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# Concept Analysis of Limited Joint Mobility in the foot

## Background

**Limited Joint mobility (LJM)** is one of the earliest clinically apparent long term complications of Type 1 Diabetes – Lindsay (2005).

A **concept analysis** approach was used to review available literature focusing on **LJM** in the foot. Clinical features of LJM were explored and the potential consequences to tissue changes appraised, to provide a clearer exposition of this condition and the factors underlying it. This work has application to a wide community of practitioners to illustrate the presence of LJM and the potential effects on joint function which may lead to ulceration of the Diabetic foot.

## Research Design and Method

Concept analysis is a method of research which contributes to a body of knowledge or developing theory about specific concepts or phenomenon Walker and Avants (2005)

Three Broad goals

**Analysis** -dissect out relevant literature

**Synthesis** -combine the seemingly isolated components together

**Derivation** - employ analogy/develop theory to make sense of the evidence

## Results

This concept analysis has identified literature on LJM falls into three domains:

- 1) Structural effects
- 2) Functional effects
- 3) Tissue properties



**The Prayer Sign** a clinical technique to assess the presence of LJM in the hands Frost (2001).

## Conclusions

The empirical referents within a concept analysis framework are measures of the defining attributes. This concept analysis has developed a theoretical framework of three domains to facilitate understanding of LJM in the foot.

**Foot Function models** can examine the biomechanical paradigms underpinning range of motion at joints  
**Structural** models to measure the behaviour of soft tissues in weight bearing and non weight bearing states.

**Tissue properties** of LJM will be investigated given the association of connective tissues changes affected by glycosylation in patients with diabetes



## References

- Lindsay, J.R. et al Reduced prevalence of Limited Joint Mobility in Type 1 Diabetes in a UK Clinic Population over a 20 year period *Diabetes Care* 28: 658-661,2005.
- Frost ,D. et al Limited Joint Mobility in Type 1 Diabetic patients *Diabetes Care* 24:95-99,2001
- Walker L.O.&Avant K.C. Strategies for Theory Construction in Nursing, 4th edn. Pearson Prentice Hall, Upper Saddle River, NJ. 2005
- Grgic A, Rosenbloom AL, et al Joint contracture: common manifestation of childhood diabetes mellitus. *J Pediatr* 88:584–588, 1976

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