



## Fit Bodywrap® for Weight Loss

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### About the Author

Dr. Aaron Flickstein’s 1994 research paper entitled “Infrared Thermal System for Whole Body Regenerative Radiant Therapy” stands as one of the most frequently quoted sources on the therapeutic uses of FIR. He has also earned praise from Deepak Chopra regarding his pioneering approach to wellness, “Congratulations to Dr. Aaron Flickstein for developing a unique system utilizing the domain of Universal Intelligence for our healing and wellbeing.” In addition to developing instructional texts, radio, video and cable TV programming with a focus on wellness, Dr. Flickstein continues to operate a Wellness practice in Minnesota, where the use of the FIT Bodywrap® system assists his work with body composition, chronic pain and other disorders.

## Summary: How The Fit Bodywrap can help with weight loss

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The Fit Bodywrap System employs infrared heat that is clinically proven to penetrate the body: melting stored fat, mobilizing its stored toxins while then prompting their elimination directly through the skin by sweating, increasing the metabolism, improving circulation and burning calories.

Used with our Fit Booster product using the proprietary Swiss formula that amplifies results in problem areas and conditions the skin and the infrared reflective Fit Body suit that recirculates IR energy back into you as you attempt to cool down while it contains your sweat for easy cleanup, the Fit Bodywrap is the only system that delivers a fully customizable self-service weight loss experience enjoying the multiple therapeutic benefits of infrared energy while breathing room temperature air.

Extensive clinical research has documented a wide range of observations about supporting weight loss using immersive far infrared therapy as delivered by the Fit Bodywrap System. This paper details research, observations and potential benefits of using the Fit Bodywrap System to achieve weight loss including:

- Raising your basal metabolism; the rate at which you burn calories when resting.
- Sweating out fat, cholesterol, heavy metals, acids and toxins that won't be replaced when you rehydrate. Studies have shown that these solids can constitute 15-20% of the volume of sweat produced through effective infrared immersion as via Fit Bodywrap, as compared with only 3%-5% in sweat produced via exercise or use of hot air saunas.
- Sweating consumes approximately 0.586 calories (kcal) per gram of sweat produced, and a Fit Bodywrap session can induce 3-5 times more sweat than exercise alone will produce, all while you are relaxing.
- Infrared saturation can rebalance metabolism directly.
- Expelling the usually hard to remove heavy metals in your sweat can allow for rebalancing of both your digestion and metabolism.
- Extra conversion of carbs and fats directly to energy is promoted as blood flow to your capillaries is increased.
- As organic acids are purged your fasting insulin levels may drop toward normal thus stopping your body from being pushed to store carbs as fat.

## What type of energy does the Fit Bodywrap use?

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Infrared Radiant Heat is another name given to infrared radiation (Alpert & Szymanski, 2000). It is a form of energy that warms objects directly through a process known as conversion. This process involves heating an object without having to heat the area or air around the object itself.

The electromagnetic spectrum includes both visible light and those light emissions infra to or below the bottom of the visible light we can see (i.e. red light) in frequency. This so called “infrared” segment is normally divided into three sub-segments by wavelength (Fayer, 2001). These lengths between wave tops are normally measured in Micrometers (i.e. millionths of a meter) also known as Microns (Günzler & Gremlich, 2002). These three segments include the close or near; the intermediate or middle and long or far wave infrared. The close or near segment is between 0.006-1.5 microns in wavelength. The intermediate or middle segment is between 1.5 and 5.6 microns. The long or far segment is between 5.6 and 1000 microns (Diakides & Bronzino, 2008).

