

PhotoBioModulation: Promising Supplement in Women's Health

Arne Grinsted^{1*} and Maja Grinsted Hillegass²

¹Founder and President of PowerMedic ApS, Denmark and PowerMedic Lasers, Inc, USA

²Sales Manager, PowerMedic Lasers, Inc, USA

***Corresponding Author:** Arne Grinsted, Founder and President of PowerMedic ApS, Denmark and PowerMedic Lasers, Inc, USA.

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Abstract

PhotoBioModulation (PBM) is widely recognized as a fast and effective way to increasing energy (ATP) in the cells and thereby strengthening the mitochondria [29,30].

PhotoBioModulation was first discovered in 1967 and a large amount of research has since documented its benefits for a wide range of applications, including acute injuries, neck pain, arthritis, epicondylitis, wound healing, and much more [29,31].

In recent years, a number of clinics have also successfully been using PBM to treat women facing fertility issues, to help improve their chances of conception [1]. The article "PhotoBioModulation for Infertility", published in *EC Gynaecology* 8.9 (2019): 875-879, concluded that "PBM could be a viable choice as a natural, non-invasive addition to other methods of ART".

In addition to infertility, PBM also appears to be beneficial in other areas related to reproductive health, including endometriosis and Polycystic Ovary Syndrome (PCOS), as well as other women's health issues, such as carpal tunnel syndrome, fibromyalgia, and some autoimmune diseases.

Our conclusion is that PBM could be a valuable option as a natural, non-invasive supplement in the treatment of a wide range of women's health issues.

Keywords: PhotoBioModulation (PBM); Low Level Laser Therapy (LLLT); Laser Therapy; Cold Laser Therapy; Reproductive Health; Women's Health

Abbreviations

PBM: PhotoBioModulation; ATP: Adenosine Triphosphate; LLLT: Low Level Laser Therapy; PCOS: Polycystic Ovary Syndrome

Introduction

Many women today are facing health issues that are unique to women, or issues that are more prevalent in women than in men.

Within reproductive health, common issues include endometriosis and Polycystic Ovary Syndrome (PCOS).

Endometriosis

Approximately 11% of women in the US, between the age of 15 and 44, are affected by endometriosis. The condition can make it more difficult to become pregnant and is also linked to other health issues for women, including asthma, some autoimmune diseases, and fibromyalgia [1-38].

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Treatment options include medications, complementary or alternative medicine therapies, and in severe cases, surgery [38].

Polycystic ovary syndrome (PCOS)

PCOS affects 1 in 10 women of childbearing age in the US. It can cause irregular or missed menstrual periods and is one of the most common causes for infertility in women [39].

Treatment options include medicines and lifestyle changes [39].

Within women's health in general, some of the issues that are more prevalent in women than in men include carpal tunnel syndrome, fibromyalgia, and some autoimmune diseases.

Carpal tunnel syndrome (CTS)

Carpal tunnel syndrome causes tingling, swelling, pain, and loss of strength in the wrist and hand. Women are three times more likely than men to suffer from carpal tunnel syndrome [40].

Common treatments include wearing a wrist splint, medication, physical therapy, alternative treatments, and surgery [40].

Fibromyalgia

Fibromyalgia causes aches and pain throughout the body and often leads to other issues, including fatigue. In the US, approximately 4 million people suffer from fibromyalgia, and more women than men are affected [41].

Treatment options include medicine, lifestyle changes, and complementary or alternative therapies [41].

Autoimmune diseases

Autoimmune diseases are diseases where the body mistakenly attacks normal cells in the body, there are more than 80 types, including psoriasis and rheumatoid arthritis. Many autoimmune diseases are more common for women than men [42].

Depending on the specific disease, treatments include medicines, and complementary and alternative medicine options [42].

PhotoBioModulation as a treatment option

PhotoBioModulation (PBM), also known as Low Level Laser Therapy (LLLT), Cold Laser Therapy, or simply Laser Therapy, is widely recognized as a fast and effective way to increasing energy (ATP) in the cells and thereby strengthening the mitochondria [29,30].

In cells that are low in energy, PBM stimulates the mitochondria to produce more ATP. The increased level of ATP gives the cell more power to do its 'job', resulting in a range of benefits, including:

- Increasing the blood circulation
- Reducing edema
- Regulating inflammation
- Relieving pain

- Relaxing muscle tensions
- Softening scar tissue.

Since PhotoBioModulation was first discovered in 1967, a large amount of research has documented the mechanisms of PBM, and its benefits for a wide range of applications, including acute injuries, neck pain, arthritis, epicondylitis, wound healing, and much more [29,31].

Since 2012, as illustrated in the article "PhotoBioModulation for Infertility", published in *EC Gynaecology* 8.9 (2019): 875-879, a number of clinics have also been using PBM to treat women facing fertility issues, to help improve their chances of conception. And with great success: as of 2019, approximately 400 women had been treated, of whom 260 (or 65%) had become pregnant [1]. The article concluded that "PBM could be a viable choice as a natural, non-invasive addition to other methods of ART".

In addition to infertility, both research and case reports from clinics using PBM point to the benefits of using PBM for a variety of other women's health issues.

For reproductive health issues, such as endometriosis, PBM helps relieve pain and discomfort [32].

For PCOS, PBM seems to help regulate the menstrual cycle, plus it may help increase the number of ovarian follicles and reduce the number of ovarian cysts [33,34].

For general women's health issues, PBM can also help relieve pain and swelling, and increase strength. For instance, in the case of carpal tunnel syndrome [35].

For fibromyalgia, PBM can help reduce the severity of the pain, number of tender points, and fatigue [36].

Depending on the specific autoimmune disease, PBM may also be beneficial. For rheumatoid arthritis, for instance, PBM helps reduce pain and inflammation [37]. PBM also works well on skin conditions, for instance to help clear up psoriasis.

Currently, common treatment options for many of the issues related to women's health often include medication and/or surgery. PBM, on the other hand, is a natural, non-invasive treatment.

Conclusion

Many women today are facing health issues that are unique to women, especially within reproductive health, including infertility, endometriosis and PCOS, or issues that are more prevalent in women than in men, such as carpal tunnel syndrome, fibromyalgia, and some autoimmune diseases.

Currently, common treatment options for many of these issues often include medication and/or surgery.

In recent years, however, research and case reports from clinics using PBM have indicated benefits to using PBM for many of the health issues that women face.

Our conclusion is that PBM could be a valuable option as a natural, non-invasive supplement in the treatment of a wide range of women's health issues.

Conflict of Interest

This review was prepared by Arne Grinsted, Founder and President of PowerMedic ApS, Denmark (manufacturer of the GigaLaser™ and the PowerLaser™ Series) and PowerMedic ApS' sister company, PowerMedic Lasers, Inc., USA, as well as Maja Grinsted Hillegass, Sales Manager at PowerMedic Lasers, Inc., USA.

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