only there was another appendage that we could market them for…"*

***Johnson** [looking down]: "I have an idea!"*

And since there are no such things as "strong ion particles," we can assume that scientific accuracy was an afterthought. I tried to find the Mojo band website just to be sure. But it doesn't exist. These bands are sold on the web, through many commercial sites, but there is no homepage. No place to put obfuscating language or a sidestepping of studies. Usually I would tell consumers to be wary of the websites that peddle balance bracelets, but we can't even start there.

If Power Balance bands themselves do not work beyond placebo , we would expect the Mojo band, which supposedly uses a "Power balance hologram" to be just as ineffective. However, I must stay my head-desking because interestingly, it might actually work.

A Bit More Complicated

I said above that these bands have no benefits, but I meant more specifically that the “strong ion particle” technology has no benefits because it’s not even a technology. But there is a way that the marketing of this product, we’ll call it a “CR” for the sake of decency, could work.

CRs work by slowing blood flow out of the male sex organ, helping men maintain an erection and changing the feeling of orgasm (yes, I had to type “How do CRs work?” into my browser). In the medical literature, CRs have been studied in tandem with vacuum devices to determine if men with erectile dysfunction can be treated. According to what I could find, CRs generally provide men with what they promise. However, caution is noted, as constricting blood flow to any appendage can lead to serious problems (even amputation).

Setting aside the pseudoscientific buzzwords that always grace the boxes of products like these, the Mojo band can function purely as a CR and still “work.” It won’t increase blood flow (rather, it will constrict it), stamina, or “energy” with ions, but the constriction of the band could feasibly aid a man’s sexual performance.

It gets a bit more complicated. Human sexuality is messy. Sexual arousal, satisfaction and function comprise a tangled, writhing mass of psychological and physiological factors. Could a subjectively beneficial placebo effect add to the objective effect of a CR? If so, the Mojo band could be somewhat redeemed. I went to the literature in search of placebo responses in sexual performance studies, and it turns out that far from the dismissive conclusion it usually merits, the placebo effect is a real player here.

In one study , researchers gave both sexually functional and dysfunctional men three pills: a genuine placebo, a “stimulating” pill that was actually a placebo, and an “inhibiting” pill that was a placebo. Both groups of men then watched “erotic images,” their genitals wired for objective measurement of arousal (think blood pressure cuff). The findings were puzzling. Even though the participants were not given any biologically active treatment, functional men had higher erectile responses with the inhibitor placebo in comparison to the other pills and dysfunctional men experienced a higher erectile response with the stimulating placebo in comparison to the other sugar pills.

Now, it's impossible to give a simple answer as to what the placebo effect really is. The research on it is amazingly complex and the effect itself is widely misunderstood. But we can still say something about how it may have real, physiological effects (other than the main subjective effects that it has been shown to have). Dr. Steve Novella writes about the real physiological effects that come along with placebo treatments:

Believing one is being treated may reduce anxiety about the illness or symptoms, which in turn may reduce sympathetic activity, reduce blood pressure and strain on the heart, and reduce the levels of stress hormones.

Other research has shown that objectively, a placebo treatment affects brain chemistry, releasing neurotransmitters that could affect mood and "well-being," and therefore subjective perceptions of symptoms such as pain. However, a skeptic would point out that *everything* affects brain chemistry. A particular treatment that is not beneficial beyond placebo (e.g., acupuncture) changes the brain, sure, but so too does everyday experience of everything.

But sexual arousal occurs primarily in the brain; just thinking of something erotic can set it off. So even a suggestion that the Mojo band will enhance performance could bring about non-specific placebo effects like increased "drive." And given that nonspecific effects may affect blood pressure, we could imagine a link between placebo and things…affected by blood pressure.

The authors of the study mentioned above offer a conclusion as to how what is basically a psychological manipulation can affect arousal: misattribution. The men in the study would react to erotica as they typically would (because they all ingested sugar pills), but the placebo would confuse their arousal attributions, creating a non-specific feedback loop. That is to say, the sexually functional men in the "inhibitor" group got an erection, figured they must be more aroused than usual to overcome the inhibitor pill, and this in turn increased erections. This misattribution loop didn't appear for them in the "stimulating" condition because, of course, an erection pill will produce an erection (or so I imagine them thinking).

There was no significant difference between functional and dysfunctional men in the pure

placebo condition, but the dysfunctional men were more affected by the “stimulating” placebo than the other group of men. The rationale for this is that their sexual dysfunctions lead them to believe that an increase in erection must be due to the pill and not themselves, creating a loop of “encouragement” (likewise, a negative feedback loop of inhibition kept the measure of arousal lower in the inhibitor group).

These feedback loops point to the fascinating connection between sexual arousal, sexual performance, psychology, expectancy, anxiety, placebo, and nonspecific effects.

Complicated indeed.

Of course, relying solely on a non-specific placebo effect means that any sufficient deception could produce similar results. The expectation of an effect from an “inhibitor pill” is interchangeable with the expectation of an effect from “strong ion particles” or a love potion of yore.

What’s the Harm?

After I stopped laughing at my skeptical gag gift (and spent a few hours researching), I realized that the Mojo band could actually work. But it has nothing to do with ions or holograms. Combine the constricting effect of CRs with the possible nonspecific feedback loops of sexual arousal, and you have a product that works for no reason outlined on the box. Your stamina and “energy” probably won’t change, though your subjective rating of them might. Your blood flow will be constricted in certain places, but your arousal and satisfaction may increase.

This is beginning to sound like an endorsement of a deceptive product from a skeptic, so let’s remember that sexual performance products that are truly biologically active, like Viagra, also have nonspecific placebo effects. It’s a product that doesn’t have to resort to pseudoscience, and is probably your best bet for treating erectile dysfunction. Even though the Mojo band may be stiff competition, it most likely doesn’t work as well as something like Viagra, and it promotes credulous adoption of nonsense shrouded by buzzwords. As Sam Harris likes to say about faith, this product may work, but it is only by accident. Extend this scientific illiteracy out to less racy products or treatments, especially in medicine, and nothing good comes of it.

I cringe to think how Richard Saunders would test these at next year's TAM…

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