

# The effect of the Mirror Effect Plus protocol in acute Bell's palsy

<b>Submission date</b> 16/10/2020	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
<b>Registration date</b> 25/11/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
<b>Last Edited</b> 18/07/2022	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Bell's palsy is a weakness or lack of movement affecting one side of the face. The aim of this study is to assess the feasibility of a future larger study on the Mirror Effect therapy for patients with Bell's palsy. Most patients with Bell's palsy recover completely. However, symptoms might persist over time, which often result in facial deformity and reduced mouth mobility. Therefore, people with such symptoms might experience changes in swallowing and speaking, which could impact their quality of life and self-esteem. In the present study, the researchers are assessing the impacts of early speech therapy on overall recovery and prevention of complications, called facial synkinesis. Synkinesis is defined as involuntary facial movements that occur while attempting to move another part of the face. This study is recruiting a small number of patients to be able to obtain an estimate of the effectiveness of the new therapy called the Mirror Effect Plus Protocol (MEPP). The MEPP will be combined with general recommendations given by the speech therapist and pharmaceutical treatment currently provided in Quebec. The researchers will compare this treatment to the usual course of treatment in Quebec, which is general recommendations given by the speech therapist and traditional pharmaceutical treatment. A positive outcome will lead to a larger study to assess the efficacy of the MEPP.

### Who can participate?

Patients aged 18 and over with acute and severe Bell's palsy

### What does the study involve?

Participants are randomly allocated to one of the two treatment groups to receive either the "mirror effect" treatment and the current pharmaceutical treatment recommended in Quebec, or the current pharmaceutical therapy recommended in Quebec at the moment plus counselling and a personalized exercise program 1 year after the onset of their Bell's palsy, if needed. The severity of facial palsy is assessed at the initial assessment (10 to 14 days after onset) as well as 1, 2, 3, 4, 5, 6 and 12 months after onset

### What are the possible benefits and risks of participating?

According to current knowledge, participation in this study does not involve any medical risk.

Participants may get a personal benefit from their participation, but the researchers cannot guarantee it. By participating, they will be able to benefit from support and a meeting with a speech therapist experienced in the field, who will answer their questions.

Where is the study run from?

Hôpital du Sacré-Coeur de Montréal and Hôpital Maisonneuve-Rosemont (Canada)

When is the study starting and how long is it expected to run for?

September 2015 to October 2021

Who is funding the study?

1. Réseau Provincial en Adaptation – Réadaptation and the Ordre des Orthophonistes et Audiologistes du Québec (Canada)

2. Fonds de recherche du Québec- Santé (Canada)

Who is the main contact?

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## Contact information

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### Protocol serial number

1

## Study information

### Scientific Title

Efficacy of the Mirror Effect rehabilitation in acute Bell's Palsy: a pilot study

### Acronym

MEPP

### Study objectives

The goal of this research study is to assess the feasibility of a future larger study on the Mirror Effect therapy for patients with Bell's Palsy.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Approved 25/11/2016, research ethics board of CIUSSS du Nord-de-l'Île-de-Montréal (5400 Gouin Ouest, Montréal, H4J 1C5, Canada; +1 (0)514 338 2222 ext. 3581; julie.hamnamji.cnmtl@sss.gouv.qc.ca), ref: MP-32-2017-1365

### Study design

Multicenter longitudinal randomized feasibility study

### Primary study design

Interventional

### Study type(s)

Treatment

### Health condition(s) or problem(s) studied

Acute Bell's palsy

### Interventions

In the present study, the researchers are recruiting a small number of patients to be able to obtain an estimate of the effectiveness of the new therapy called "Mirror Effect". The Mirror Effect therapy will be combined with general recommendations given by the speech therapist and pharmaceutical treatment currently provided in Quebec. The researchers will compare this treatment to the usual course of treatment in Quebec, which is general recommendations given by the speech therapist and traditional pharmaceutical treatment. A positive outcome of this process will lead to a larger study to assess the efficacy of the Mirror Effect Therapy.

