



10° Congresso Nazionale ROI

BOLOGNA 20-21 GIUGNO 2025

L'OSTEOPATIA TRA LE PROFESSIONI SANITARIE
Prospettive di Prevenzione e Promozione della Salute

Effetti del tocco affettivo, del tocco terapeutico (OMT) e del tocco statico/non specifico sulla connettività cerebrale e sui biomarcatori metabolici in neonati prematuri.

Andrea Manzotti

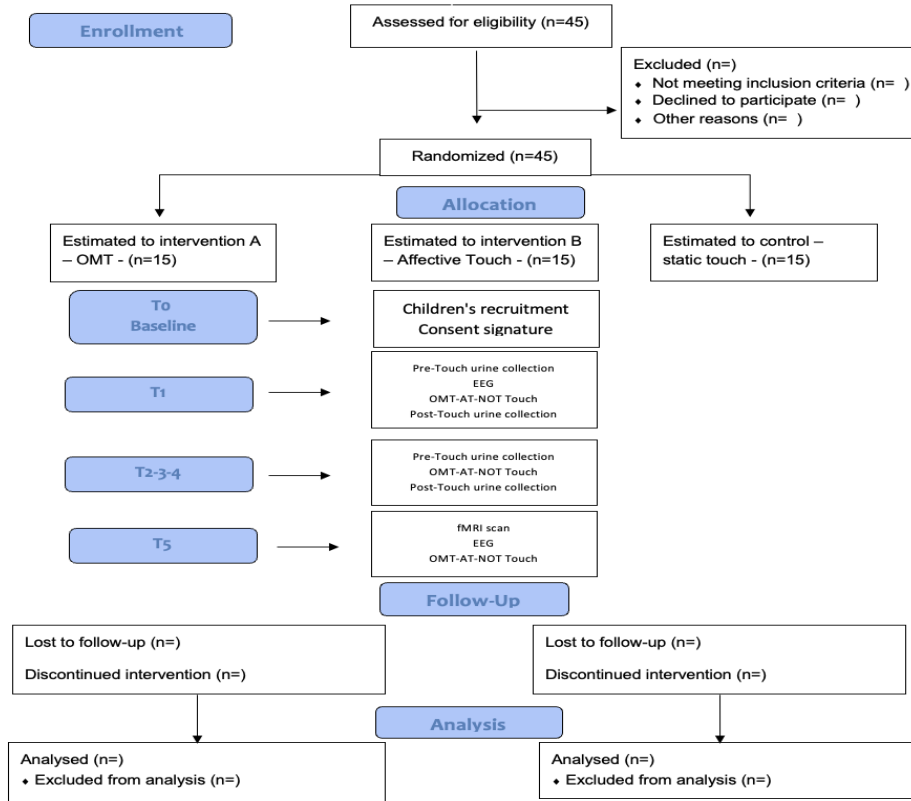
Study Design



CONSORT

TRANSPARENT REPORTING of TRIALS

CONSORT 2010 Flow Diagram

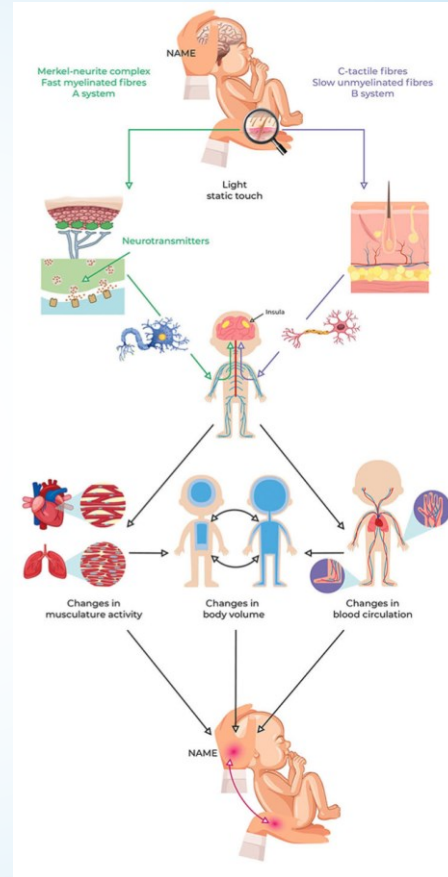


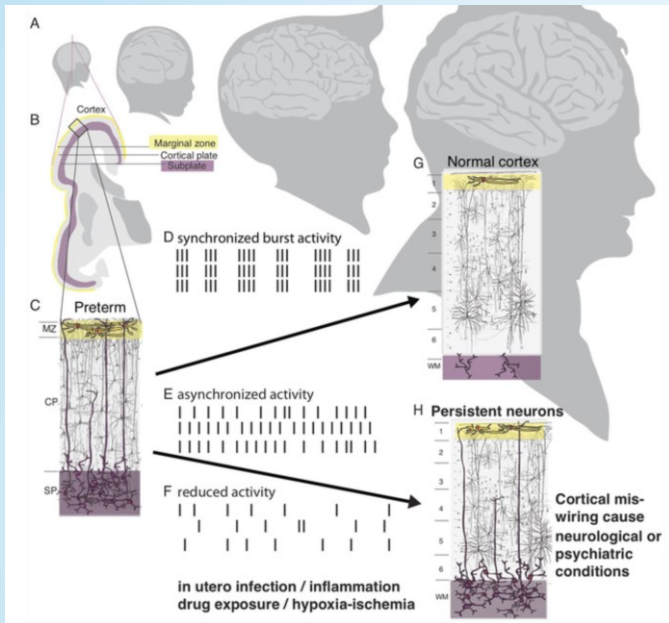
fMRI, EEG and metabolomics

These techniques provide real-time information on complex body systems, allowing for personalized diagnosis, therapy, and outcome prediction

(Fanos et al., 2018-Hanson et al., 2016-Mc Anulty et al., 2010-Tataranno et al., 2021).

Interventions

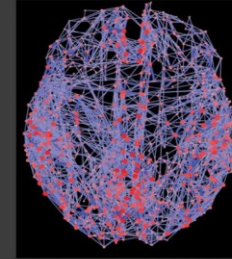




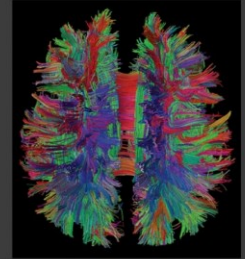
The Human Connectome



