Developing Treatments to Prevent Meteoropathy

It is well known that the symptoms of ailments like chronic pain and depression tend to be exacerbated during the rainy season, when typhoons approach, or with other changes in the weather. This area of study, known as meteoropathy, has only been researched through epidemiological surveys and very rarely through experimental studies and effective treatment methods have yet to be found. In studying meteoropathy, we have focused particularly on weather pains (aches and pains that worsen with changes in the weather), conducting tests using animal disease models in order to explain the mechanisms involved from a holistic perspective. We have succeeded in demonstrating that pain and depression are exacerbated by exposure to artificial low-pressure environments, demonstrated the effectiveness of high-pressure exposure as a treatment, and proven that atmospheric pressure sensors in the inner ear and autonomic nerves are involved in the mechanism that leads to the onset of these symptoms.

Potential Applications

With abnormal weather conditions becoming a more frequent occurrence in recent years, there is a greater effect on the health of average people. For this reason, these breakthroughs have a deep significance not only in coming up with treatment methods for those that experience greater pain or depression with changes in the weather, but also in developing strategies to cope with the abnormal weather patterns that affect human health in general.

Customer Benefits

- preventative strategies and treatments that can be applied across-the-board to sufferers of meteoropathy
- cope with the abnormal weather patterns that affect human health in general
- alleviate chronic pain and depression
- prevent the onset of meteoropathic symptoms

Technology Features & Specifications

In the clinical research, studies were also carried out that expose chronic pain and mood disorder (anxiety/depression) sufferers to artificial low-pressure conditions. A high-pressure device has been developed based on the research insights that helps alleviate chronic pain and depression with subtle increases in pressure, and has been shown to cause the autonomic nerves to relax. Also, the usage of an electric stimulation of the inner ear has proved that those who suffer from weather pains have a higher degree of vestibular sensitivity in the inner ear than healthy subjects. These characteristics are being used to develop control systems for inner ear pressure sensors that can prevent the onset of meteoropathic symptoms.

Market Trends and Opportunities

(1) Practical tests in meteoropathy have been long ignored, making this line of research extremely unique. There are no other experimental research in this area anywhere in the world, and this is the only study using experimental research to explain the underlying mechanisms common to all meteoropathy.

(2) This scientific breakthroughs will make it possible to come up with preventative strategies and treatments that do not rely on pharmaceuticals and that can be applied across-the-board to sufferers of meteoropathy, everything from chronic pain and depression to dizzy spells, asthma attacks, heart problems, and even sudden death.

For more information on technologies we have to offer, please visit our website at https://www.ipi-singapore.org or enquire at techscout@www.ipi-singapore.org