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Mindfulness Meditation

MINDFULNESS-BASED THERAPY: TO THE HELP OF PRETERM-BORN ADOLESCENTS

Adolescents born prematurely present a high risk of developing executive, behavioural and socio-emotional difficulties. Now, researchers from Geneva University Hospitals (HUG) and the University of Geneva (UNIGE) have revealed that practicing mindfulness may help improve these various skills. The study, published in the journal *Scientific Reports*, suggests using mindfulness as a means of clinical intervention with adolescents, whether prematurely born or not.

Several studies have already shown that very preterm (VPT) children and adolescents are at higher risk of exhibiting cognitive and socio-emotional problems that may persist into adulthood. To help them overcome the difficulties they face, researchers from the HUG and UNIGE have set up an intervention based on mindfulness, a technique known to have beneficial effects in these areas. Mindfulness consists in training the mind to focus on the present moment, concentrating on physical sensations, on breathing, on the weight of one's body, and even on one's feelings and thoughts, completely judgment-free. The mindfulness-based interventions generally take place in a group with an instructor along with invitations to practice individually at home.

To accurately assess the effects of mindfulness, a randomized controlled trial was performed with young adolescents aged 10 to 14, born before 32 weeks gestational weeks. Scientists quickly found that mindfulness improves the regulation of cognitive, social and emotional functions, in other words, our brain's ability to interact with our environment. Indeed, it increases the ability to focus on the present — on thoughts, emotions and physical sensations, with curiosity and non-judgement. Thanks to this practice, adolescents improve their executive functions, i.e. the mental processes that enable us to control our behaviour to successfully achieve a goal. As a result, young people find it easier to focus, manage and regulate their behaviour and emotions in everyday life.

Improving daily life

For eight weeks, the young teens spent an hour and a half each week with two mindfulness instructors. They were further encouraged to practice mindfulness daily at home.

Parents were also involved in this study. They were asked to observe their child's executive functions, for example the ability to regulate their emotions and attentional control, their relationships with others and their behaviour. The adolescents also underwent a series of computerised tasks to assess their reactions to events. A comparison of their test results with a control group that did not practice mindfulness shows a positive impact of the intervention on the adolescents' everyday life and on their ability to react to new events.

"Each teenager is unique, with their own strengths and difficulties. Through their involvement in this study, our volunteers have contributed to show that mindfulness can help many young people to feel better, to refocus and to face the world, whether they were born preterm born or not," agree Dr Russia Hà-Vinh Leuchter, a consultant in the Division of Development and Growth, Department of Paediatrics, Gynaecology and Obstetrics at Geneva University Hospitals, and Dr Vanessa Siffredi, a researcher at the Child Development Laboratory at the Department of Paediatrics, Gynaecology and Obstetrics at the UNIGE Faculty of Medicine, two of the authors of this work. "However, while the practice of meditation can be a useful resource, it is important to be accompanied by well-trained instructors", they specify.

Towards clinical recognition?

The adolescents who took part in the programme are now between 14 and 18 years. Scientists are currently evaluating the long-term effects of mindfulness-based intervention on their daily attention and stress.

Furthermore, to validate their clinical data with neurobiological measurements, researchers are currently studying the effects of mindfulness on the brain using magnetic resonance imaging (MRI).

For more information

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The HUG: Care, Teaching, and leading-edge Research

The Geneva University Hospital (HUG) comprises [eight public hospitals and two clinics](#). Their missions are to provide health care to the community in all medical specialties, to help train physicians and health professionals, and to conduct medical and clinical research. The HUG operate as a national reference centre for [influenza](#), [emerging viral infections](#), [meningococcus](#), and transplant immunology, and are the [national reference laboratory for histocompatibility](#). They are also a WHO Collaborating Centre [in six areas](#), as well as [Centres of Excellence](#) in a number of sectors. The HUG treat 280,000 patients each year, with a capacity of 2,109 hospital beds, and employ 13.557 people.

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