Anatomy
Klingler's method for fiber tract dissection uses freezing of brain matter to spread nerve fibers apart. Afterwards, tissue is carefully scratched away to reveal a relief-like surface in which the desired nerve tracts are naturally surrounded by their anatomical brain areas.



Connectome
Shown are the connections of brain regions together with "hubs" that connect signals among different brain areas and a central "core" or backbone of connections, which relays commands for our thoughts and behaviors.



Neuronal Pathways
A new MRI technique called diffusion spectrum imaging (DSI) analyzes how water molecules move along nerve fibers. DSI can show a brain's major neuron pathways and will help neurologists relate structure to function.

The Human Connectome - Eugen Ludvig, Josef Klingler, Patric Hagmann & Olaf Sporns - 1956, 2008

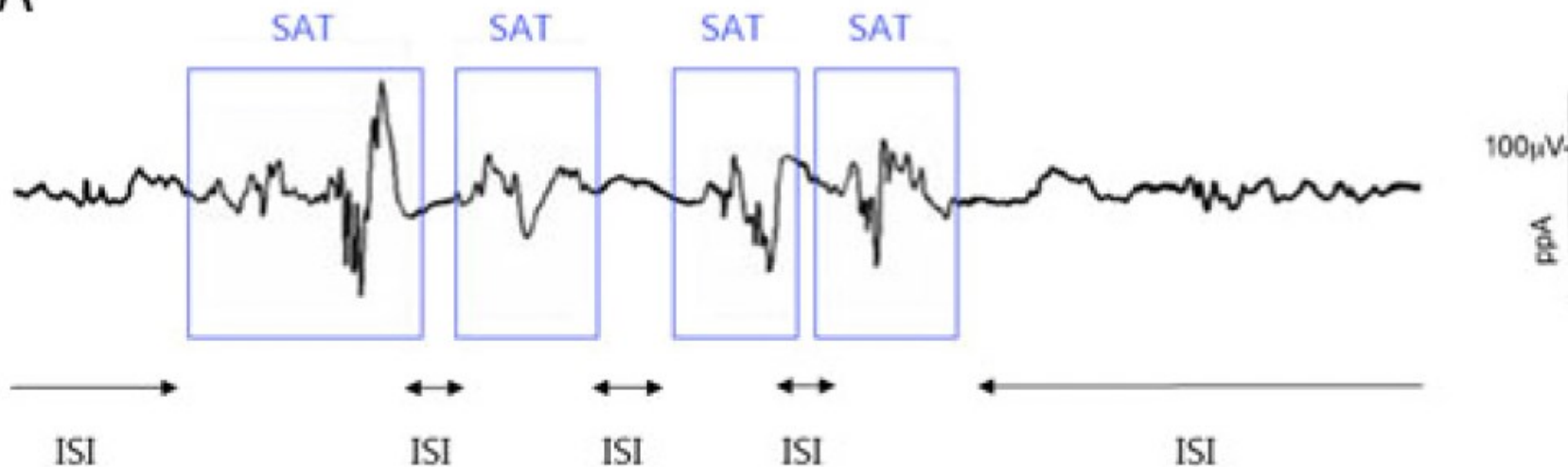
Assessment and Outcome

Primary Outcome:

Pre-post changes in functional connectivity of the brain.

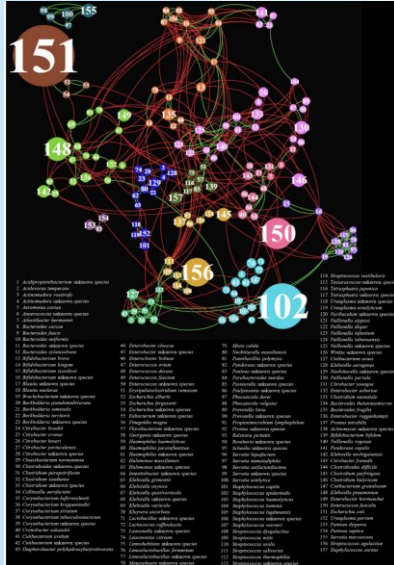
Figure 1 | Event-based EEG measures.

A



Assessment and Outcome

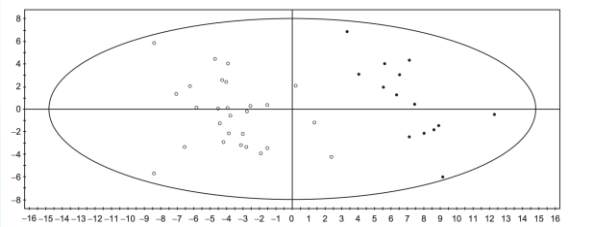
Assessment and Outcome



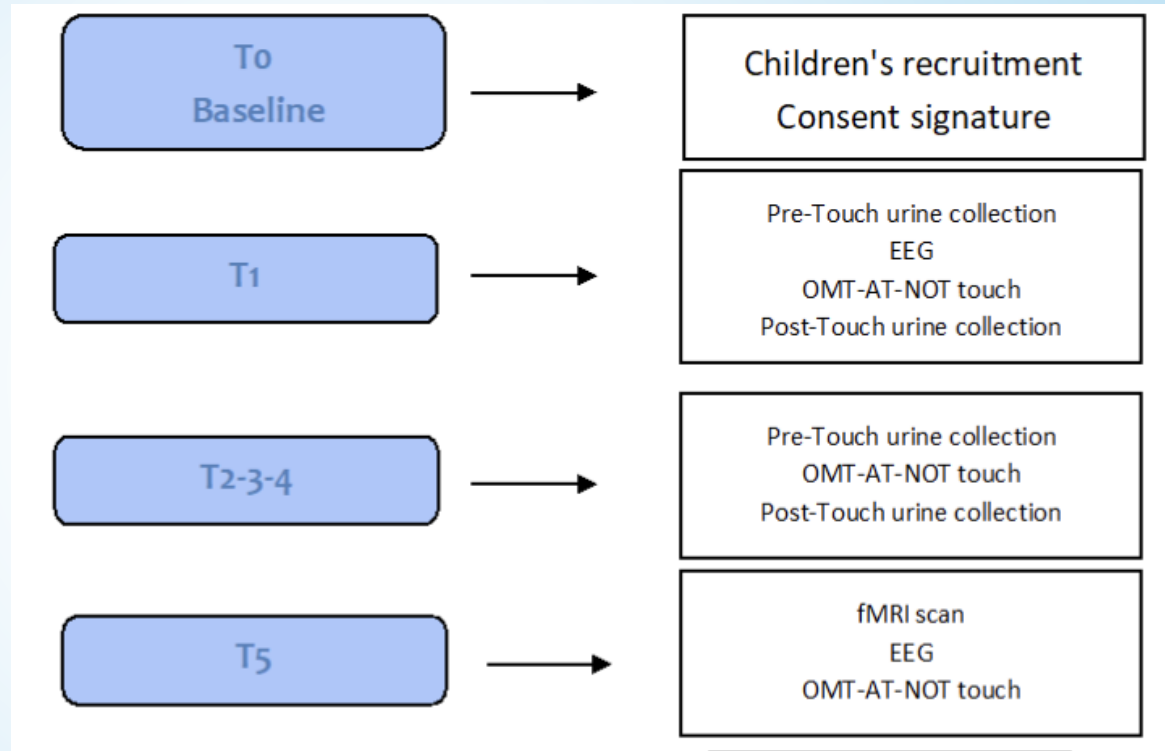
ADVANCES IN CLINICAL CHEMISTRY, VOL. 58

URINARY METABOLOMICS IN NEWBORNS AND INFANTS

Vassilios Fanos,^{*} Roberto Antonucci,[†] Luigi Barberini,[‡] and Luigi Atzori^{S,1}



