

## 2<sup>nd</sup> Week for Somatosensory Rehabilitation

8<sup>th</sup> to 11<sup>th</sup> March 2010

### 2<sup>nd</sup> WEEK for SOMATOSENSORY REHABILITATION 2010

#### Problem

- When the patients that are placed in our care have been suffering too much for too long, when their facial expression remains frozen, how can the hope of a better tomorrow be rejuvenated: a future with less shooting pain, with less burning sensations - simply put - with a decrease of **neuropathic pain**.
- Most patients suffering from chronic pain have cutaneous sense disorders. A decrease in the hypoaesthesia (for example the pressure perception threshold) will, at the same time, cause a decrease of their chronic neuropathic pain (for example the McGill Pain Questionnaire).

#### Overall Aim

- To rehabilitate the disorders of the cutaneous sense on the basis of the neuroplasticity of the somaesthetic system so as to lessen chronic neuropathic pain.
- To avert the outbreak of painful complications by rehabilitating the cutaneous sense.
- To build bridges between rehabilitation, medicine and the neurosciences.

#### Specific Objective

- To evaluate disorders of the cutaneous sense: aesthesiography, static 2-point discrimination test, tingling signs and somaesthetic symptoms, pressure perception threshold, etc.
- To evaluate painful complications with the St-Antoine pain questionnaire: mechanical allodynia, reflex sympathetic dystrophies, neuralgia, etc.
- To implement planned rehabilitation procedures within the context of chronic pain complications.
- To adapt the knowledge of mainstream neurology for use in rehabilitating neuropathic pain and vice versa.

#### Teachers

- Claude Spicher, OT, Swiss certified HT, Manager & therapist in the Somatosensory Rehabilitation Centre, Scientific collaborator  
<http://www.unifr.ch/neuro/rouiller/collaborators/spicher.php>
- Rebekah Della Casa, OT, therapist in the Somatosensory Rehabilitation Ctr.

#### Guestspeakers

- Dr Georges Kohut, MD, Orthopaedic and Hand surgery, co-head medical doctor of HFR, Fribourg, Lecturer at the Unit of anatomy, University of Friburg
- Dr Patrick Freund, PhD, Research Associate; UCL, Institute of Neurology, London

Date	8 <sup>th</sup> to 11 <sup>th</sup> of March 2010
Time Table	9am – 12am & 1pm – 5 pm
Duration	28 hours
Place	Clinique Générale; 6, Hans-Geiler Street ; Friburg
Price	CHF 980.- (Work Documents in English + Handbook)
Reference	Spicher, C.J. (2006). <i>Handbook for Somatosensory Rehabilitation</i> . Montpellier, Paris: Sauramps Médical.

2<sup>nd</sup> Week for Somatosensory Rehabilitation  
8<sup>th</sup> to 11<sup>th</sup> of March 2010

## REGISTRATION FORM

Deadline: Friday, 26<sup>th</sup> February 2010

**Name:**

**First (given) name:**

**Professional occupation:**

**Address:**

**e-mail address:**

**Please fill and return to:**

Claude Spicher  
Department of Medicine – Physiology  
Rue du Musée 5  
CH-1700 Fribourg  
Switzerland

e-mail : [claudio.spicher@unifr.ch](mailto:claudio.spicher@unifr.ch)

**or**

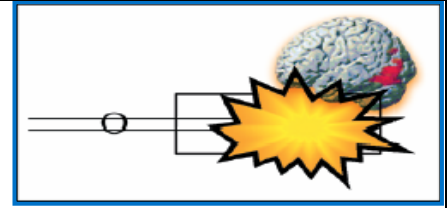
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## SOMATOSENSORY

## REHABILITATION CTR

Occupational Therapy Unit 6, Hans-Geiler Street  
 1700 FRIBURG  
 RCC : K 0324.10

[reeducation.sensitive@cliniquegenerale.ch](mailto:reeducation.sensitive@cliniquegenerale.ch)



## CONTINUOUS EDUCATION

### PROGRAM

## 2<sup>nd</sup> WEEK for SOMATOSENSORY REHABILITATION 2010

#### 1<sup>st</sup> Day

##### Morning:

Your patients suffer from hypersensitivity to touch  
 Diagnostic testing of axonal lesions (part one)

##### Afternoon:

Workshop introduction  
 Workshop  
 Rehabilitation of hyposensitivity

6pm: Conferences at the university of Friburg

#### 2<sup>nd</sup> Day

##### Morning:

Diagnostic testing of axonal lesions (part two)  
 A Way of Hope towards the Liberation from Neuropathic Pain

