Skin Extensibility around Surgical Wounds after Total Knee Arthroplasty

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**Purpose:** We investigated skin extensibility around surgical wounds in patients after total knee arthroplasty (TKA) to determine the relationship between skin extensibility and knee range of motion.

**Methods:** Twenty patients treated with TKA (mean age: 78.1 ± 7.4 years) and ten age-matched healthy subjects (mean age, 71.8 ± 8.7 years) participated in this study. To evaluate skin extensibility, we marked the surface of the skin over the knee and measured changes in the location of these marks using vertical and horizontal reference points as the knee was positioned in various degrees of flexion (60°, 90°, and full flexion). We further divided TKA patients into two groups based on a knee flexion angle of 120° (above or below 120° knee flexion), and compared skin extensibility among TKA patients and healthy subjects.

**Results:** In TKA patients, skin extensibility was significantly lower than that in healthy subjects, as determined using the vertical line reference around the suprapatellar region. There was no significant difference between the two groups of TKA patients.

**Conclusion:** Our results reveal that skin extensibility around surgical wounds in TKA patients is lower than that in healthy subjects. However, skin extensibility is not a limiting factor for knee flexion after TKA.