Fit Bodywrap emits its Infrared between 5 and 15 microns in the Far Infrared (FIR) band. This band of light is normally not visible to the human eye; to be seen special cameras are needed to translate the infrared into different colors that are visible to human eyes. The infrared segment however can be felt by us as heat. The sun produces 54% of its energy in the infrared segment of the EM spectrum (Alpert & Szymanski, 2000). Far IR energy is tuned to match so closely to the human body’s radiant energy that the body absorbs ninety three per cent of the waves that reach the skin (Ciccolella, 1972). The earth’s atmosphere has a layer that allows the infrared rays of seven to fourteen microns to pass. This safe range of IR frequencies does not cause damage to the things and people on earth. When the earth’s surface is warmed, it re-radiates infrared rays in the 7-14 micron band, peaking in output power at ten microns (Gremlich & Yan, 2001). Our bodies radiate infrared energy out through our skin (Alpert & Szymanski, 2000). This re-radiated IR energy measures three to fifty microns with the peak output at 9.4 microns.

## Is Infrared a safe kind of energy?

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The palms of the human body also produce infrared energy at eight to fourteen microns (Heyward & Stolarczyk, 1996). A form of healing known as palm healing, used for at least the past three hundred years in China has been based in part on the healing properties of these natural infrared rays. This form of healing also has been recommended by yogis such as P. Yogananda (*Autobiography of a Yogi*).

Dr. Tsu-Tsair, in his summary on the mechanism of action on infrared absorbed in the human body, said that the tissues that need more IR to get a boost in their output absorb the rays selectively and the IR absorbed boosts a range of healing processes. At times more energy than can be self-generated is required to raise the rate of healing to a maximum level to assure we heal all tissues to the fullest (Fayer, 2001). After the tissues have been sufficiently saturated for this purpose, any additional IR energy does not get absorbed and passes on without causing any harm. This process is known as *resonant absorption*.

Panels that produce infrared rays are used to warm newborn babies in healthcare centers. The Radiation Protection Institute, based in Sweden, has concluded that heaters in immersive IR thermal systems are safe. This means that the newborn babies who are placed under the infrared rays are safe (Alpert & Szymanski, 2000) and your using a Fit Bodywrap is too. These rays help them to stay warm

until their bodies are able to produce enough warmth to sustain them; warmth that could have otherwise been produced in the baby's mother womb.

More than seven hundred thousand infrared thermal systems had been sold for whole body treatment by the mid-1990's (Heyward & Stolarczyk, 1996) and more than thirty million people have been successfully treated using the same machines.

Whole body therapy using infrared machines has been used widely for the past eighty years by German physicians in an independently developed form (Mobbs & Hof, 2010). The Germans are the people who have used this technology for the longest time and the beneficial effects of infrared treatments have been accepted within German society.

Infrared rays like those from the Fit Bodywrap have a wide range of uses, both medically and non-medically. One of the primary purposes served by infrared is in weight loss (Chatterjee, 2007; Agatston, 2003; Günzler & Gremlich, 2002).

***Fit Bodywrap brings a new level of comfort and effectiveness to safe and clinically proven infrared thermal therapy.***

## **Weight Loss Overview**

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Recently, IR therapy, like that provided by using the Fit Bodywrap, has become popular as a way of losing weight (Trudeau, 2007). IR immersion has been found to be helpful in losing weight through eliminating fats and toxins directly and by burning calories.

## ***Lose fats and toxins***

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Fat becomes water-soluble at a body temperature of approximately 100.5 degrees F and will literally 'melt' by breaking up into smaller particles, which can then be purged from the body through IR-induced sweating. The Fit Bodywrap can be set to generate temps from 110-130 degrees F. Some of the fat molecules that IR exposure dissolves and the toxins it releases enter the blood stream to be eliminated by the liver, kidneys and bowels. Profuse sweating, using a Fit Bodywrap will help clear fat and toxic debris from the body directly through the pores of our skin, and the decrease in the overall toxic burden can then allow the body to rebalance its metabolism (Yamazaki).