##### Afternoon:

Desensitization at the site of axonal lesions  
 Live Treatment  
 Chronic Neuropathic Pain decreases through Somatosensory Rehabilitation

#### 3<sup>rd</sup> Day

##### Morning:

Distant vibrotactile counter stimulation  
 Static Mechanical Allodynia  
 VAS  
 Distant vibrotactile counter-stimulation  
 Rainbow pain scale

##### Afternoon:

Chronic pain  
 Live Treatment  
 McGill Pain Questionnaire

#### 4<sup>th</sup> Day

##### Morning:

CRPS Definition and Therapy  
 Ideas for every days practice

##### Afternoon:

Case report  
 Live Treatment  
 Drugs and Prevention

# Table of Contents

Foreword : A Lee Dellon, MD

Introduction

## Part 1

Definitions, Testing & Rehabilitation of Basic Cutaneous Sense Disorders in Case of Neurological Lesions.

### Senses: Some Useful Distinctions

1. Muscle Sense

2. Cutaneous Sense

*A. Protective Sense*

*B. Vibrotactile Sense*

*C. Somatosensory Recovery Stages*

*D. Nerve Regeneration*

3. Touch

### Testing of the Cutaneous Sense

1. Argumentation to the Prescribing Doctor

2. Diagnostic Testing of Axonal Lesions

*A. Aesthesiography*

*B. Static 2-Point Discrimination Test*

*C. Tingling Signs*

*D. Somatosensory Qualifiers*

3. Search Procedure of Abnormal Low-Sensitivity

4. Testing of the Protection Sense

*A. Perception of Vibrations*

*B. Protection from Heat*

*C. Protection from Pain*

## **Pressure Perception Threshold**

### **Rehabilitation of Hyposensitivity**

1. Line Rehabilitation
2. Asperity Rehabilitation
3. Hands-on Therapy
4. Stimulation of Nerve Regeneration
  - A. Overdose of Vitamin B12*
  - B. Stimulation by Mechanical Vibration*
5. Permanent Assessment
  - A. Static 1-Point Localization Test*
  - B. Moving 2-Point Discrimination Test*
  - C. Picking-Up Test*
6. Rehabilitation of Hyposensitivity in Case of Cerebral Lesions: a few Special Features
  - A. First Strict Bed Session of a Patient Suffering from a Cerebral Vascular Accident, in Particular with a Sensorimotor Hemisysndrome*
  - B. Hands-on Therapy*
  - C. Stimulation by Mechanical Vibrations*
7. Examples: Rehabilitation of Hyposensitivity, Stage by Stage
  - A. Nerve Transsection (Illustrations I to IV)*
  - B. "Small" Axonal Lesions (Illustrations I and II)*
  - C. "Very Small" Axonal Lesions (Illustration I)*

### **Conclusion**

## Part 2

Definitions, Testing, Rehabilitation & Prevention of Painful Complications of Cutaneous Sense Disorders in Case of Peripheral Neurological Lesions

### Introduction

#### From Alarm Pain to the Phenomenon of Pain

1. Definitions
2. Treatment

*Few Analgesic Drugs*

#### McGill Pain Questionnaire

1. Short Presentation
2. Short History
3. Original Test Administration
4. Interpretation

*A. The Simplest*

*B. Averages Score*

*C. Affective Pains or Sensory Pains*

*D. Therapies Lasting Longer than One Month*

5. Conclusion

#### Mechanical Allodynia

1. Definitions
2. Allodynic Territory Assessment

*A. Allodynography*

*B. Rainbow Pain Scale*

3. Allodynic Territory Rehabilitation

*A. How to Determine the Zone to Counter Stimulate?*

*B. Vibrotactile Counter Stimulation*

4. Conclusion

## **Desensitization by Mechanical Vibrations at the Site of Axonal Lesions**

1. Definitions
2. Assessment
3. Desensitization
4. Few Types of Vibration Generator
5. Conclusion

## **Neuralgias or Neuropathic Pains**

1. Definitions
  - A. History*
  - B. Few Neuralgias as Examples*
  - C. Etiopathogenesis*
2. Assessment
3. Rehabilitation
4. Conclusion

