

Improved Regeneration of DNA Double Strand Breaks with NanoVi® Bio-identical Signaling Technology

Research conducted at IMSB Austria, Olympic Centre, Institute for Sports Medicine and Science

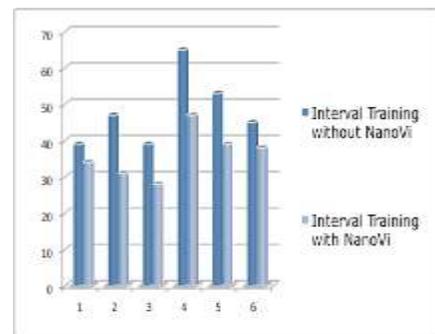
Overview

Testing done at the Olympic Training Center, Vienna showed that using the NanoVi® Pro device resulted in faster regeneration of DNA double strand breaks. Blood samples were taken after athletes did a specific interval-training regime. A second set of samples was taken after they did the same regime and also used the NanoVi Pro device for 20 minutes. Blood samples were analyzed by the AKLIDES® system to determine the percentage of damaged cells. Endurance athletes were studied because they generate a high degree of cellular oxidative stress and therefore DNA damage. The speed of DNA regeneration in endurance athletes is an excellent indicator of the therapeutic benefit of NanoVi technology.

Study Results

In all cases, the DNA double strand breaks in the blood of the athletes were lower when the NanoVi Pro device was used in conjunction with interval training. The reduction of DNA breaks is the result of faster cell regeneration. Results are shown to the right with the average number of damaged cells (y-axis) of the subjects (x-axis) over two blood sampling days. All subjects improved their oxidative response showing faster regeneration with the NanoVi therapy.

Percentage of damaged cells



Double Strand DNA Damage

When only one of the two strands of a double helix has a defect, the other strand can be used as a template to guide the correction of the damaged strand. Double-strand breaks, in which both strands in the double helix are severed, are particularly hazardous to the cell because they can lead to genome rearrangements. Therefore rapid regeneration of DNA double strand breaks is essential. The body's oxidative response mechanisms are responsible for this repair.

NanoVi® Technology

The NanoVi device is a bio-identical signaling technology. It produces a signal equivalent to the one that the body generates naturally to assist repair and protection mechanisms and to boost cellular activity. NanoVi technology is used to help counteract oxidative stress damage caused by excess free radicals. A standard treatment is twenty minutes and is administered by inhalation.



AKLIDES® Measurement Technology

In this study the AKLIDES® system was used to analyze blood samples to detect cell damage caused by oxidative stress. A fluorescent-labelled antibody binds specifically to the site of DNA double strand breaks of isolated lymphocytes from a blood sample to reveal the presence of damaged cells. The AKLIDES® technology automatically and objectively analyses immunofluorescence assays to determine the number of DNA double strand breaks in each cell. Blood samples were collected at the IMSB Austria, Olympic Centre in Vienna and analysed in the Medipan laboratory in Berlin Germany.