*The sweat normally produced in a hot air sauna or by exercise is approximately, 95%-97% water. On the other hand, the sweat produced while enjoying IR immersion in a Fit Bodywrap is from 80-85% water (Cornbleet, 2008).*

IR immersion stimulates the sweat glands to release 15-20% dissolved solids in our sweat versus only 3-5% from normal sweat (Widmaier, Raff, Strang & Vander, 2011) increasing the rate of elimination of toxins directly through our skin by the act of sweating. The non-water portion that remains after spending time in IR immersion is principally cholesterol, fat (Broer, 2001), toxic heavy metals, soluble toxins, sulfuric acid, ammonia, sodium, and uric acid (Günzler & Gremlich, 2002).

## Burn calories by sweating

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*Sweating is a calorie consuming process*, (Widmaier, Raff, Strang & Vander, 2011). In Guyton's Textbook of Medical Physiology we find that producing one gram of sweat requires 0.586 kcal (stored calories). In the American Medical Association's journal, JAMA (Journal of the American Medical Association August 7, 1981) we find that,

*"A moderately conditioned person can easily sweat off 500 grams, in a [less efficient hot air] sauna, consuming nearly 300 kcal - the equivalent of running 2-3 miles. A heat-conditioned person can easily sweat off 600-800 kcal with no adverse effects."*

While the weight of the water lost will be regained by rehydration, neither the calories consumed to make the sweat nor the solid waste expelled will be.

## How many calories can I burn?

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The amount of calories that anyone burns in a Fit Bodywrap depends on many factors.

IR immersion that raises your body temperature increases your metabolism (Mobbs & Hof, 2010), which also contributes to loss of weight (Trudeau, 2007). The time spent in IR immersion, and the amounts of IR energy being absorbed are each significant factors that help to determine the amount of calories burnt (Antila, 2006; Somers, 2001).

Since Fit Bodywrap has a built in 25% greater IR energy saturation versus a sauna, due to the absence of an air gap between you and its heaters, it is able to heat you more effectively than Infrared Saunas can.

One pound of fat in a human body is equivalent to 3500 stored calories (i.e. "Kcals" in strict scientific terminology). Human beings lose calories through physical activities and exercise. In the process, the human body sweats to keep cool (Ciccolella, 1972). Bearing this in mind, it would at first appear to follow that there is a simple direct relationship between how many times one uses a Fit Bodywrap and the amount of weight that one loses.

However, the amount you sweat, raise your metabolism and lose weight will be determined by several additional factors beyond time and repetition, including without limitation:

- a) Your diet between sessions.
- b) Your exercise status between uses.
- c) Your hydration status when using the Bodywrap (i.e. drinking water before using the wrap and remaining hydrated while in it too).
- d) How heat conditioned you are.
- e) How high you set the temperature in the 4 heat zones of the Fit Bodywrap.
- f) How thoroughly you apply the unique *Fit Booster Spray* to your problem zones to amplify the heating effect of IR energy for you.

- g) Your use of the disposable *Fit Coat* while in the Fit Bodywrap with its unique infrared reflective layer recycling the heat from your body right back into you.
- h) The amount of infrared syphoned off via resonant absorption during initial and subsequent sessions so that each of your cells, tissues and organs needing more energy: to run at high efficiency, finish regeneration and repair cycles previously put on hold and handle environmental pollution, can become saturated enough to allow infrared to pass all the way to your core and raise its temperature.

The weight lost via sweating initially is equal to the amount of water and dissolved other substances that the individual's body loses (Agatston, 2003) and the calories needed to pump the sweat as discussed above.

The fat and cholesterol, acids and toxins making up 15-20% of your sweat volume in the Fit Bodywrap are not replaced during rehydration. The stored calories obtained from fat that have been used to pump the sweat are also not restored via rehydrating.

Marion pointed out that immersive IR therapy can stimulate losing weight in two additional ways (Trudeau, 2007):

- 1) The reduction of heavy metals: these having fostered metabolic imbalances and poor digestion that had led to weight gain (Agatston, 2003; Mobbs & Hof, 2010).
- 2) IR immersion generated perspiration sends more blood to capillaries that fosters *extra conversion of carbohydrates, and fats into energy used by the body* and thus the burning of additional calories (Trudeau, 2007).

