



SFCNS Swiss Brain Health Plan

Kick-off Stakeholder Meeting

22 November 2023
13:00-18:00

Kunsthaus Zurich

BOOKLET

swiss-brainhealth.congress-imk.ch

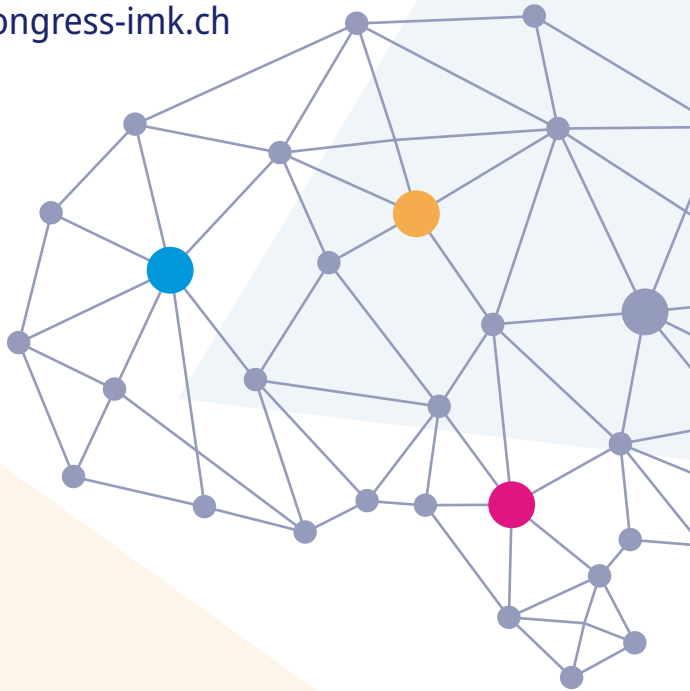


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Office of the Swiss Federation of Clinical Neuro-Societies SFCNS
c/o **IMK** Institute for medicine and communication Ltd.
Münsterberg 1 | 4001 Basel
Tel. +41 61 561 53 53
www.imk.ch | congress@imk.ch

Pictures
Rob Lewis
Flavia Leuenberger Ceppi
Testimonials givers

Welcome - President of the Swiss Federation of Clinical Neurosocieties (SFCNS)

Brain and Mental Health are essential for a good human life and bring benefit for the individual, the family, the community, the nation and globally for the world.

It is a pleasure and an honor for me to be part of the kick-off of the SFCNS Swiss Plan to create awareness around brain health and promote in the future a national strategy to improve brain and mental health.

Within the aim of the SFCNS to stimulate the interdisciplinarity of clinical neurosciences was from the begin to invite and bring together all the key actors from across Switzerland with the support of international guests

Prof. Luca Remonda, MD
SFCNS President

Welcome - Chair of the Swiss Brain Health Plan (SBHP)

Our brain is essential for health, wellbeing, creativity and productivity, both as individuals and society. However, brain disorders - which include such neurological and psychiatric/mental conditions as stroke, dementia, epilepsy, depression, anxiety, substance abuse, headache, sleep disorders- affect over 50% of the population. Also, brain disorders are not only very frequent, but also a source of tremendous suffering for individuals and their families, as well as an increasing economic burden for the entire community.

The crucial role of the brain for our lives and the high burden of brain disorders contrast with the almost universal absence of strategies to promote brain health and prevent brain disorders. With the Swiss Brain Health Plan (SBHP), our country has the chance to be among the very first to adopt concrete solutions to value, promote, and protect the brain over the entire lifespan. To address this tremendous challenge, more awareness, education, research but also a novel, integrated public health approaches and the empowerment of patients are needed.

On November 22, 2023 patients, caregivers, patient organizations, healthcare professionals, researchers, as well as representatives of culture, science, governments, insurance providers, industry and international organizations, join to officially launch the SBHP and start a united and important journey.

I would like to express my sincere thanks to all for sharing the same vision and conviction that a change is not only needed but also possible.

Prof. Dr med. Dr. h. c. mult. Claudio L.A. Bassetti
Chair, Swiss Brain Health Plan (SBHP)
Vice-President, European Brain Council (EBC)
Past President, European Academy of Neurology (EAN)
Founding President, Swiss Federation of Clinical Neurosocieties (SFCNS)

Welcome - President of the Swiss Confederation

Die Hirngesundheit ist entscheidend für unsere physische und psychische Gesundheit – sei es auf individueller Ebene, sei es für die Gesellschaft, die darauf angewiesen ist, dass ihre Mitglieder ihr produktives und kreatives Potenzial verwirklichen können.

Deshalb ist es eine höchst begrüßenswerte Entwicklung, dass neurologische Erkrankungen seit einigen Jahren zunehmend in ihrer ganzen Tragweite erkannt werden.

Das Engagement der «Arbeitsgruppe brain health» ist besonders wertvoll, weil uns das Thema Hirngesundheit aufgrund des demographischen Wandels künftig in noch viel stärkerem Masse beschäftigen wird. Die aktive Förderung der Hirngesundheit der Bevölkerung wird damit als gesellschaftliche Aufgabe – koordiniert mit der Prävention von nicht-übertragbaren Krankheiten allgemein – zentral sein.

Alain Berset

Bundespräsident

Welcome - GDK President

I am delighted that the SFCNS Brain Health Plan Kick-off Stakeholder Meeting is finally taking place. Neurological diseases and mental disorders great suffering in our society for those affected and their families. In addition, there are high costs in the form of treatments and lost working hours. It is important that we shed light on the topic together with all the involved stakeholders and that we develop joint strategies to deal with this major challenge.

Lukas Engelberger, PhD

Präsident Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren (GDK)
Regierungsrat des Kantons Basel-Stadt

Welcome - European Academy of Neurology (ean)



Dear Colleagues,

As we gather in support of the Swiss Federation of Clinical Neuro-Societies on the auspicious occasion of the Swiss Brain Health Plan launch, on behalf of the European Academy of Neurology (EAN), we extend our heartfelt congratulations and support.

This initiative aligns remarkably with the objectives of the WHO's Global Action Plan (iGAP) on epilepsy and other neurological disorders and is further strengthened by the foundational principles of the EAN's Brain Health Strategy. The Swiss Brain Health Plan, in harmonizing with these overarching frameworks, exemplifies the kind of national-level initiative that the EAN ardently encourages and supports among our member countries.

The EAN's Brain Health Strategy complements the WHO iGAP by emphasizing the importance of research, innovation, and a patient-centered approach to neurological care. It serves as a guiding light for those at national level seeking to develop comprehensive strategies to tackle the challenges posed by brain disorders. By embracing these principles, the Swiss Brain Health Plan not only propels Switzerland to the forefront of brain health but also serves as inspiration and role model for other countries to prioritize and innovate in this critical field of medicine.

We commend the Swiss Federation of Clinical Neuro-Societies for their commitment and vision. Their efforts are a testament to the collaborative spirit that is essential in our collective journey towards better neurological health. Initiatives like the Swiss Brain Health Plan are pivotal in bringing us closer to the goals outlined in the iGAP, and the EAN is proud to support and advocate for such endeavors.

As the plan unfolds, we look forward to the advancements and positive changes it will bring to brain health in Switzerland and beyond. We are confident that its success will inspire and catalyze similar efforts across Europe and the world.

Together, united by a shared vision and commitment, we move steadily towards a future where brain health is a priority, and people can realize their full potential throughout the life course.

With warm regards,

Prof. Paul Boon, MD

President, European Academy of Neurology

Prof. Elena Moro, MD

President-elect, European Academy of Neurology

Welcome - European Brain Council (EBC)



On behalf of the European Brain Council (EBC), we would like to offer our sincere congratulations for the kick-off of the SFCNS Swiss Brain Health Plan, an important development in bringing together key actors from across Switzerland and beyond to create awareness around brain health and foster the deployment of brain-focused programs and initiatives building towards a wider brain health strategy.

This comes amidst key developments in the global brain health space and timely as the World Health Organization's turns a spotlight towards the brain in the development of a Global Action Plans, namely the Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders.

Furthermore, in line with EBC's engagement with National Brain Councils, calling for the recognition of brain health as an urgent priority in the planning and fostering the establishment of National Brain Plans at Member State level should be supported by policymakers and society across European countries in order to run a concerted national strategy to maintain health and combat brain diseases throughout the human lifespan.

