



*Ensuring Wellness*

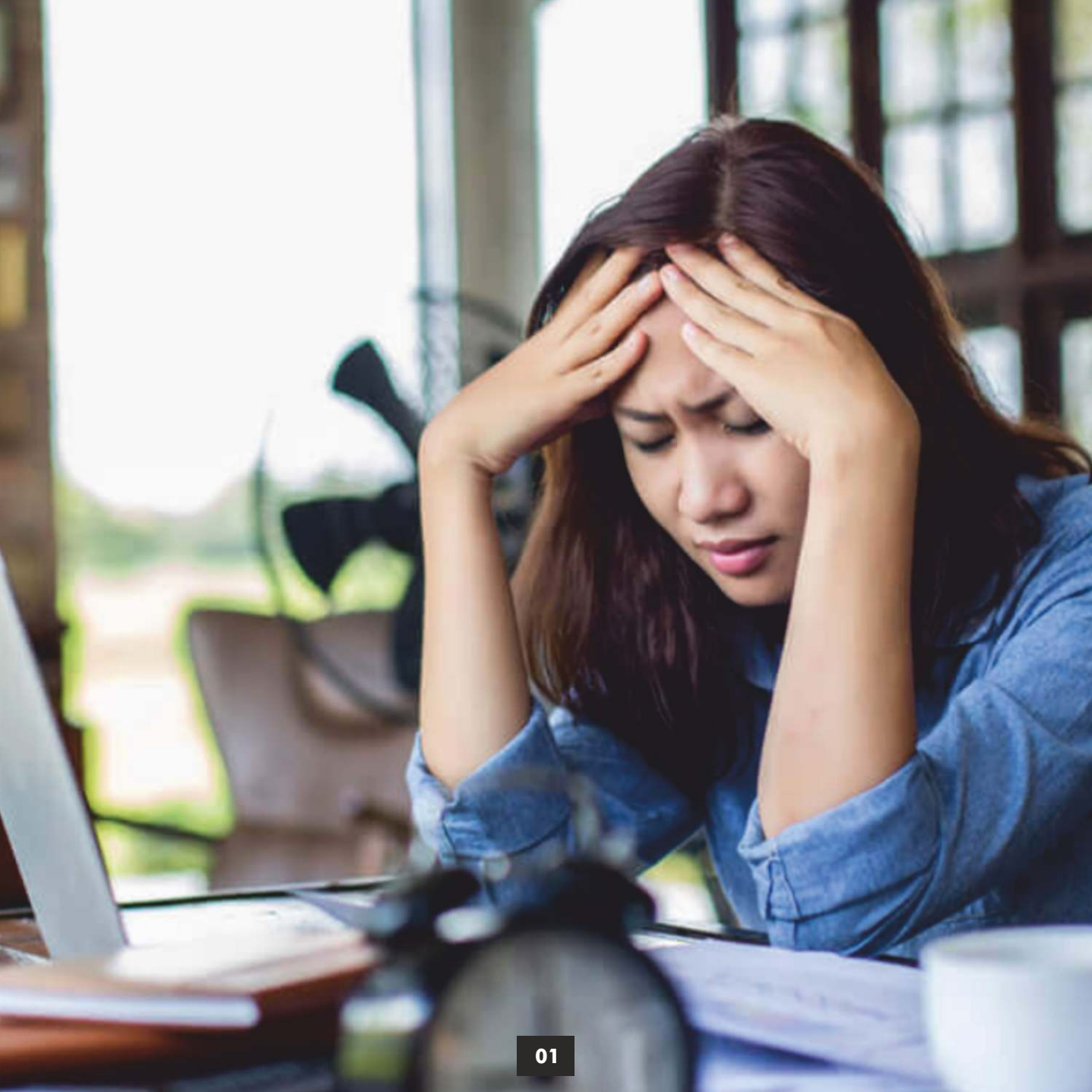
*Assuring Well-being*

## **BRIEF PULSE THERAPY**

Psychiatry

Psychology

Neuro-Psychiatry



# Electroconvulsive Therapy also known as Brief Pulse Therapy

Electroconvulsive therapy has been a treatment of choice for various psychiatric illness for decades. Over time due to improvements in the technical parameters, administration technique and advent of newer drugs, electroconvulsive therapy has transformed into a more safe, tolerable and effective form of treatment.