### **Exercise and Diet may not be enough: Detoxify!**

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If you are unable to achieve weight loss with dieting and exercise, your bodily fluids could be over acidic from stress and diet too, as well as toxic. With the exception of vegetables and some fruits all of our other dietary choices leave us with an acid burden to eliminate as does stressful living and pollution. Our bodies will hold extra weight because they carry toxins and acids they have been unable to safely change or eliminate that where then hidden away or quarantined within fat.

Another reason we may hold onto fat is a secondary effect of an overly acidic internal environment. When our system is too acidic, our bodies produce more insulin than usual. The more insulin that is available, the higher the chance that fat will be stored rather than burned as energy, making it difficult to lose weight. To protect itself from these insults from acidity and toxins your body will hold onto the weight as a safety zone for quarantining offending toxins from stress, diet and environment.

As the toxic chemicals are removed from you using the Fit Bodywrap, weight loss is inevitable (University of Missouri).

Speaking of the potential to fundamentally improve your metabolism one of my colleagues notes:

*"I had heard [about using] infrared..., but was very pleasantly surprised to see it was actually true. I had personally noticed fat loss and increased energy from infrared ...as well*

*as sleeping better. I decided to run functional medicine testing to confirm this and found **my basic metabolic rate had actually increased**"*

*Dr. Mike Nowazek-President Alberta Naturopathic Practitioners  
(2000-2007).*

Fit Bodywrap sessions are a convenient way to lose weight (Trudeau, 2007). They can be prescribed for consumption several times in a week, once one is minimally conditioned to the cardiovascular stress.

This passive type of "exercise" is especially useful when pain complaints block many other types of exercise. This method of losing weight has been scientifically proven (Agatston, 2003). Normally three sessions a week are used on a weight loss plan until the target is achieved, then perhaps some visits to stay lean and de-stressed.

European Beauty Specialists confirm that infrared heat as generated by the Fit Bodywrap will also greatly speed any anti-cellulite program. Far infrared therapy is far more effective than a traditional hot air sauna due to the unique properties of Infrared Resonant Absorption and the deep penetration into the body (Biro, 2003; Wong 2005).

The body stores most of its toxic overload in fatty tissue cells. With regular infrared use using Fit Bodywrap, the body becomes less toxic and needs to retain less fat for toxin storage.

Also, as the body becomes less toxic, proper metabolism and immune system strength are restored (Hyman, 2006; Edwards, 1982).

IR immersion in the Fit Bodywrap is both more pleasant than Finnish-type saunas, steam rooms or even the cooler IR saunas because you breath room temperature air and can lay down and safer for those people with cardiovascular risks factors that could be worsened by the effects of breathing hot air.

## **Passive Cardiovascular Conditioning**

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The Fit Bodywrap makes it possible for people not willing or unable to follow conditioning and exercise programs to achieve cardiovascular training effects thus getting their heart and blood vessels in better shape.

Most people who run do so in order to place demands on their cardiovascular systems that will improve it. They do not run in order to build big muscles. The use of the Fit Bodywrap imparts the same effects on the cardiovascular system as running. The regular use of the Fit Bodywrap is effective in cardiovascular conditioning as well as burning calories (Bailey, 2000).

## **Boosted Metabolism**

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The human body responds to the IR loading experienced in the Fit Bodywrap by an increase of both the volume of heart output and the rate of the heart beat (Heyward & Stolarczyk, 1996). The beneficial stress applied to the heart leads to the sought-after cardiovascular conditioning training effects.

The heart beat is one of the principle metabolic processes. In the process of the body striving to cool itself it is evident that the heart's rate increases. This rate increase provides an indirect measurement of the increase in the rate of metabolic processes induced.