It is exciting to see this achievement underway in Switzerland and remain optimistic that this example can lead to a domino effect to place brain health and science at the forefront of national strategies. Looking forward to a bright future for brain health and research in Europe and beyond!

Prof. Suzanne Dickson, MD
EBC president

Frédéric Destrebecq
EBC executive director

Welcome - European Psychiatric Association (EPA)



Dear colleagues, dear guests,

it is an honor for me to represent EPA as its immediate past-president at the occasion of the kick-off meeting of the Swiss Brain Plan. As one of the coordinators of the brain plan of the GBC, I really do appreciate the efforts of the Swiss colleagues and their organisations. There is no way around such an endeavour if we want to make a step forward in early recognition and intervention of brain disorders. Therefore EPA representing mental health in Europe is happy to join these efforts.

Best wishes

Prof. Dr. Geert Dom
EPA president

Prof. Peter Falkai, MD
EPA past-president

Partner Companies 2023

We would like to thank the following Partner Companies for their generous support.

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Partners 2023



The Swiss Brain Health Plan 2023-2033

The SBHP (Swiss Brain Health Plan) is a comprehensive initiative in Switzerland to promote brain health and prevention of brain disorders across all stages of life. More awareness, education, and research about the burden of brain disorders, brain health, mechanisms of brain disorders and opportunities for their prevention are needed. In addition, the SBHP aims at establishing a person-centered, integrated, coordinated and cost-effective public health approach based on novel and strong synergies between healthcare professionals, scientists, patients, caregivers, insurance providers, commercial, societal and governmental stakeholders, and emphasizing gender perspectives, equity, and humans rights.

The first activities of the SBHP after its launch in November 2023 will include the (co-)organization of educational and scientific events across the country, a systematic analysis of the global burden of brain disorders in Switzerland, the launch of an international Certificate of Advanced Studies on Brain Health, and the creation of international collaborations.



Figure - The five strategic objectives of the Swiss Brain Health Plan
The Swiss Brain Health Plan 2023-2033
Clin. Transl. Neurosci. 2023, 7, 38. <https://doi.org/10.3390/ctn7040038>

Steering Committee & Working Group

Under the umbrella of the SFCNS, the **Swiss Brain Health Plan** is under the lead of the Swiss Brain Health Plan – **Working Group** and driven by the Swiss Brain Health Plan – **Steering Committee**.

Steering Committee

Prof. Claudio Bassetti, MD, Bern (Chair SBHP)
Prof. Indrit Bègue, PhD, Geneva
Prof. Urs Fischer, MD, Basel
Prof. Giovanni Frisoni, MD, Geneva
Harald F. Grossmann, Basel
Prof. Raphael Guzman, MD, Basel
Annette Hackenberg, MD, Zurich

Prof. Anita Lüthi, PhD, Lausanne
Prof. Luca Remonda, MD, Aarau
Prof. Barbara Tettenborn, MD, St. Gallen
Prof. Sebastian Walther, MD, Bern
Prof. Susanne Wegener, MD, Zurich
Prof. Thomas Zeltner, MD, Bern
Petra Zalud, PhD, Basel

Working Group

Kristina Adorjan, MD, Bern
Prof. Emiliano Albanese MD, PhD, Lugano
Prof. Gilles Allali, MD, PhD, Lausanne
Prof. Marcel Arnold, MD, Bern
Prof. Mirjam R. Heldner, MD, Bern
Prof. Claudio L. A. Bassetti, MD, Bern (Chair SBHP)
Prof. Indrit Bègue, Dr. phil., Geneva
Prof. Murielle Bochud, MD, Lausanne
Prof. Andrew Chan, MD, Bern
Prof. Kim Q. do Cuénod, MD, Lausanne
Prof. Renaud Du Pasquier, MD, Lausanne
Prof. Bogdan Draganski, MD, Lausanne
Prof. Matthias Egger, MD, Bern
Mohamed Eshmaewey, MD, Geneva
Ansgar Felbecker, MD, St. Gallen
Prof. Urs Fischer, MD, Basel
Prof. Annika Frahsa, Dr. phil., Bern
Prof. Giovanni B. Frisoni, MD, Geneva
Harald F. Grossmann, Basel
Prof. Raphael Guzman, MD, Basel
Annette Hackenberg, MD, Zurich
Prof. Martin Hatzinger, MD, Solothurn
Marcus Herdener, MD, Zurich
Prof. Andrea M. Humm, MD, Fribourg
Prof. Simon Jung, MD, Bern
Prof. Michael Kaess, MD, Bern
Christian Kätterer, MD, Basel

Prof. Jürg Kesselring, MD, Valens
Prof. Andrea Klein, MD, Bern
Prof. Andreas Kleinschmidt, MD, Geneva
Prof. Stefan Klöppel, MD, Bern
Nora Kronig, Liebefeld
Prof. Karl-Olof Lövblad, MD, Geneva
Prof. Anita Lüthi, PhD, Lausanne
Prof. Philippe Lyrer, MD, Basel
Prof. Iris-Katharina Penner, MD, Bern
Prof. Caroline Pot, MD, Lausanne
Prof. Luca Remonda, MD, Aarau
Prof. Peter S. Sandor, MD, Bad Zurzach
Prof. Hakan Sarikaya, MD, Bern
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Lukas Sveikata, MD, Geneva
Prof. Barbara Tettenborn, MD, Zurich
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Prof. Ana Maria Vicedo-Cabrera, PhD, Bern
Prof. Susanne Walitza, MD, Zurich
Prof. Sebastian Walther, MD, Bern
Prof. Isabel Wanke, MD, Zurich
Prof. Michael Weller, MD, Zurich
Prof. Susanne Wegener, MD, Zurich
Petra Zalud, PhD, Basel
Prof. Thomas Zeltner, MD, Bern
Daniel Zutter, MD, Zihlschlacht-Sitterdorf



Prof. Thomas C. Südhof

Avram Goldstein Professor, Stanford University
School of Medicine
Nobel Prize in Physiology or Medicine 2013

"Declining brain health is the most neglected but most important threat of our ability, as individuals and as a society, to lead a dignified, productive and satisfying life as we age. The Swiss Brain Health plan is a great first step towards addressing this threat."

Mario Botta, Mendrisio

Architetto

«Capita, di tanto in tanto, che in un momento di grazia, una sorprendente consapevolezza critica possa anche trasformarsi in una nuova creatività. Allora, il nostro cervello deve essere pronto a interagire.»



Belle Lee

Caregiver's view

"As a caregiver first take care of yourself then your loved one. If you are sick you can't take care of anyone. Caregiving is a job learn to let go, get help and set limits."



Marcus Schumacher

Patient's view

«Leider ist bei vielen Menschen der Besuch beim Psychiater immer noch mit viel Scham und negativen Gefühlen verbunden! Dabei gibt es keinen Grund psychisch bedingte Schmerzen zu verlängern. Professionelle Unterstützung hilft und man kann sich selbst und seinen Angehörigen damit viel Leid ersparen!»



Manuela Graber

Patient's view

«Im Laufe meiner Behandlungen wurde mir klar, dass Ärzte nur aufgrund von Aussagen von Patienten «wissen», wie sich zum Beispiel ein Test, eine Behandlung oder ein Eingriff anfühlt. Deshalb finde ich es auch gut, dass beim Swiss Brain Health Plan Patienten ihre Erfahrungen, Empfindungen und Wünsche mitteilen können.»



Prof. Dr. med. Urs P. Mosimann

Direktor Medizin, Inselspital, Universitätsspital Bern

«Prävention ist eine Lebenshaltung. Viele chronische Hirn-Erkrankungen können durch Prävention beeinflusst werden. Die Wissenschaft wird zeigen, wie wir gesund altern können.»





Martin Fankhauser

Patient's view

Vertreter des Berner Bündnis gegen Depression BBgD

«Wenn ich eine Grippe habe, bleibe ich zu Hause und melde mich krank. Bei einer depressiven Episode beisse ich mich durch und versuche mir bei der Arbeit nichts anzumerken. Was läuft hier falsch? Wir sollten viel mehr über psychische Gesundheit reden und das Thema auch nicht Betroffenen zugänglicher und somit verständnisvoller machen!»

Prof. Dr. Thomas H. Zurbuchen

Professor and leader of the Space Programs, ETH Zurich | Head of science at NASA 2016-2022

"NASA has stood as a beacon of leadership and innovation since its inception, embodying the spirit of President Kennedy's words: 'We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard.' Over the past decade, NASA has become a shining example of the power of public-private partnerships to accelerate progress and achieve goals that would otherwise be beyond our reach.



