

## DOES FAT GRAFTING HAVE ANY BENEFICIAL EFFECTS IN NERVE REGENERATION?

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### OBJECTIVES

The aim of our study was to assess the effect of autologous fat graft on nerve regeneration by creating a suitable experimental model.

### MATERIALS AND METHODS

The rat sciatic nerve was used, followed by transaction. Primary neurorrhaphy was made on both hind legs, but a processed fat graft was applied on one side, surrounding the nerve.

### RESULTS

We used histological examination for the follow-up, at 4 and 10 weeks. The results showed an increased and a more organised neural regeneration on the side where the fat graft was used.

### CONCLUSIONS

The adipose-derived stem cell has clearly demonstrated its capacity to transdifferentiate. However, its specific role in this process is not yet clearly understood. We attempted to explore the blunt effect of this cell on direct neurorrhaphy. We did not observe a categorical differentiation towards Schwann like cell, but mostly an antifibrotic and antiinflammatory effect.



**Graphical abstract:** Technical aspects of fat grafting on neurorrhaphy.

### REFERENCES

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