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Mind the Gap: The Effect of Tension on the Gaping of Sutures

When sutures don't withstand this process they gape which can lead to infection. Infections caused by suture gaping are never good for the patient and can lead to further complications. This project aimed to see which of five different methods of sutures could best withstand the process of wound healing. The five suture types were placed in fetal pig dermal tissue samples, which were then exposed to two types of force; tension and shear. After the testing was conducted and results were collected, there was sufficient data to answer the question, which of five methods of suturing will show the least gaping when exposed to force? The vertical mattress suture showed the most gaping in both tests conducted. In the test with the first type of tension, the simple running shows the least gaping and with the second type of tension, the simple interrupted showed the least gaping. This data did not support the hypothesis posed which was that the simple interrupted would show the least gaping. Instead the opposite happened, as the vertical mattress was expected to show the least gaping by an expert. Knowledge on this topic could help doctors everywhere make safer decisions for their patients. So while this project did not support the hypothesis posed it did answer an important question and offered an opportunity to further the knowledge available on wound healing.