Similarly, the understanding of the brain and the diagnosis and treatment of brain diseases represent a challenge as monumental and potentially more impactful than many other human endeavors. This challenge profoundly affects each of our families.

In this great challenge, once again, we find an opportunity for governments, industry, private individuals, and international partners to unite in pursuit of a noble and worthy goal. Together, we can embark on a patient and determined journey of research into the boundless realm of possibilities, leveraging new diagnostic and analytical techniques. Equally importantly, this partnership must also commit to swiftly identify what is now achievable and deploy solutions 'at the speed of freedom' within the exhilarating adventure of exploring the mysteries of the brain, much as Kennedy might have envisioned.

With this endeavor, I wish you nothing but the best of luck!"

Raffaele De Rosa

Presidente del Consiglio di Stato del Cantone Ticino e direttore del Dipartimento della sanità e della socialità

«L'attenzione e la sensibilità verso la salute mentale è aumentata nel corso degli ultimi anni e questo grazie all'accresciuta sensibilizzazione, che convegni come quello odierno contribuiscono a rafforzare. Prendere consapevolezza dell'importanza della prevenzione in questo ambito è fondamentale, anche in termini di salute pubblica. Da tempo ci impegniamo sia nella presa a carico sia in progetti a favore della prevenzione della salute intesa nelle sue molteplici sfaccettature. Queste diverse dimensioni rendono ancora più importante la ricerca scientifica e il coinvolgimento di tutto il personale di cura su questi temi, così come di tutta la rete che può garantire un prezioso supporto a chiunque sia nella necessità di chiedere aiuto.»



Daniel Albrecht

Patient's view

Weltmeister und Weltcupsieger Ski alpin

«Wie einschneidend eine Hirnverletzung sein kann, ist vielen Menschen nicht bewusst. Als ehemaliger Profi-Skirennfahrer, der nach einem schweren Schädel-Hirn-Trauma wochenlang im Koma lag, weiß ich aus eigener Erfahrung, wie essenziell ein gesundes Gehirn für ein erfolgreiches, glückliches Leben ist. Die Neurorehabilitation hat mir geholfen, Hirngesundheit und körperliche Fitness wieder zu gewinnen.»



Luana Deva

Patient's view

"As someone who battled an AVM as a child and who was also faced with the emotional burden of such a diagnosis, I am deeply aware of the impact of brain disorders. We must raise awareness and prioritize holistic public health to support individuals like me. Let's unite to empower patients, caregivers, and organizations for a healthier society."



The Swiss Federation of Clinical Neuro-Societies

SFCNS Swiss Federation of Clinical Neuro-Societies

The Swiss Federation of Clinical Neuro-Societies (SFCNS) was officially founded in 2009. The SFCNS aims to formalise and structure the joint political, educational, and clinical research efforts. Regular high-level congresses shall lay the ground for communication and contacts with other medical groups working in the neuroscience field.

The SFCNS is a strong partner for all medico-political challenges in Switzerland. Representing multidisciplinary medical associations and patient groups, the SFCNS is strategically bridging interests. For translational research and education, SFCNS is a cooperative partner of the Swiss Society for Neuroscience. Via targeted projects that primarily involve HSM, the SFCNS paves the way for excellence and advances in neurological health care.

The Swiss Brain Health Plan will be developed and implemented under the umbrella of the SFCNS.

Ordinary Members



Swiss Neurological Society
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Société Suisse de Neurologie
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www.swissneuro.ch



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Società Svizzera di Neurochirurgia
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www.neuropaediatric.ch



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SWISS SOCIETY OF NEUROPATHOLOGY
SSNPath

www.ssn.uzh.ch



SSBP SWISS SOCIETY OF BIOLOGICAL PSYCHIATRY
SGBP Schweizerische Gesellschaft für Biologische Psychiatrie
SSPB Société Suisse de Psychiatrie Biologique
SSPB Società Svizzera di Psichiatria Biologica
www.ssbp.ch

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Swiss Society for
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www.sgvn.ch



SHG - Schweizerische Hirn Schlaggesellschaft
SCS - Société Cérébrovasculaire Suisse
SCS - Società Cerebrovascolare Svizzera
SSS - Swiss Stroke Society
neurovasc.ch

www.neurovasc.ch



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SOCIETY

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Extraordinary Members



Schweizerische Epilepsie-Liga
Swiss League Against Epilepsy

www.epi.ch

aphasiesuisse (...)

wenn Worte fehlen.
quand les mots font défaut.
quando le parole sfuggono.
sch'its plets mancan.

www.aphasie.org



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Für Menschen mit Hirnverletzung
und Angehörige

www.fragile.ch

Alzheimer Schweiz



Alzheimer Schweiz befürwortet den Schweizer Brain Health Plan und betont, die Wichtigkeit die Hirngesundheit kontinuierlich über das ganze Leben hinweg zu stärken, um das Risiko von Alzheimer und anderen Demenzerkrankungen zu minimieren. Es ist von zentraler Bedeutung, das Bewusstsein der Gesellschaft für die Gesundheit des Gehirns zu schärfen und die Kenntnisse über Präventionsmöglichkeiten, selbst bei bereits bestehender Diagnose der breiten Öffentlichkeit bekannter zu machen. Mit einem integrativen und multiprofessionellen Vorgehen streben wir an, in Zusammenarbeit mit den Betroffenen, alltagstaugliche und individuell zugeschnittene Präventionsstrategien zu schaffen, die einen dauerhaften gesundheitlichen Nutzen bieten.

www.alzheimer-schweiz.ch

demenzworld



Demenz gehört im Westen zu den häufigsten Krankheiten älterer Menschen. Sie ist unheilbar und führt zum Tod. Im deutschsprachigen Raum sind rund 2 Millionen Menschen betroffen. Jede erkrankte Person wird von 2-3 Angehörigen meist während einer langen Zeit zu Hause betreut.

Menschen brauchen in Notsituationen Anlaufstellen, die verlässliche Informationen und Gemeinschaft bieten. Der Verein demenzworld will im deutschsprachigen Europa zur innovativsten und bewegendsten Kraft für die Unterstützung von Angehörigen sowie für die Enttabuisierung und Integration von Demenzbetroffenen in die Gesellschaft werden.

Wir treiben das nötige gesellschaftliche Umdenken in attraktiven - physischen & digitalen - Formaten voran und bieten eine wertvolle Heimat für Angehörige.

Im Jahr 2024 planen wir, in der Schweiz zusätzlich ein öffentliches Festival zum Thema Brain Health / Prävention zu lancieren.

Dr. Dominik Isler
Vereinspräsident

www.demenzworld.com

Den Weg gemeinsam bestreiten

Auf dem Weg zurück in ein selbstbestimmtes Leben werden Betroffene und Angehörige neben Ungewissheit meist von Ängsten, Sorgen und unzähligen Fragen geplagt. Zurück zuhause ist häufig nichts mehr so, wie es vor der Hirnverletzung war. Es stellen sich völlig neue Herausforderungen für die Betroffenen, die nun plötzlich komplett auf sich alleine gestellt sind. FRAGILE Suisse bietet neben individueller und langfristiger Begleitung Orientierungshilfe und zielgerichtete Angebote, damit Betroffene und Angehörige diesen Weg nicht alleine bestreiten müssen. Dabei steht das Ziel, ihre Selbstständigkeit und ihre Inklusion in die Gesellschaft zu fördern und ihnen neuen Lebensmut zu schenken, im Vordergrund.

www.fragile.ch

kosek



There are currently between 6'000 and 8'000 known rare diseases. Eighty per cent of them are of genetic origin. A disease is defined as rare if it occurs in less than 5 cases per 10'000 inhabitants. In Switzerland, around 600'000 people are said to be affected. In 2014, the Swiss Federal Council adopted the National Plan for Rare Diseases to ensure that patients with rare diseases and their families receive the same care as other patients. In 2017, the National Coordination for Rare Diseases (kosek) was established. In a quality-assurance procedure, kosek recognises Centres for rare diseases for people without a diagnosis and Reference Centres for people with a diagnosis of a rare disease. Kosek believes that patients are actors of their health, with specific needs, values and their own perspective, and therefore consistently involves them in all its projects as full partners.