Newer form of therapy utilize narrower pulses of stimulation, under anesthesia to produce the desired effect. This form of treatment is known as Brief Pulse Therapy.

Brief Pulse Therapy is the “GOLD STANDARD” of care in many conditions in Psychiatry.

## Indications Include:

- Mania
- Catatonia
- Bipolar Mood Disorder
- Major Depressive Disorder
- Neuroleptic Malignant Syndrome
- Schizophrenia and allied psychotic conditions
- Suicidal tendencies as a result of mental disorders
- Violent/Aggressive Behavior as a result of mental disorders

We, at Parth Hospital, employ the most advanced equipment's to provide a safe and effective BPT.

**Emergency drugs are always kept handy to effectively deal with any complication, if they arise.**



**RMS PC-ECTON**  
(optional In-built EEG Recording)



**Philips MP-5**  
Multiparameter Cardiac Monitor



**BPL Monophasic Defibrillator**  
And Suction Machine



**Endotracheal Intubation Kit**  
(Laryngoscope + Endotracheal Tubes)  
and Emergency Drugs

# Brief Pulse Therapy (BPT) Overview

When given as an OPD procedure, the patient does not require admission and can come at the time of BPT, and is free to go a few hours after the procedure.



Boyle's Apparatus

## TYPE

Out-Patient (OPD) and  
Indoor-Patient (IPD) Procedure.

## PROCEDURAL DURATION

15-20 minutes (Usual time)

## DURATION OF NIL PER ORAL

3-4 Hours  
(Solid Foods and Liquids)

## NUMBER OF BPT'S REQUIRED

Usual course is of 6 BPT's.  
Upto 12 BPT's , May be required

## MAINTENANCE BPT'S

May be required

## PRE BPT-WORKUP

Complete Blood Count (CBC),  
S. Electrolytes, S. Creatinine, SGPT,  
ECG X-Ray, CT-Scan / MRI Brain  
(If Required)





## Know the Procedure

- The patient is expected to come empty stomach for the procedure. No solid or liquid foods, including water, should be consumed for up to 3-4 hours prior to the procedure.
- Before giving the stimulation in BPT, the patient is anaesthetized by a trained anesthesiologist using a suitable aesthetic agent (Short acting agents are used, with a typical duration of action of about 10-12 minutes)
- This is followed by a dose of a muscle relaxant, which relaxes the entire body.
- Then the electrical stimulation is delivered. It is usually given for 1-3 seconds.
- Application of the stimulation, elicits a therapeutic seizure, which is monitored for its duration.
- At the end of the procedure, the patient comes out of the effect of anesthesia and regains consciousness. After the patient is stable, he/she is discharged.
- During the entire procedure the patient's airway and ventilation is maintained and vital signs are continuously monitored.

## Equipment's Used

- BPT Machine: RMS PC-ECTON BRIEF PULSE THERAPY MACHINE
- Multi-Parameter Monitor: PHILIPS MP-5 multi-parameter Monitor
- Boyle's Apparatus and Anesthetic Trolley.
- BPL Monophasic Defibrillator

## Side Effects

- Side effects with BPT could be due to anesthesia or due to the BPT procedure.
- Most common side effects with BPT include body ache, jaw pain and headache, post procedure. These side effects are transient and respond well to pain killers (e.g. Diclofenac Sodium)
- BPT can induce some amount of memory disturbances in the form of forgetfulness and confusion. This usually occurs for a few hours. Some patients may experience memory disturbances for up to 21 days. This is usually self-limiting and does not require any additional medications.
- A thorough pre-BPT checkup is done to minimize any anesthesia related complications



<b>MYTHS</b>	<b>FACTS</b>
BPT is given to an awake patient	Patient is under anesthesia for the entire procedure. BPT is given after anesthesia has been given.
“Electrical Shock” is given for a long time.	Controlled electrical stimulation is given using a specialized machine. The average duration of the stimulus is for a few seconds (1-3 seconds)
BPT causes permanent memory loss	BPT is not associated with any permanent damages to memory or to other brain structure
BPT resets/factory resets the brain	BPT causes a complex chain of changes in the chemical balance of the brain, which leads to recovery from illness. It does not alter the brain structure in any way.
A person goes crazy after taking BPT	BPT is the cure to an illness, and does not cause the illness.
The patient becomes dependent on BPT	No form of dependence occurs after a course of BPT.
BPT is given for serious mental illnesses.	BPT can be given to any patient with mental illnesses, irrespective of the severity of the illness.