40 participants suffering from acute and severe Bell's palsy will be recruited and randomly attributed to one of the two treatment conditions. Assignment to the control group or MEPP group is performed by an external researcher who was not in direct contact with the patients, through computerized balanced block randomization. Thus, the 20 participants attributed to the experimental condition will receive the "mirror effect" treatment and the current pharmaceutical therapy recommended in Quebec, while the 20 other participants will be assigned to the control condition, which is the current pharmaceutical therapy recommended in Quebec at the moment plus counselling.

**Treatment group:** All participants receive the MEPP, a facial rehabilitation consisting of facial counselling and retraining during four in-clinic sessions during the first 2 weeks following the initial assessment. Each patient first receives information about facial function and anatomy. They then practise motor imagery (see Eaves et al., 2016) and receive passive soft tissue manipulation (Diels & Beurskens, 2014). Subsequently, specific facial exercises are explained and executed with the help of a free webpage (<https://www.webcamtoy.com> or MEPP web site <https://mepp.marcottelab.ca/auth/signin>) that provides modified visual biofeedback and a symmetrical image of the patient's face generated by duplicating the healthy side. Instructions for facial exercises are provided to promote facial motor learning using small specific movements, emotional cueing, exercise randomization, and proper pacing. Exercises are continued at home twice daily until recovery was achieved.

**Control group:** The control group receive basic counselling such as instructions for avoiding excessive facial movements; however, participants did not attend therapy sessions. The control group will also receive a personalized exercise program 1 year after the onset of their Bell's Palsy if needed.

**For both groups:** The first assessment is performed 10-14 days after BP onset and prior to any intervention or therapy. Reassessments are performed 1, 2, 3, 4, 5, 6 and 12 months after onset.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

Severity of facial palsy assessed using the Facial Nerve Grading System 2.0 (FNGS 2.0; also known as the House-Brackmann 2.0 score and the Sunnybrook Facial Grading System at the initial assessment (10 to 14 days after onset) as well as 1, 2, 3, 4, 5, 6 and 12 months after onset

## **Key secondary outcome(s)**

Speech intelligibility measured using a visual analog scale at the initial assessment (10 to 14 days after onset) as well as 1, 2, 3, 4, 5, 6 and 12 months after onset

## **Completion date**

07/10/2021

## **Eligibility**

### **Key inclusion criteria**

1. Aged 18 years and older
2. First episode of Bell's Palsy
3. Having persistent severe Bell's palsy 10 days post-onset
4. Received the recommended drug regimen for severe and total BP (1000 mg valacyclovir three

times daily for 7 days and 50 mg prednisone once daily for 10 days) began within 72 hours of onset

5. Normal cognitive status based on the Montreal Cognitive Assessment

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

40

**Key exclusion criteria**

1. History of trauma to the 7th cranial nerve
2. Having suffered from Bell's palsy previously or any other facial palsy of another origin (e.g. secondary to surgery or a syndrome)
3. History of neurological disorders (e.g. stroke, neurodegenerative diseases)
4. Psychiatric illness on active treatment (e.g. schizophrenia, severe depression)
5. History of neoplastic diseases

**Date of first enrolment**

27/02/2017

**Date of final enrolment**

07/10/2020

**Locations**

**Countries of recruitment**

Canada

**Study participating centre**

CIUSSS Nord-de-l'île-de-Montréal (Hôpital du Sacré-Coeur de Montréal)

5400 Gouin Ouest

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**Study participating centre**

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## Sponsor information

**Organisation**

Centres Intégrés Universitaires de Santé et de Services Sociaux

**ROR**

<https://ror.org/041c8tt83>

## Funder(s)

**Funder type**

Research organisation

**Funder Name**

Réseau provincial en adaptation-réadaptation and Ordre des orthophonistes et audiologistes du Québec

**Funder Name**

Fonds de recherche Québec-Santé

## Results and Publications

**Individual participant data (IPD) sharing plan**

According to the informed consent, data will only be accessed by researchers and team members (which is standard procedure in Quebec). Research data will be stored at the Hôpital du Sacré-Coeur de Montréal in a safe location by researchers responsible for the research project for a period of 5 years, after which the research files will be destroyed and can be consulted only by the participants in the research project.

**IPD sharing plan summary**

Not expected to be made available

## Study outputs

Output type

[Results article](#)

Details

Date created

19/06/2022

Date added

18/07/2022

Peer reviewed?

Yes

Patient-facing?

No