According to WHO, for conditions affecting the brain, health and social care require a holistic person-centred approach and interdisciplinary collaborations. Kosek promotes this very important approach in the field of rare diseases through enabling caregivers and patients' organisations to develop national networks. The goal of these national networks for patients is to have access to services in their language, and to ensure health equity within Switzerland. Kosek welcomes the Swiss Brain Health Plan and is looking forward to an open dialogue about potential collaborations where needed.

Dr. med. J.-B. Wasserfallen
MPP, president of kosek

Dr. med. F. Barazzoni MPH
head of the evaluation group of kosek

www.kosekschweiz.ch

MS Gesellschaft



Mindestens 15'000 Menschen in der Schweiz sind von Multipler Sklerose betroffen. Und jeden Tag erhält ein weiterer Mensch die Diagnose MS. Sie verändert das Leben von Betroffenen, Familie und Partnern radikal. Zum Wesen dieser chronischen und unheilbaren Krankheit gehört es, dass durch Entzündungen im zentralen Nervensystem Nervenzellen geschädigt werden, was sich physisch in Symptomen wie Seh- und Gleichgewichtsstörungen, Lähmungen, aber auch kognitiv in grosser Müdigkeit und Konzentrationsschwächen zeigt. Die Fähigkeit des menschlichen Gehirns, auf diese Einschränkungen zu reagieren, sich anzupassen und neue Wege zu finden, Impulse an die richtigen Stellen zu transportieren, ist von zentraler Bedeutung. Für die Lebensqualität Betroffener, aber auch ihres ganzen sozialen Umfelds, fördert die Schweiz. MS-Gesellschaft erfolgversprechende Forschungsprojekte und unterstützt mit einem umfassenden Dienstleistungs- und Beratungsspektrum in allen Landesteilen, sowie Ferien- und Entlastungsangeboten.

www.multiplesklerose.ch

Parkinson Schweiz



Seit über 35 Jahren stehen wir Betroffenen und ihren Angehörigen in allen Fragen rund um Parkinson zur Seite. Die Schwerpunkte unseres Angebots sind:

- Persönliche Beratung: Rat und Kontaktvermittlung in den Bereichen Sozialversicherungen, Pflege und Selbsthilfe
- Umfassende Information: Broschüren, Journal, Newsletter und Informationstagungen in Zusammenarbeit mit Partner-Kliniken
- Langjährige Forschung: Finanzielle Unterstützung ausgewählter Forschungsprojekte

Parkinson Schweiz organisiert und unterstützt in allen Sprachregionen der Schweiz ein breites Angebot an Seminaren, Kursen und Ferien – finanziert durch Spenden, Legate, Mitgliederbeiträge, Beiträge der öffentlichen Hand und Sponsoring.

www.parkinson.ch

Schweizerische Epilepsie-Liga und Epi-Suisse

Gemeinsames Statement



epi suisse

Gemeinsam engagieren wir uns in der Schweiz für Menschen mit Epilepsie und ihre Angehörigen – die Epilepsie-Liga als Fachgesellschaft und ausserordentliches Mitglied der SFCNS, Epi-Suisse als Patientenorganisation.

Wir begrüssen den Swiss Brain Health Plan und werden ihn nach Kräften unterstützen. Epilepsie gehört zu den häufigsten chronischen neurologischen Krankheiten, über die zudem noch viele Vorurteile bestehen. Ein substantieller Teil aller erworbenen Epilepsien, vor allem derjenigen im höheren Lebensalter, könnte durch Prävention verhindert werden. Zudem werden Menschen mit bestehenden Epilepsien von einer besseren Awareness für ein gesundes Gehirn profitieren.

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Swiss Brain Health Plan Kick-off Stakeholder Meeting - Program

Wednesday, 22 November 2023

12:00-13:00 Welcome coffee & registration

13:00-13:15

Welcome, introduction & video greetings

Prof. Luca Remonda, MD, Department of Neuroradiology, Cantonal Hospital Aarau | SFCNS President

Christine Bulliard-Marbach, Nationalrätin, Fribourg

Nora Kronig Romero Leiterin Abteilung Internationales, Vizedirektorin, Bundesamt für Gesundheit BAG, Bern

Prof. Claudio L. A. Bassetti, MD, Department of Neurology, Inselspital, University Hospital, University of Bern | Chair of SBHP

13:15-14:15

The burden of neurological and psychiatric disorders

Chairs: Prof. Sebastian Walther, MD, University Hospital of Psychiatry and Psychotherapy, University of Bern | Assessor SSBP

Prof. Caroline Pot, MD, Department of Neurology, Lausanne University Hospital, University of Lausanne

13:15-13:35

Burden and stigma: the patient's voice

Gudrun Schumacher, Vereinigung Dravet Syndrom Schweiz, Zurich

13:35-13:55

The burden of neurological disorders

Prof. Paul Boon, MD, Department of Neurology, Ghent University, Gent, Belgium | EAN President

13:55-14:15

The burden of psychiatric disorders

Prof. Erich Seifritz, MD, Department of Psychiatry, Psychotherapy and Psychosomatics, Psychiatric University Hospital, University of Zurich

14:15-14:55

Illustrative examples I

Chairs: Prof. Isabelle Wanke, MD, Hirslanden Klinik Zurich | SSNR President

Prof. Suzanne L. Dickson, MD, Department of Physiology/Endocrine, Institute of Neuroscience and Physiology, The Sahlgrenska Academy at the University of Gothenburg, Sweden | EBC President

14:15-14:25

Stroke in children and adults

Prof. Urs Fischer, MD, Department of Neurology, University Hospital Basel, University of Basel | SNG Vice-President

14:25-14:35

Dementia

Prof. Giovanni Frisoni, MD, Memory Center, Department of Rehabilitation and Geriatrics, Geneva University Hospitals, University of Geneva

14:35-14:45

Epilepsy in children and adults

Prof. Barbara Tettenborn, MD, Bellevue Medical Group AG, Zurich

14:45-14:55

Concussion and TBI in children and adults

Prof. Raphael Guzman, MD, Department of Neurosurgery, University Hospital Basel, University of Basel | SFCNS Vice-President

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14:55-15:35

Illustrative examples II

Chairs: Prof. Andreas Kleinschmidt, MD, Department of Neurology, Geneva University Hospitals, University of Geneva | SKG President

Prof. Susanne Walitza, MD, Department of Child and Adolescent Psychiatry and Psychotherapy, Psychiatric University Hospital, University of Zurich

14:55-15:05

Migraine in children and adults

Prof. Susanne Wegener, MD, Department of Neurology, Clinical Neuroscience Center, University Hospital, University of Zurich

15:05-15:15

Rare disorders: the example of SMA

Prof. Andrea Klein, MD, Division of Neuropaediatrics, Development and Rehabilitation, Department of Paediatrics, Inselspital Bern, University Hospital, University of Bern

15:15-15:25

MS in children and adults

Anette Hackenberg, MD, University Children's Hospital Zurich, University of Zurich

15:25-15:35

Depression in children and adults

Prof. Indrit Bègue, Dr. phil., Department of Psychiatry, University Hospitals of Geneva, University of Geneva

15:35-16:15

Coffee break

16:15-16:55

Brain plans to reduce the burden of neurological and psychiatric disorders

Chairs: Prof. Peter Falkai, MD, Clinic for Psychiatry and Psychotherapy Ludwig-Maximilians-University Munich, Germany | EPA President

Prof. Elena Moro, MD, Department of Psychiatry, Neurology and Neurological Rehabilitation, CHU, Grenoble Alpes, Grenoble, France | EAN President-Elect

16:15-16:35

Intersectoral global action plan of the WHO

Dr. Katrin Seeher, Mental Health Specialist, WHO, Geneva

16:35-16:55

Swiss Brain Health Plan

Prof. Claudio L. A. Bassetti, MD, Department of Neurology, Inselspital, University Hospital, University of Bern | Chair of SBHP

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Wednesday, 22 November 2023

16:55-17:45

Roundtable

Chairs: Prof. Thomas Zeltner, MD, Präsident, Schweizerisches Rotes Kreuz, Bern

Prof. Claudio L. A. Bassetti, MD, Department of Neurology, Inselspital, University Hospital, University of Bern | Chair of SBHP

Lukas Engelberger, PhD, Gesundheitsdepartement des Kantons Basel-Stadt, Regierungsrat | GDK Präsident, Basel

Prof. Renaud du Pasquier, MD, Department of Neurology, Lausanne University Hospital, University of Lausanne

