



The Izun PerioPatch®

A **new** dimension
in oral care:
Reducing inflamed
gums and promoting
tissue repair



PERIOPATCH®

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Inflammation is the body's response to trauma and infection and is necessary to initiate repair of injured tissue. Yet dysregulated inflammation - too much or too persistent (chronic) - can itself become a culprit, by damaging tissue and preventing normal healing. This can be observed in a wide variety of diseases, among them rheumatoid arthritis, myocardial infarcts and multiple autoimmune diseases. In these instances, the inflammation is transformed from a healthy protective response to an integral part of the disease process. Periodontitis and gingivitis are classic examples of chronic inflammatory diseases, a situation where the dysregulated inflammation actually causes damage rather than protect the body. Thus, the effective management of inflammation is a critical aspect in the successful treatment of these common oral diseases.

**INFLAMMATION
IS THE DRIVING
FORCE IN A
DIVERSE ARRAY OF
PATHOLOGIES**

Inflammation is a complex process. Multiple cell types are recruited to the inflammatory site, where they secrete a myriad of active factors. These include cytokines, potent enzymes, and reactive oxygen and nitrogen intermediates. Taken together, these factors cause the tell-tale signs of inflammation - swelling, heat, redness, pain and loss of function. The corresponding repair process is equally complex. In order to heal the subsequent inflammatory damage, the body recruits cells to rebuild tissue. A host of growth factors stimulate these cells to restore the complex architecture that is ravaged by inflammation.

**In order to effectively treat periodontitis and gingivitis
three goals need to be realized:**

1 Reduced
inflammatory
damage

2 Enhanced
natural repair

3 Reduced
pathogenic
microbial load

Current therapies, including scaling and root planing, antiseptic rinses and toothpastes, and even subgingivally-delivered antibacterial agents, all reduce bacteria.

However, NONE of these approaches actually directly reduces inflammation or enhances the capacity of the gums to repair. PerioPatch® is the first product to accomplish both these crucial objectives.

**PerioPatch® - Reduces inflammation,
reduces pocket depth and increases gingival repair
(including a gain in attachment levels)**

PerioPatch® is a topical patch that adheres and conforms to the gums. It protects the gingival tissue and rapidly reduces the signs and symptoms of inflammation. Based on new medical technology developed to accelerate healing in chronic wound care, PerioPatch® absorbs the pro-inflammatory exudate from

both the gingiva and the crevicular fluid. This rebalances the local environment, reducing inflammatory damage and promoting natural healing. PerioPatch® is intended for the management of all oral wounds, injuries and ulcerations of the gingiva and oral mucosa, including stomatitis, minor chafing and traumatic ulcers, abrasions caused by braces and ill-fitting dentures, and lesions associated with oral surgery. PerioPatch® operates to relieve pain by adhering to and protecting affected tissue from further irritation, thereby allowing healing. Clinical trials evaluating the PerioPatch® have demonstrated a rapid reduction in gingival inflammation (GI) (Figure 1), as noted by reduced bleeding and swelling of the gums^{1,2,3}.

In addition to reducing the signs and symptoms of inflammation, PerioPatch® also assists in protecting gum tissue, preventing continued damage and enabling the local tissue to heal more efficiently⁴. Clinical trials analyzing gingival biopsies have demonstrated that patch placement will reduce activity of inflammatory cells in the crevicular fluid, as shown by reduction of β -glucuronidase levels² (Figure 2), as well as significantly reduce the MMP activity in the gingiva⁶ (Figure 3). These results are consistent with additional studies demonstrating an advantage to combining scaling and root planing with PerioPatch® treatment. In these studies significant improvement of clinical attachment levels, pocket depth (PD) (Figure 4) and bleeding were observed, when compared to scaling and root planing alone³.

Recent large clinical trials conducted at the University of North Carolina demonstrated a rapid reduction of pocket depth with a concomitant gain in attachment level when PerioPatch® was used together with scaling and root planing⁷. These exciting results are also supported by animal trials that demonstrate that the use of PerioPatch® increases (i) collagen production, (ii) gingival revascularization and (iii) wound repair.