Research done by the NASA in the 1980's led to the conclusion that IR stimulation of cardiovascular functions would be an effective way of maintaining cardiovascular conditioning in the American astronauts when in long space flights (Alpert & Szymanski, 2000). Fit Bodywrap induced core body temperature increase is expected to *raise the normal five to seven quarts a minute blood flow up to approximately thirteen quarts a minute* (Mobbs & Hof, 2010).

IR immersion therapy stimulates a higher rate of metabolic processing that assists not only weight loss but also immune responsiveness in that the far IR saturation one gets form using the Fit Bodywrap interferes with the growth of pathogenic viruses and bacteria (Mobbs & Hof, 2010).

IR immersion stimulates vital glands and organs including our weight regulating endocrine glands to increase their activities to normal if sub-functional.

Also, the restorative capacity and healing activities of the body are increased and accelerated (Stowe, 1991).

The body is also rejuvenated to a degree by using repeated IR immersion sessions as it is cleansed both inside and out (Mobbs & Hof, 2010).



## Contraindications

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The segment of the infrared spectrum emitted by the Fit Bodywrap has been shown to offer an astounding range of possible therapeutic benefits in research conducted around the world. The data presented herein is offered for reference purposes only and to stimulate further observation. **No implication that the Fit Bodywrap is a cure for or treatment of any illness, condition or disease is implied nor should it be inferred.**

- If you have a disease, be certain to consult with a primary-care physician concerning it.
- If you are using any prescription drugs, check with you physician or pharmacist for any possible change in the drug's effect due to any interaction with infrared energy.
- It is considered inadvisable to raise the core temperature in someone with adrenal suppression, systemic lupus erythematosus or multiple sclerosis, by some authorities.
- If you have a recent (acute) joint injury the old school admonition is that it should not be heated for the first 48 hours after the insult or until the hot and swollen symptoms subside. While this may apply, the more modern concept is move, exercise, attenuate the pain and treat the injured tissues (MEAT), the first two of which far infrared does do. If you have a joint or joints that are chronically hot and swollen, these joints may respond poorly to vigorous heating of any kind.
- Vigorous heating is strictly contraindicated in cases of enclosed infections anywhere: dental, in joints or in any other tissues.
- If you are *pregnant or suspect you may be, discontinue your Fit Bodywrap use*. Finnish women use their saunas, which don't throw heat as deeply into the body, for only 6-12 minutes and reportedly leave at that time, due to perceived discomfort. Their usage at this low level of intensity is not linked to birth defects. IR Thermal Systems use may be 2-3 times more intense, and comparatively shorter 2-6 minute sessions hardly seem worth any minimal risk they may present.
- Metal pins, rods, artificial joints or any other surgical implants generally reflect infrared rays and thus are not heated by these wave lengths, nevertheless you should consult your surgeon prior to using an IR Thermal System. Certainly if you experience pain near any such implants IR Thermal System use must be discontinued.
- Silicone does absorb infrared energy. Since silicone melts at over 200°C it should not be adversely effected by IR Thermal System use. The Fit Bodywrap has an off switch for the breast region to avoid a problem from this issue. It is still advised that you check with your surgeon and possibly a representative from the implant product manufacturer to be certain about safety.
- Heating of the low back area of women during the menstrual period may temporarily increase their menstrual flow. Once a woman is aware that this may occur, she can choose to allow herself to possibly experience this short-term effect without worry or to simply avoid IR Thermal System use at that time of her cycle.
- Haemophiliacs and anyone predisposed to haemorrhage should avoid IR usage or any type of heating that would induce vasodilation which can potentiate the tendency to bleed.
- Obviously, *should any condition worsen with use of the Fit Bodywrap, the use of the system should be discontinued.*
- People do not experience increased pain using the Fit Bodywrap unless such use is contraindicated. If you do, the use of radiant heat is clearly inappropriate for you at that time.

**Do not attempt to self-treat any disease with a Fit Bodywrap without direct supervision of a physician.**

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