Prof. Jürg Kesselring, MD, Department of Neurology and Neurorehabilitation, Kliniken Valens Rehasentrum, Valens

Prof. Anita Lüthi, PhD, Department of Fundamental Neurosciences, University of Lausanne | President Swiss Society for Neuroscience (SSN)

Prof. Arnaud Perrier, MD, Direction médicale Hôpitaux Universitaires de Genève, Geneva

Prof. Indrit Bègue, Dr. phil., Department of Psychiatry, University Hospitals of Geneva, University of Geneva

17:45-18:00

Farewell & closing

Prof. Luca Remonda, MD, Department of Neuroradiology, Cantonal Hospital Aarau | SFCNS President

18:00-19:00

Apéro in the foyer

The Swiss Brain Health Plan 2023-2033 - CTN publication



clinical and translational
neuroscience



Project Report

The Swiss Brain Health Plan 2023–2033

Claudio L. A. Bassetti^{1,*}, Mirjam R. Heldner¹, Kristina Adorjan², Emiliano Albanese³, Gilles Allali⁴, Marcel Arnold¹, Indrit Bëgue⁵, Murielle Bochud⁶, Andrew Chan¹, Kim Q. do Cuénod⁷, Renaud Du Pasquier⁸, Bogdan Draganski⁸, Mohamed Eshmaewy⁹, Ansgar Felbecker¹⁰, Urs Fischer¹¹, Annika Frahsa¹², Giovanni B. Frisoni¹³, Harald Grossmann¹⁴, Raphael Guzman¹⁵, Annette Hackenberg¹⁶, Martin Hatzinger¹⁷, Marcus Herdener¹⁸, Albert Hofman¹⁹, Andrea M. Humm²⁰, Simon Jung¹, Michael Kaess²¹, Christian Kätterer²², Jürg Kesselring²³, Andrea Klein²⁴, Andreas Kleinschmidt²⁵, Stefan Klöppel²⁶, Nora Kronig²⁷, Karl-Olof Lövblad²⁸, Anita Lüthi²⁹, Philippe Lyrer¹¹, Iris-Katharina Penner¹, Caroline Pot⁸, Quinn Rafferty³⁰, Peter S. Sandor³¹, Hakan Sarikaya¹, Erich Seifritz¹⁸, Shayla Smith³⁰, Lukas Sveikata³², Thomas P. Südhof³³, Barbara Tettenborn³⁴, Paul G. Unschuld⁹, Anna M. Vicedo Cabrera¹², Susanne Walitza³⁵, Sebastian Walther², Isabel Wancke³⁶, Michael Weller³⁷, Susanne Wegener³⁸, Petra Zalud¹⁴, Thomas Zeltner³⁹, Daniel Zutter⁴⁰ and Luca Remonda⁴¹



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- 1 Department of Neurology, Inselspital, University Hospital, University of Bern, Freiburgstrasse 16, 3010 Bern, Switzerland; mirjam.heldner@insel.ch (M.R.H.); marcel.arnold@insel.ch (M.A.); andrew.chan@insel.ch (A.C.); simon.jung@insel.ch (S.J.); iris-katharina.penner@insel.ch (I.-K.P.); hakan.sarikaya@insel.ch (H.S.)
- 2 University Hospital of Psychiatry and Psychotherapy, University of Bern, Bolligenstrasse 111, 3000 Bern, Switzerland; kristina.adorjan@med.uni-muenchen.de (K.A.); sebastian.walther@upd.unibe.ch (S.W.)
- 3 Institute of Public Health, Faculty of Biomedicine, Università della Svizzera Italiana (USI), Via Buffi 13, 6900 Lugano, Switzerland; emiliano.albanese@usi.ch
- 4 Leinars Memory Center, Lausanne University Hospital, University of Lausanne, Chem. de Mont-Paisible 16, 1011 Lausanne, Switzerland; gilles.allali@chuv.ch
- 5 Department of Psychiatry, University Hospitals of Geneva, University of Geneva, Rue Gabrielle-Perret-Gentil 4, 1211 Geneva, Switzerland; indrit.sinanaj@unige.ch
- 6 Unisanté, University Center for Primary Care and Public Health, University of Lausanne, Route de la Corniche 10, 1010 Lausanne, Switzerland; murielle.bochud@chuv.ch
- 7 Department of Psychiatry, Centre for Psychiatric Neuroscience, Lausanne University Hospital, University of Lausanne, Route de Cery 1, 1008 Prilly, Switzerland; kimquang.docuénod@unil.ch
- 8 Department of Neurology, Lausanne University Hospital, University of Lausanne, Rue du Bugnon 46, 1005 Lausanne, Switzerland; renaud.du-pasquier@chuv.ch (R.D.P.); bogdan.draganski@chuv.ch (B.D.); caroline.pot-kreis@chuv.ch (C.P.)
- 9 Geriatric Psychiatry Service, Department of Psychiatry, University of Geneva, Rue Gabrielle-Perret-Gentil 4, 1211 Geneva, Switzerland; mohamed.eshmaewy@hcuge.ch (M.E.); paul.unschuld@hcuge.ch (P.G.U.)
- 10 Clinic for Neurology, Cantonal Hospital St. Gallen, Rorschacherstr. 95, 9007 St. Gallen, Switzerland; ansgar.felbecker@kssg.ch
- 11 Department of Neurology, University Hospital Basel, University of Basel, Petersgraben 4, 4031 Basel, Switzerland; urs.fischer@usb.ch (U.F.); philippe.lyrer@usb.ch (P.L.)
- 12 Institute of Social and Preventive Medicine, University of Bern, Mittelstrasse 43, 3012 Bern, Switzerland; annika.frahsa@unibe.ch (A.F.); anamaria.vicedo@unibe.ch (A.M.V.C.)
- 13 Memory Center, Department of Rehabilitation and Geriatrics, Geneva University Hospitals, University of Geneva, Rue Gabrielle-Perret-Gentil 4, 1211 Geneva, Switzerland; giovanni.frisoni@hcuge.ch
- 14 Institute for Medicine and Communication Ltd., Basel, Münsterberg 1, 4001 Basel, Switzerland; harald.grossmann@imk.ch (H.G.); petra.zalud@imk.ch (P.Z.)
- 15 Department of Neurosurgery, University Hospital Basel, University of Basel, Spitalstrasse 21, 4031 Basel, Switzerland; raphael.guzman@unibas.ch
- 16 University Children's Hospital Zurich, University of Zurich, Steinwiesstrasse 75, 8032 Zurich, Switzerland; annette.hackenberg@kispi.uzh.ch
- 17 Clinics for Psychiatry, Psychotherapy and Psychosomatics, Psychiatric Services, Hospital of Solothurn, Weissensteinstrasse 102, 4503 Solothurn, Switzerland; martin.hatzinger@spital.so.ch
- 18 Department of Psychiatry, Psychotherapy and Psychosomatics, Psychiatric University Hospital, University of Zurich, Lenggstrasse 31, 8008 Zurich, Switzerland; marcus.herdener@bli.uzh.ch (M.H.); erich.seifritz@bli.uzh.ch (E.S.)
- 19 Department of Epidemiology, Harvard T.H. Chan School of Public Health, 667 Huntington Avenue, Boston, MA 02115, USA; ahofman@hsph.harvard.edu