## **Complex Regional Pain Syndrome**

1. Definitions
  - Short Historical Overview*
2. Assessment
3. Rehabilitation
4. Conclusion

## **Prevention or How to Argue with the Patient**

## CONCLUSION, GLOSSARY AND BIBLIOGRAPHY

### **Conclusion**

Glossary

General Bibliography

## ANNEXES

1. Somatosensory Recovery Stages Modified by Spicher
2. Three Classifications of Somatosensory Recovery
3. Prescription de rééducation sensitive (Somatosensory Rehabilitation Centre)
4. Diagnostic Testing of Axonal Lesions
5. Normal Values of the Static 2-Point Discrimination Test for each Cutaneous Department of the Lower and Upper Extremities
6. Three Tables of Vibration Amplitude Concordance for Different Generators with the IKAR Probe for:
  - Vibrotactile Counter Stimulation in the Presence of a Possible Allodynic Territory
  - Testing and Rehabilitation of the Hypoaesthetic Territory
  - Desensitization by Mechanical Vibrations at the Site of Axonal Lesions
7. Search Procedure of Abnormal Low-Sensitivity
8. Palmo-Ulnar Collateral Nerve of the Ring Finger and its Forks
9. Permanent Assessment of Cutaneous Sense in Case of Cerebral Lesions
10. Semmes-Weinstein Utilization Table
11. Line Rehabilitation Program – for a Member of the Family
12. Hands-on Therapy
13. Permanent Assessment of Cutaneous Sense in Case of Peripheral Neurological Lesions
14. Values of Static 1-Point Localization Test
15. McGill Pain Questionnaire Modified by Spicher, Version of the Somatosensory Rehabilitation Centre
16. Interpretation of the McGill Pain Questionnaire Modified by Spicher, Version of the Somatosensory Rehabilitation Centre
17. Visual Analogue Scales
  - Neutral*
  - With “Smilies”*
  - With Text*
18. Desensitization Evolution Graph
19. CRPS Diagnostic Procedure According to Bruehl
20. Rehabilitation Periods of a CRPS II



**Ihre Meinungen zum Thema - Ce qu'ils en disent - Their point of view -**

Published in the *American Journal of Hand Surgery*, with the kindly authorization of its editor-in-chief, the authors and the publisher.

## BOOK REVIEW

**Handbook for Somatosensory Rehabilitation.** Claude Spicher, Paris: Sauramps Medical, 2006; 199 pages, \$36.00.

The *Handbook for Somatosensory Rehabilitation* provides a practical primer for individuals interested in the rehabilitation of patients following peripheral nerve lesions and particularly painful nerve lesions. This book will be useful primarily to rehabilitation specialists interested in sensory recovery and rehabilitation following nerve injury.

This book is authored by Claude Spicher, an occupational therapist who has devoted his career to the treatment and study of patients with peripheral nerve injuries. Spicher is a certified hand therapist of the Swiss Society for Hand Therapy and in 2004 founded the Somatosensory Rehabilitation Center in Switzerland. This book is easy to read and understand; it is obviously written with passion by an individual dedicated to this specialty.

Part One of this book outlines the basic definitions, testing, and rehabilitation principles for patients following neurological lesions. Spicher provides the reader with an excellent summary of the critical aspects that pertain to the evaluation of patients with sensory nerve injuries. He provides an excellent compilation of definitions, terms, and syndromes that are commonly seen in this patient population. With a sufficient bibliography, the reader is quickly directed to other, more detailed monographs and references. This book is not meant to provide a definitive literature review, but the comprehensive bibliography provides the reader with the capability to pursue other sources of specific interest.

Part Two addresses primarily the evaluation and treatment of patients with neuropathic pain and includes some specific treatment strategies that have worked in the author's personal experience. This

book also discusses and recommends the McGill Pain Questionnaire, which is just one of many questionnaires that are available to assess pain. Spicher should be commended for recommending the use of a valid and reliable measure for pain. Pain, however, is a complex phenomenon with psychosocial issues, such as anxiety, depression, and catastrophic pain, that can also impact these patients and should be considered in management but are beyond evaluation with the McGill Pain Questionnaire. In other sections, such as CRPS, the reader is provided with a brief overview of the topic, and the interested reader should research other sources for more comprehensive reviews.

This book provides the reader with an overview of a very complicated problem. It is good "starter" material for individuals interested in this patient population. It is filled with detailed personal reflection. As such, Spicher clearly states that he is not intending this book to be anything more than his interpretation over his very long career in managing these patients. Perhaps the most useful part of this book is the bibliography, which will direct the reader to manuscripts that may be obscure but also relevant. The book achieves its intent as Spicher states: A "handbook based on practice with its originality in the attempt to synthesize numerous publications and in the introduction of a few personal touches." It is, in fact, Spicher's personal touches, anecdotes, and musings that readers will find enjoyable and perhaps stimulating and beneficial to the evaluation and management of their own patients.

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