



**BME PARIS**  
BioMedical Engineering  
MASTER'S PROGRAM

## Soft Tissues Under Pressure Key Changes Leading to Pressure Injuries

Open Your Mind Seminar

Friday, Nov 15 2024  
1.30 pm – 3.00 pm

Amphitheater FOURNEL  
Arts et Métiers Institute of Technology  
155 boulevard de l'Hôpital, 75013 Paris

Overview of the changes in soft tissue structure and function impacting Pressure Injury (PI) occurrence

From the most recent EPUAP/NPIAP/PPPIAP guideline (EPUAP, NPIAP & PPIAP, 2019), pressure ulcer/injury (PI) is defined as “a localized damage to the skin and/or underlying tissue” that appears “as a result of intense and/or prolonged pressure or pressure in combination with shear” and that PIs “usually occur over a bony prominence but may also be related to a medical device or other object.” (EPUAP, NPIAP & PPPIAP, 2019, p. 16; Kottner et al., 2019).

Despite increased attention in better understanding and a major focus on prevention, PI prevalence remains very high.

The relation between load and tissue viability is highly influenced by individual characteristics as Individual's pathological characteristics affect tissue deformation. PI formation and severity depend both on the mechanical load characteristics (pressure or pressure and shear duration, intensity, etc.) and the tolerance/resistance of the soft tissue (Coleman et al., 2014). Several aetiological pathways for PI development have been proposed and supported by laboratory evidence including ischaemia from capillary closure, reperfusion injury, and tissue deformation....but not only.

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