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- 20 Neurology Unit, Department of Medicine, Cantonal Hospital Fribourg, Chemin des Pensionnats 2/6, 1752 Villars-sur-Glâne, Switzerland; andrea.humm@h-fr.ch
- 21 University Hospital of Child and Adolescent Psychiatry and Psychotherapy, University Hospital, University of Bern, Bolligenstrasse 111, 3000 Bern, Switzerland; michael.kaess@upd.ch
- 22 REHAB Basel AG, Im Burgelderhof 40, 4055 Basel, Switzerland; ch.kaetterer@rehab.ch
- 23 Department of Neurology and Neurorehabilitation, Kliniken Valens Rehasentrum, Quaderstrasse 7, 7317 Valens, Switzerland; juerg.kesselring@kliniken-valens.ch
- 24 Division of Neuropaediatrics, Development and Rehabilitation, Department of Paediatrics, Inselspital Bern, University Hospital, University of Bern, Freiburgstrasse 15, 3010 Bern, Switzerland; andrea.klein@insel.ch
- 25 Department of Neurology, Geneva University Hospitals, University of Geneva, Avenue de Champel 41, 1206 Geneva, Switzerland; andreas.kleinschmidt@hcuge.ch
- 26 Department of Old Age Psychiatry and Psychotherapy, University Hospital, University of Bern, Bolligenstrasse 111, 3012 Bern, Switzerland; stefan.kloepfel@upd.ch
- 27 Bundesamt für Gesundheit (BAG), Schwarzenburgstrasse 157, 3097 Liebefeld, Switzerland; nora.kronig@bag.admin.ch
- 28 Department of Radiology and Medical Informatics, Geneva University Hospitals, University of Geneva, 4 Rue Gabrielle-Perret-Gentil, 1211 Geneva, Switzerland; karl-olof.lovblad@unige.ch
- 29 Department of Fundamental Neurosciences, University of Lausanne, Rue du Bugnon, 1011 Lausanne, Switzerland; anita.luthi@unil.ch
- 30 Institute for Health Metrics and Evaluation, University of Washington, 15th Avenue NE, Seattle, WA 98105, USA; quinn.rafferty@gmail.com (Q.R.); smith.shayla@gmail.com (S.S.)
- 31 Neurology ZURZACH Care AG, Quellenstrasse 34, 5330 Bad Zurzach, Switzerland; peter.sandor@zurzachcare.ch
- 32 Department of Neurology, Department of Clinical Neurosciences, Geneva University Hospitals, University of Geneva, Avenue de Champel 41, 1206 Geneva, Switzerland; lukas.sveikata@hcuge.ch
- 33 Department of Molecular and Cellular Physiology, Howard Hughes Medical Institute, Stanford University School of Medicine, 265 Campus Drive, Stanford, CA 94305-5453, USA; tcs1@stanford.edu
- 34 Bellevue Medical Group AG, Theaterstrasse 8, 8001 Zurich, Switzerland; barbara.tettenborn@kssg.ch
- 35 Department of Child and Adolescent Psychiatry and Psychotherapy, Psychiatric University Hospital, University of Zurich, Lenggstrasse 31, 8032 Zurich, Switzerland; susanne.walitzka@puk.zh.ch
- 36 Hirslanden Klinik Zurich, Witellikerstrasse 40, 8032 Zurich, Switzerland; isabel.wanke@hirslanden.ch
- 37 Department of Neurology, University Hospital Zurich, University of Zurich, Gynaecological Clinic Street 26, 8091 Zurich, Switzerland; michael.weller@usz.ch
- 38 Department of Neurology, Clinical Neuroscience Center, University Hospital, University of Zurich, Gynaecological Clinic Street 26, 8091 Zurich, Switzerland; susanne.wegener@usz.ch
- 39 WHO Foundation, Chemin des Mines 2, 1202 Geneva, Switzerland; t.zel@bluewin.ch
- 40 Neurologisches Rehabilitationszentrum, Rehaklinik Zihlschlacht AG, Hauptstrasse 2, 8588 Zihlschlacht-Sitterdorf, Switzerland; d.zutter@rehaklinik-zihlschlacht.ch
- 41 Department of Neuroradiology, Cantonal Hospital Aarau, Tellstrasse 25, 5001 Aarau, Switzerland; luca.remonda@ksa.ch
- * Correspondence: claudio.bassetti@insel.ch

Abstract: The brain and its health are essential for our (physical mental, social, and spiritual) wellbeing, for being able to realize our potential as individuals, and also for a fair, well-functioning, and productive society. However, today the world is facing a healthcare crisis related to the very high (and increasing) burden of brain disorders. As a response to this crisis, the “Swiss Brain Health Plan” (SBHP) was conceptualized in the context of other initiatives launched to value, promote, and protect brain health over the entire life course. In the first section of this position paper, the following fundamental considerations of the SBHP are discussed: (1) the high (and increasing) burden of brain disorders in terms of prevalence (>50% of the population suffers from a brain disorder), disability, mortality, and costs; (2) the prevention of brain disorders; (3) the operational definition of brain health; (4) determinants of brain health; (5) international initiatives to promote brain (including mental) health including the World Health Organization (WHO) intersectorial global action plan on epilepsy and other neurological disorders (NDs) (IGAP) and the WHO comprehensive mental health action plan. In the second section of the paper, the five strategic objectives of the SBHP, which has the vision of promoting brain health for all across the entire life course, are presented: (1) to raise awareness; (2) strengthen cross-disciplinary and interprofessional training/educational programs for healthcare professionals; (3) foster research on brain health determinants and individualized prevention of brain disorders; (4) prioritize a holistic (non-disease-specific), integrated, person-centered public health

approach to promote brain health and prevent brain disorders through collaborations across scientific, health care, commercial, societal and governmental stakeholders and insurance providers; (5) support, empower, and engage patients, caregivers, and patient organizations, and reduce the stigma and discrimination related to brain disorders. In the third section of the paper, the first (2024) steps in the implementation of the SBHP, which will be officially launched in Zurich on 22 November 2023, are presented: (1) a definition of the overall organization, governance, specific targets, and action areas of the SBHP; (2) the patronage and/or co-organization of events on such specific topics as brain research (Lausanne), dementia (Geneva), stroke (Basel), neurohumanities (Bellinzona), sleep (Lugano), and psychiatry (Zurich); (3) the conduction of a new study on the global burden of brain disorders in Switzerland; (4) the launching of an international Certificate of Advanced Studies (CAS) on Brain Health at the University of Bern. In the fourth section of the paper, there is a concise executive summary of the SBHP.

Keywords: brain health; World Health Organization; promoting brain health

1. Introduction

Our brain plays a crucial role in all aspects of our life; it is essential for cognitive, motor, and sensory functions, as well as our experiences, emotions, and behavior. In addition, it influences vascular, endocrine, and immunological processes in our body. Eventually, the brain and its health are essential for our individual (physical mental, social, and spiritual) wellbeing, for being able to unlock our potential (in terms of knowledge, skills, and creativity) as individuals, as well as for the sustainable development of a fair, well-functioning, and productive society [1].

The key role of a healthy brain in our life stands in contrast to the limited awareness among the public and health professionals regarding the very high burden of brain disorders (see Appendix A.1), the growing possibilities to diagnose, treat, rehabilitate, and prevent them, and the opportunities to promote brain health and resilience throughout the entire lifespan [2–4]. Brain disorders, both MDs and NDs, affect millions of people worldwide. According to the World Health Organization (WHO), and recent peer-reviewed publications, more than one in three persons are affected by a ND and at least one in three are affected by a mental (psychiatric) disorder (MD) [3–6].

Until today, brain health and brain disorders have often been neglected, particularly concerning prevention strategies and compared to other non-communicable diseases. Accordingly, most countries lack brain health education and promotion policies. The prevention of brain disorders is underprioritized, under the presumed outdated assumption that little can be done to reduce individual and population risk [4]. Moreover, there is a significant shortage of healthcare professionals worldwide for diagnosing and treating brain disorders, including in several European and other Western, high-income countries [7–10]. Finally, research, teaching, and public awareness on brain disorders and brain health remain markedly underfunded [1].

Brain health, which includes mental health [12], can be conceived as a public good in which a coordinated collective financial, material, and cultural investment carries the potential for significant societal benefits for both present and future generations.

This paper, which represents the work of a consortium of almost 60 clinicians and scientists across multiple disciplines and career stages within the country, presents the data, conceptual framework, and considerations upon which the initiative is built, along with the first concrete measures to implement a National Plan to promote Brain Health for all and across the entire life course in Switzerland (SBHP) [13].

2. Section 1: The Fundamental Considerations of the Swiss Brain Health Plan

2.1. The Burden of Brain Disorders

For different reasons, the prevalence and burden of brain disorders have been underestimated for a long period of time [14,15]. The first large study was performed in 30 European countries in 2010, included 9 neurological and 10 mental disorders, and estimated that in that year, >50% of people living in Europe had a brain disorder for a total estimated cost of EUR 798 billion (of which 63% were indirect costs). These costs exceeded the estimated costs of cardiovascular disorders, cancer, and diabetes, and represented 45% of the annual health budget of Europe (Figure 1) [16,17].