Methodology

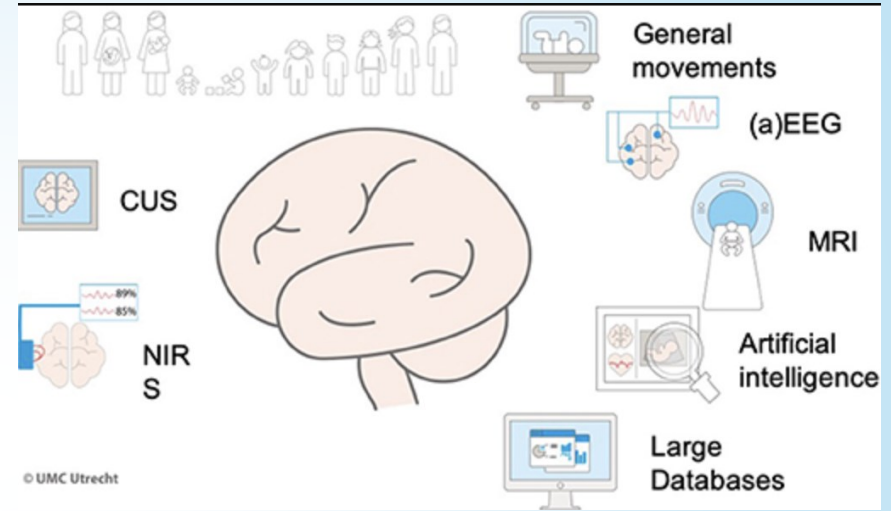
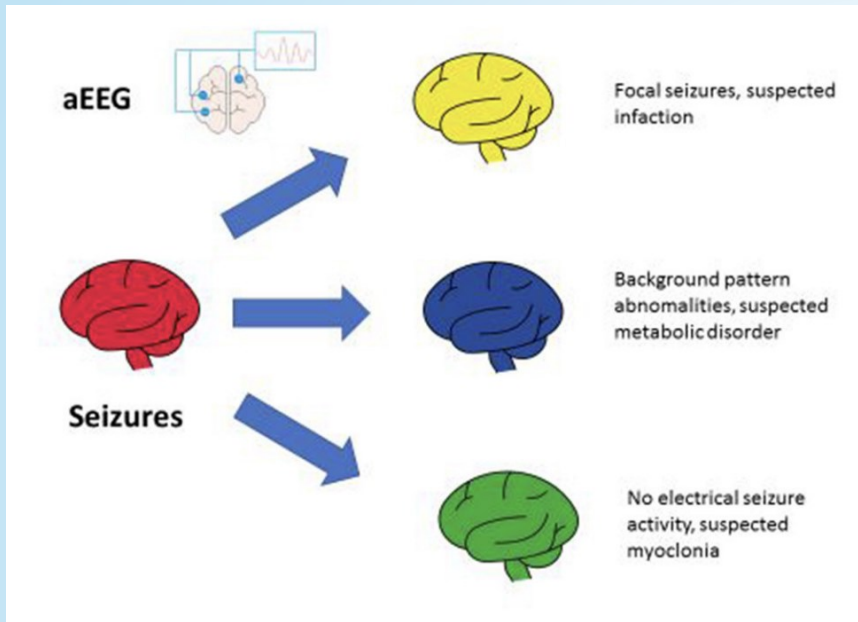


Methodology





Methodology



Osteopathic treatment and brain, clinical and biochemical monitoring

- Tataranno ML, Vijlbrief DC, Dudink J, Benders MJNL.
- Precision Medicine in Neonates: A Tailored Approach to Neonatal Brain Injury.
- Front Pediatr. 2021 May 19;9:634092. doi: 10.3389/fped.2021.634092.

