

<b>Author Year Country Research Design PEDro Score Sample Size</b>	<b>Methods</b>	<b>Outcome</b>
<p>Di Caprio et al. 2016 Italy Pre-post N=7</p>	<p><b>Population:</b> Mean age=38.7 yr; Gender: males=4, females=3; Level of injury: paraplegia; Pressure injury stage: I or II or had previous reconstructive flap surgery and present with areas of dystrophic and unstable scarring and flap showing thinning, atrophy and scar retractions creating risk for new ulcers. <b>Intervention:</b> Autologous fat injections using fat from participant into areas of risk; avg of 400 cm<sup>3</sup> fat was used (range 115-620). Post injection intervention followed standard liposuction practices and preventative antibiotics. Follow up using ultrasound completed at 2 &amp; 4 weeks and 3,6,12 months post injection. <b>Outcomes:</b> Thickness of subcutaneous tissues; Quality and elasticity of tissues; Recurrence of pressure sores.</p>	<ol style="list-style-type: none"> <li>1. All participants had general improvements in skin characteristics, with improved elasticity in areas of dystrophic and unstable scarring, increased thickness of subcutaneous fat layer facilitated satisfactory restoration of the anatomical profile and the degree of filling of the weight-bearing areas. .</li> <li>2. Fat grafting resulted in an increase of the subcutaneous layer thickness, which decreased progressively during the postoperative period until stabilizing around 6mo post-intervention.</li> <li>3. At 12 mo post-intervention, the risk of pressure injury recurrence was reduced in all patients.</li> </ol>
<p>Previnaire et al. 2016 France Pre-post N=10</p>	<p><b>Population:</b> Mean age=44.1 +/- 6.8 yr; Gender: males=8, females=2; Level of injury: paraplegia=8, tetraplegia=2; Severity of injury: complete=8, incomplete=2; ASIA classification: A=8, B=2; Time since injury=21.1 +/- 9.4 yr; Pressure injury stage: recurring pressure injuries following unsatisfactory previous surgical flap procedures (mean of 3.2, range of 1-6 surgeries). Braden risk scale: mild risk (score of 15-18) =8, no risk (scores of 19 -23) = 2. <b>Intervention:</b> Participants at risk of pressure injury recurrence due to unsatisfactory adipose tissue thickness received the Coleman procedure for fat grafting (water-jet assisted liposuction, decantation, and reinjection of autologous fat) to a thickness of at least 5 cm in both ischial tuberosity regions and as deemed necessary by the surgeon, in the sacral and trochanteric regions. Folow up occurred 14 days, 1, 3 and 6 months post grafting. <b>Outcomes: Pre and post grafting measures of weight, body mass index, pressure mapping</b> Pressure injury recurrence; Fat wasting; Adipose tissue thickness; Sitting times; self-assessment of Skin quality and Quality of life; Better feeling of positioning; Pelvic Pain.</p>	<ol style="list-style-type: none"> <li>1. Three participants developed pressure injuries (2 stage I and 1 stage II) due to longer sitting position (patients' negligence); no recurrence of stage 3 or 4 during follow up period</li> <li>2. Significant improvement of adipose tissue thickness was seen in 7 patients, with 2 patients having significant fat waste, one of whom purposely lost overall body weight for health reasons..</li> </ol> <ol style="list-style-type: none"> <li>1. Three participants reported longer sitting times, nine participants reported improved skin quality, six participants reported improved quality of life but none reported a decrease, four participants reported a "better feeling of positioning in their wheelchair", and 3 participants reported decreased pelvic pain.</li> <li>2. Severity of lesion (Asia A or B) and type of motor neuron lesion (upper or lower) do not seem to influence the outcome</li> <li>3. Body mass index seems to play a role in grafting success</li> </ol>