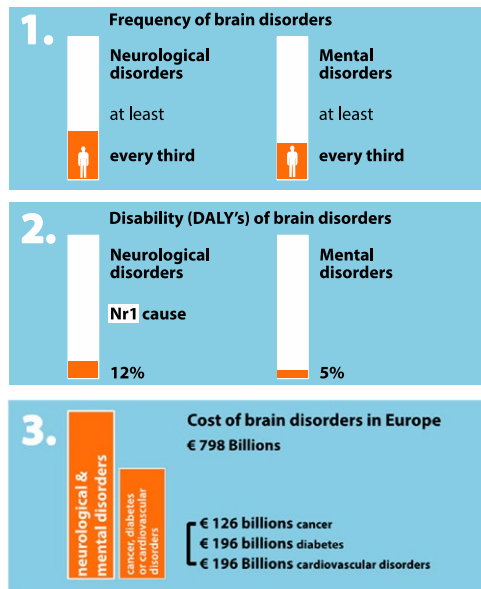


Figure 1. The burden of brain (neurological and mental) disorders. A direct comparison of the economic burden across different disorders is possible only with data dating from a decade ago [2,3,5,16,18–20] (Figure: Alain Blank, Bern).

2.2. The Burden of Neurological Disorders

It is only in the last decade that the burden of NDs including dementia, stroke, epilepsy, headache, Parkinson's disease, multiple sclerosis, sleep-wake disorders, brain tumors, traumatic brain injury, and neuromuscular and rare diseases has been appropriately studied and fully recognized (Figure 1) [16,21].

The prevalence of NDs in the general population was estimated in two recent systematic reviews of studies conducted in Europe and worldwide to be over 30% [2,3,22]. These studies also found that NDs are the leading cause of disability (expressed in so-called DALYs—disability adjusted life years—which refer to years of healthy life lost to premature death and disability), and the second (worldwide) and third (Europe-wide) leading cause of death (Figure 1) [2–4]. The proportion of global DALYs attributed to NDs was estimated in 2016 to be 11.6% [22]. The three largest contributors to disability in 2016 were stroke

(42%), migraine (16%), and dementia (10%). Migraine, multiple sclerosis, and tension-type headache were more common and caused more of a burden in females. Children from underprivileged households, ethnic minorities, refugees, and migrants were disproportionately affected [23].

The burden of NDs has increased from 1990 to 2016 (39% more in terms of disability; 15% more in terms of mortality) [2]. This increase is in part due to the increasing age of the population but it might also suggest that the primary prevention strategies (e.g., for stroke) are still insufficient in terms of effectiveness or implementation [2]. The COVID-19 pandemic has been exacerbated by multiple neurological complications with a consequent increase in the burden of NDs [24,25].

The European Academy of Neurology (EAN) is currently completing an in-depth analysis on the costs of 18 NDs across 47 European countries (including Switzerland), which is expected to be published in 2024. Recent studies have estimated the global societal costs of single NDs such as dementia (equivalent to 1.5% of the global GDP) and sleep disorders (between 1.3% and 2.9% of the GDP across five OECD countries) [23,26].

2.3. The Burden of Mental (Psychiatric) Disorders

MDs are defined in the two major classification systems (DSM-5-TR and ICD-11) as disorders of thought, emotions, and behaviors that impair functional abilities and relationships with others, and are associated with suffering.

The prevalence of MDs was estimated to be around 30% in two studies conducted in Germany and worldwide [5,6]. In 2019, the proportion of global DALYs attributed to MDs was estimated to be 4.9% [5]. Depression was the leading cause of disability due to MDs. An important characteristic of MDs is their common onset in the first half of life, affecting a growing number of young people [27].

Recent studies indicate that the incidence of MDs has increased over the past two decades, specifically in adolescents and adults aged <55 years [5,28]. The COVID-19 pandemic has been marked by numerous psychiatric complications including a 28% increase in major depressive disorders and a 26% rise in anxiety disorders [24,29].

Finally, the mortality of MDs is non-negligible and includes over 800,000 annual suicides worldwide [30] and deaths related to poor health behaviors or substance abuse. Notably, among young people 15–29 years of age, suicide is the second leading cause of death globally [30]. As a consequence, patients with severe MDs have a reduced life expectancy of up to 25 years compared to that of the general population [31].

2.4. The Burden of Brain (Neurological and Mental) Disorders in Switzerland

The burden of brain disorders in Switzerland has been estimated by the 2010 European Brain Study, which included 19 brain disorders [16]. This study suggested that 5.7 of the 7.8 million people living in Switzerland in 2010 had a brain disorder. The total costs of care of brain disorders were estimated to exceed 14.5 billion/year [16,32].

A subsequent analysis devoted specifically to the burden of NDs in Switzerland estimated that in 2010, the nine NDs included in the analysis affected over 3.3 million people with the following prevalence: headache (2,359,744 persons), sleep disorders (682,598), dementias (124,218), stroke (71,156), epilepsy (38,150), Parkinson's disease (17,624), multiple sclerosis (7669), neuromuscular diseases ($n = 3894$), and brain tumors (3504). For some of these NDs (e.g., multiple sclerosis; sleep disorders), specialists estimate that these prevalences are/were even higher.

In addition to these common NDs, there are around 600,000 individuals affected by rare diseases (defined as a prevalence of <5 per 10,000 inhabitants) in Switzerland, many of which can lead to a wide range of neurological symptoms.

The Brain Health Atlas initiative (<https://brainhealthatlas.org> (accessed on 12 October 2023)), estimated the DALYs for Switzerland in 2021 (<https://brainhealthatlas.org/factsheet> (accessed on 12 October 2023)), see also Figure 2). The most important results can be summarized as follows: (1) The estimated burden of brain disorders varies significantly

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across age groups. While the age group of 80–84-year-olds was estimated to experience the largest number (35,085) of brain disorder DALYs in 2019 [33], the burden of brain disorders is also non-trivial among Swiss children, with a relevant impact already in children aged 10–14 (10,749 DALYs), and rising very significantly among adults aged 35–39 (26,642 DALYs); (2) Disability in NDs exceeded that in MDs by more than 25%. Headache disorders (including both migraine and tension-type headaches) cause the highest age-standardized rates of health loss related to brain disorders in Switzerland, as it is the case for many other European countries. This burden is driven by a large and increasing prevalence; (3) One large driver of DALYs across all ages, not only the elderly, is represented by depressive disorders. Approximately 391,056 Swiss people were living with depressive disorders in 2019, representing an increase of 4% from the number in 1990 [33].

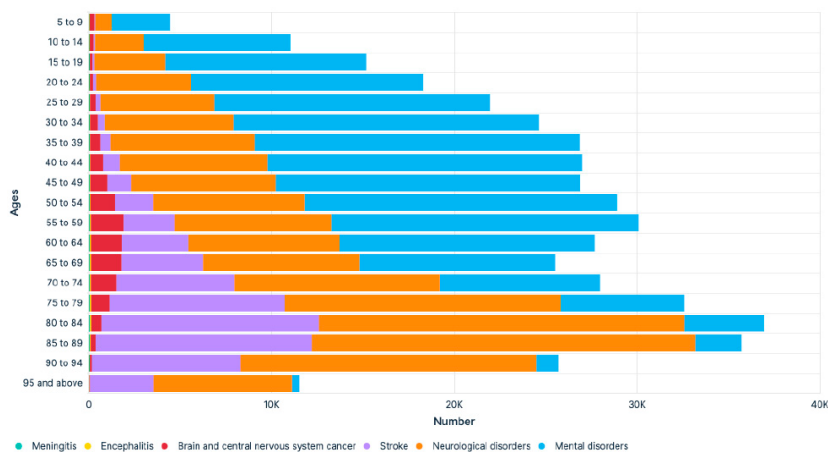


Figure 2. The disability related to brain disorders in Switzerland in 2021. The disability, as expressed in the years of healthy life lost (DALYs), due to different brain disorders varies across the life course and reaches the highest value at the age of 80–84 (data from the “Brain Health Atlas”, <https://brainhealthatlas.org> (accessed on 12 October 2023)). Noteworthy, in this representation, stroke, meningitis/encephalitis, and brain/central nervous system cancer are listed separately from other neurological disorders.

3. Prevention of Brain Disorders

In recent decades, neurology has evolved from a predominantly diagnostic to an increasingly therapeutic discipline [34,35]. Psychiatry has a longer tradition of treatment combining such approaches as psychotherapy, psychopharmacology, and non-invasive brain stimulation. While an increasing number of patients with brain disorders can be treated efficiently and benefit from favorable outcomes today, disease-modifying drugs and effective interventions are still insufficient (for 30% of patients with depression and most patients with neurodegenerative disorders) [8,36,37].