Baseline



Touch



Post-Touch



0

5

10

Osteopathic treatment and brain, clinical and biochemical monitoring

Osteopathic treatment and brain, clinical and biochemical monitoring



- Furthermore, a series of studies in the field of neonatology have shown positive effects (Lanaro et al., 2017, Vismara 2019) (Cerritelli et al., 2015).

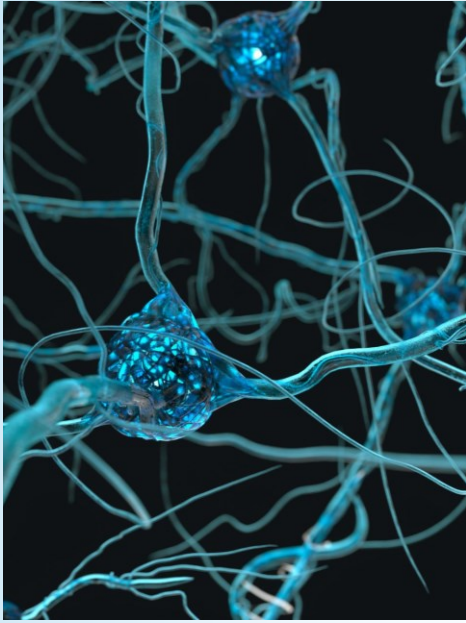
Osteopathic Manipulative Treatment



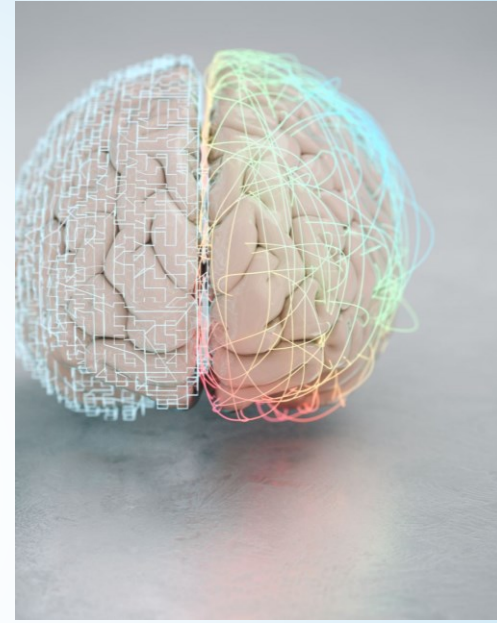
SpO2



HR



Development of short cortico-cortical connections



- *Synaptogenesis is a crucial event in the neonatal cortex. In quantitative terms, the first postnatal month shows a rapid increase in the formation of synapses*

Ethical Approval and Registration

 U.S. National Library of Medicine

ClinicalTrials.gov

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Trial record **1 of 1** for: manzotti | Recruiting, Not yet recruiting Studies | Italy

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Effects of Touch on Brain Connectivity and Metabolic Biomarkers in Preterm Infants



The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been evaluated by the U.S. Federal Government. [Know the risks and potential benefits](#) of clinical studies and talk to your health care provider before participating. Read our [disclaimer](#) for details.

ClinicalTrials.gov Identifier: NCT05853991

[Recruitment Status](#) ⓘ : Not yet recruiting

[First Posted](#) ⓘ : May 11, 2023

[Last Update Posted](#) ⓘ : May 17, 2023

See [Contacts and Locations](#)

[View this study on Beta.ClinicalTrials.gov](#)

Il Comitato Etico Territoriale Lombardia 1, nella persona del Presidente Dott. M. Sessa, prende atto della documentazione trasmessa dal Proponente alla Segreteria Tecnico-Scientifica in data 29/05/2025 in risposta al parere espresso nella seduta del 22/01/2025, scioglie le riserve e conferma il parere favorevole, ricordando che sarebbe opportuno formalizzare il finanziamento intestandolo al Promotore dello studio.

Cordiali saluti.

Dott. Marco Sessa

Presidente Comitato Etico Territoriale Lombardia 1

Marco Sessa

16.06.2025

14:59:15

UTC



Si fa riferimento alla seguente documentazione:

- dichiarazione sulla Proprietà dei Dati per il Progetto di Ricerca datata 29/05/2025;
- contratto tra ASST Fatebenfratelli Sacco e ROI (Registro Osteopati d'Italia);
- lettera di chiarimento del ruolo del dott. Manzotti nel progetto di ricerca.

Osteopathic treatment and brain, clinical and biochemical monitoring

- Thank you!!!





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Grazie per l'attenzione