Fat Tissue Engineers Gather to Swap Notes on Repairing Human Tissue

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Doctors, fat researchers and tissue engineers from around the world will trade techniques and their latest research findings to improve the use of human fat tissue in medical therapies like facial, breast, bone, vocal cord and other tissue reconstruction.

Members of the International Fat Applied Technology Society (IFATS) will explore both the use of fat in traditional means - injection into damaged soft-tissue, for example - as well as more futuristic uses, like blending of stem cells into fat before injection, and converting fat stem cells to bone. They will also learn from their basic research colleagues about the amplifying effects of a human virus on fat formation.

The researchers intend their findings to improve plastic surgery, surgical repair of damaged or diseased tissue, and genetically identical tissue replacement to improve and even to save lives.

The researchers point out that fat tissue, like bone marrow and umbilical cords, contains hundreds of thousands of adult stem cells that are naturally programmed to heal and repair the human body. Called fat-derived adult stem cells, laboratory researchers have prompted them to convert to fat, bone, cartilage and muscle. Researchers believe these cells could help treat heart conditions, heal broken bones, and even be used in reconstructive surgery.

According to Dr. Jeffrey Gimble of the Pennington Biomedical Research Center in Baton Rouge and current president of IFATS, “We now know fat is much more than just those extra pounds we carry around. It’s a dynamic tissue that holds secrets to treating disease. Unlocking the potential of stem cells found in fat tissue is just the beginning.”

Source: Pennington Biomedical Research Center