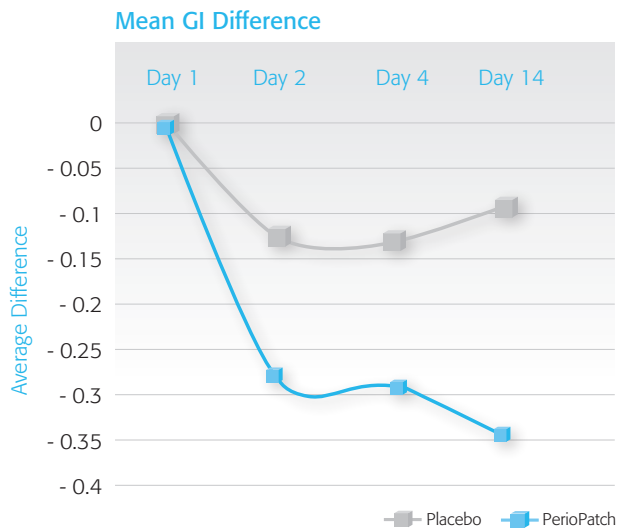


Figure 1. Reduction in GI levels after treatment with PerioPatch¹

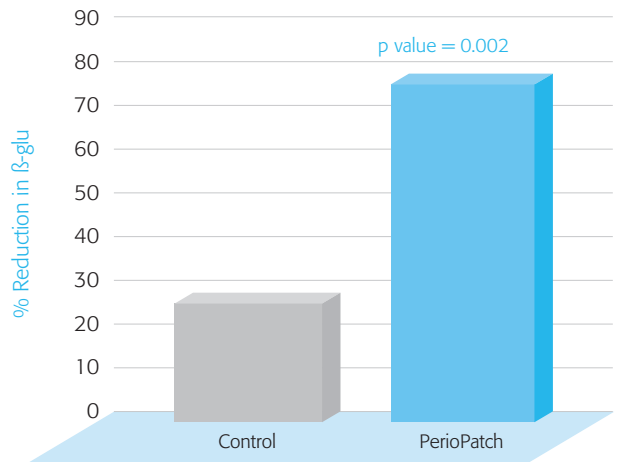


Figure 2. Reduction in β -glucuronidase levels 24h after treatment with PerioPatch

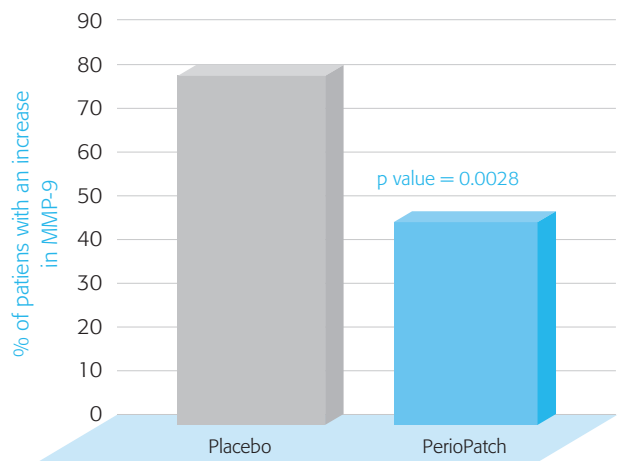


Figure 3. Reduction in MMP-9 levels after using PerioPatch

Where and when should PerioPatch® be used?

1. Adjunctive care to scaling and root planing
2. Treatment of recession defects⁶
3. After implant placement and periodontal surgical treatment to reduce pain and enhance healing
4. After extractions to enhance healing
5. Areas of acute inflammation to reduce pain and swelling

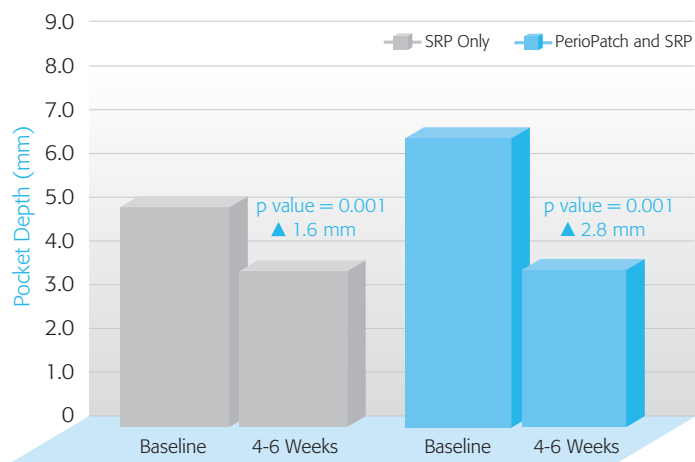


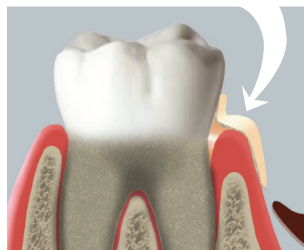
Figure 4. Effect of PerioPatch + SRP vs. SRP alone on Pocket Depth

Reducing inflammation and promoting healing are critical after surgical procedures such as implant placement, periodontal surgery, ridge augmentation, extractions and even in controlling the discomfort experienced after scaling and root planing⁵. The PerioPatch® can be used in these and many other applications in oral care.

PerioPatch® natural technology

Izun scientists have designed a unique polymolecular material based on natural plant extracts that is carefully monitored using chemical analysis and bioassays from plant harvest to the finished product. Izun products capture the beneficial activity of each component, capitalizing on synergistic interactions that emerge from the unique combination within. Izun products amplify and enhance the body's own potential to reduce inflammation in tissue, while activating and orchestrating the natural healing process.

PerioPatch®



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