## Further Reading

### Video

- <https://youtu.be/AcmarVpo2xE>
- <https://youtu.be/-T0mwzXHgvl>
- <https://bit.ly/2ISlMC>
- <https://vimeo.com/178622011>

### Books/Articles

- <https://mayocl.in/2EVldU5>
- <https://bit.ly/2GBG15X>
- <https://wb.md/2GAdX2e>
- <https://bit.ly/2UJoAWs>
- <https://bit.ly/2ZvmlJT>

## Patients Say

“

मेरी लडकी चार-पाँच साल से डीप्रेशन से पीडित थी । दवाईओ का बहोत ज्यादा असर नही हो रहा था । पार्थ होस्पिटल में डॉ. पार्थ और डॉ. प्रियल के सलाह अनुसार, हमने ई.सी.टी. सारवार करवाई । ६ ई.सी.टी. के बाद मेरी बेटी की बिमारी काफी कम हो गई और पहली बार, बहुत सालो के बाद मैंने उसके चेहरे पर मुस्कुराहट देखी । हम डॉ. पार्थ और डॉ. प्रियल का खुब घन्यवाद करते है ।

- उसका पिता  
सुरेन्द्रकुमार, ईन्दोर

”

“

My wife had been suffering from depression since last 10-15 years. Six Month ago we meet Dr. Parth Goyal. He suggested to give ECT to my wife. We were not ready but Dr. Parth explained us that ECT is very safe. After taking ECT, according to the suggestion of Dr. Parth. She became 90% all right.

Dr. Priyal has also given sitting to make my wife all right. The nature of Dr. Parth and Dr. Priyal is very good. They understand the problem the problem of patient and help them to get rid of it.

- Mr. Dipesh Nandha  
Husband, Ahmedabad

”

## Dr. Parth Goyal

M.D. (Psychiatry)

### Consultant Psychiatrist

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- Worked as a Research associate at Yale School of Medicine, Dept. of Psychiatry, U.S.A, (2014) on the use of Repetitive Transcranial Magnetic Stimulation, and its role in the reduction of Auditory Hallucination in treatment resistant Schizophrenia, under the guidance of Dr. Ralph Hoffman.
- Trained in the use of Ultra-brief Pulse Electroconvulsive Therapy (ECT) at Yale School of Medicine, under the guidance of Dr. Robert Ostroff.
- Presented a poster on "Trans-cranial Direct Current Stimulation as a treatment option for Hallucinosis: A Case Report" at the 1st Symposium on Non-invasive Brain Stimulation in Psychiatry held at NIMHANS, Bengaluru on September 20th 2015.
- Presented a poster on "Transcranial Direct Current Stimulation for Severe, Persistent, Treatment-Refractory Auditory Hallucinations in Schizophrenia" for the 2018 Biennial Meeting in Florence, Italy, 4 – 8 April 2018.
- Attended an International Course on Electroconvulsive Therapy conducted by Dr. Sackeim, Dr. George, Dr. Loo and Dr. Sienaert, at Singapore, by Mecta Corporation.

## Dr. Priyal Goyal

D.P.M. (Psychiatry)

### Consultant Psychiatrist

Parth Hospital, Ahmedabad

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- Consultant Psychiatrist at Parth Neuropsychiatric Hospital, since May 2017.
- Certified as expert in Neurostimulation (ECT, rTMS, tDCS) from National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru.
- Trained in Cognitive Behavioral Therapy from National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru.
- Interests include Neurostimulation, Women's Health and Child Psychiatry



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