As a consequence, both universal and selective prevention are essential to reduce the burden of brain disorders, and should be grounded on the promotion of brain health, which in turn is rooted in brain health education (significantly, only a few sentences are devoted to the topic of “prevention of brain disorders” in standard German-language texts on social and preventive medicine [38,39]). The recent establishment of an interdisciplinary unit for the treatment and prevention of dementia at the Geneva University hospital (unité de

traitement et de prevention des démences”) documents the growing demand for preventive brain medicine in Switzerland.

Preventive neurology and psychiatry are relatively new disciplines but are increasingly based on scientific evidence [40,41]. Recent studies have estimated that up to 25% of epilepsies, 40% of dementias, and over 50% of strokes could be prevented through potentially attainable relative reductions (by up to 20% less) in the prevalence of modifiable risk factors [4,42,43]. For most brain disorders, however, risk factors and determinants remain poorly known [2].

Because most risk and protective factors tend to cluster and co-occur, and are modulated by social determinants, cultural, and contextual circumstances, both individual- and population-level approaches are required to reduce risks, and also to pursue prevention through the timely detection of prodromal signs and symptoms, and of pathological hallmarks in individuals. Timely and early detection /diagnosis is important because evidence suggests that early, complex, multidomain interventions can effectively contribute to buffering and delaying the clinical manifestations and effects of brain damage. Furthermore, personalized medicine approaches, which tailor prevention and treatment based on individual risk profiles and monitor risk in specific population subgroups, hold significant potential. They can not only enhance the effectiveness of interventions but also promote sustainability, improve adherence, and ensure fidelity among target groups, health-care professionals, and all stakeholders involved in implementing prevention programs and strategies.

4. Brain Health: Definition and Relevance (“No Health without Brain Health”)

The WHO definitions of health (1948) and mental / psychological health (Mental Health, 2004) are well established, although still somewhat debated. A unifying and widely accepted definition of brain health was lacking until very recently [44–46]. While until 2005, fewer than 10 papers per year were published on the topic of “brain health”, in 2021, there were already more than 1800 [4]. Several suggestions for a definition of brain health have been published in the last 10 years [1].

Traditionally, a distinction was made between “mental health” and “brain health” on the one hand, and between NDs and MDs on the other. This dichotomy is misleading; etiological/pathophysiological overlaps are present across brain disorders and in clinical practice (e.g., in the context of the neuropsychiatric complications of COVID-19 disease or in the context of post-COVID syndrome [47]), the separation is often not possible or does not make sense [4,12,21].

On 9 August 2022, the WHO presented the position paper “Optimizing brain health across the life course”. It proposed a new definition (Figure 3) [4].

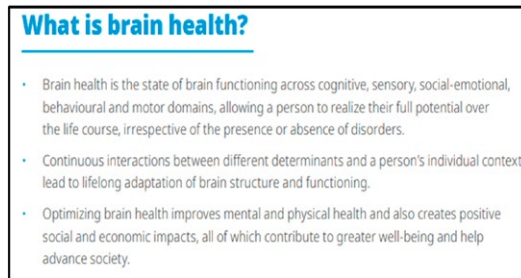


Figure 3. WHO definition of brain health.

This new holistic, person-centered definition advocates for stronger multi-sectoral and interdisciplinary collaborations in social and health systems to maximize prevention, treatment, rehabilitation, care, and the participation of patients and their families/ caregivers. However, brain health goes beyond the absence of disease—it defines a state that is essential for wellbeing, productivity, creativity and coping with life stressors (“no health without brain health”). At the same time, brain health is an important component of mental health, which is why brain health prevention measures can improve many diseases. Often considered separately, both NDs and MDs depend on brain health, on its optimal prenatal and postnatal development, and on its structural and functional maintenance across the life course.

5. Brain Health: Determinants

Numerous factors across the life course (from the prenatal stages to old age) contribute to determining and influencing brain health (Figure 4).

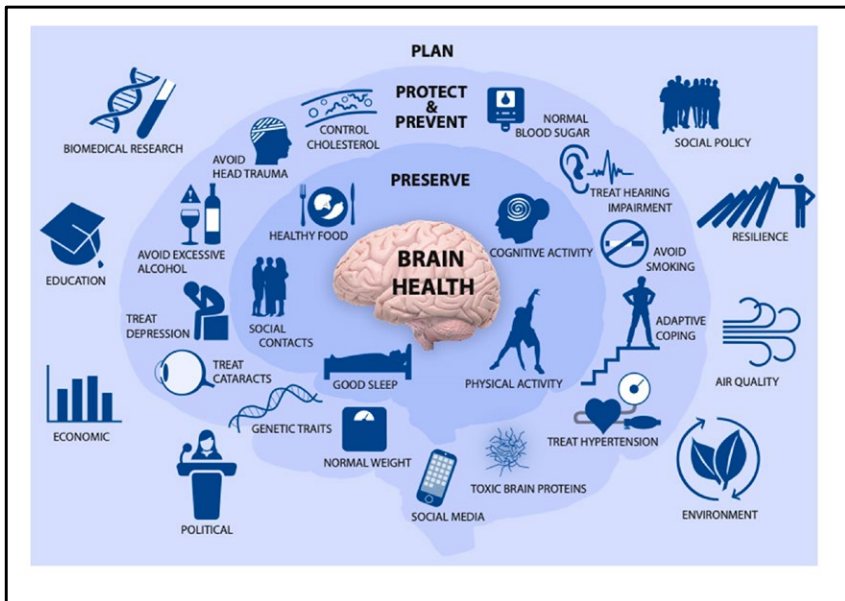


Figure 4. Factors that determine brain health throughout the lifespan (figure modified by Alain Blank, Bern, from Bassetti et al., 2022 [2]). Preserve: behaviors and factors that promote brain resilience (see also Appendix A.2). Protect/prevent: factors that decrease brain resilience (see also Appendix A.2).

Brain health and resilience (i.e., the ability to respond to structural and functional damage) are influenced by various factors, many of which are part of our daily lives. These factors include age, sex/gender, socio-economic factors, sleep, diet and food systems, physical activity, cognitive (mental) activities, social adversity, and numerous risk factors including overweight/obesity, hypertension, diabetes, hyperlipidemia, addictions (alcohol,

tobacco-related products, and specific drugs such as heroin and opioids), and genetic variation [1,4,21,48].

Other factors including education, hearing loss, visual impairment, traumatic brain injury, air pollution, excessive use of social media, weather, and other environmental factors including the built (e.g., housing, school, and workplace) and natural environment (e.g., green and blue space; the climate) may also influence our brain health [49–51]. Other more global and recently identified factors include commercial and legal determinants of health which may also impact brain health broadly and at a very upstream level [52,53].

The key to achieving optimal brain health lies ideally in adopting a holistic approach that encompasses all these factors. Interventions to promote brain health may vary from including very general and population-based to more specific (targeted) individual-based measures. Individualized and multi-domain strategies will require appropriate information, communication, motivation, and a consideration of individual values [48,54].

The WHO identifies five determining factors (physical health, healthy environments, safety and security, learning and social connection, and access to quality services) for brain health [4].

The European Academy of Neurology (EAN) has grouped risk and protective factors into the following three categories [21]: (1) preservation (see Appendix A.2): e.g., a healthy diet, good sleep, social interactions, and physical activity (see above); (2) protection: e.g., from excessive alcohol consumption, brain injury, addictions (see above), high sugar consumption, high blood lipids, and high blood pressure (see above); (3) planning: e.g., political, scientific, and public health decision-makers influence access to education, the environment, research strategies, and socio-economic conditions, which (as the COVID-19 pandemic and the invasion war against Ukraine illustrate) influence our brain and mental health [55].

A precise identification of the determinants of brain health and risk factors in brain disorders is essential for interventions at the societal and individual level. While major advances have been made in the targeted (precise) prevention of dementia and stroke [43,56,57], our understanding of risk factors and determinants for most (other) NDs and MDs remains limited [2].

More research is required for the effective prevention of many brain disorders [2,58]. Promising new approaches to foster brain health and the prevention of brain disorders include immunotherapies for dementia and demyelinating disorders, genetic approaches for neuromuscular disorders and rare diseases, and the promotion of neuroplasticity (e.g., cognitive training and sleep) to improve cognitive resilience. The identification of novel (e.g., neurophysiological, neuroimaging, and omics-related) biomarkers and the use of new technologies (e.g., brain-machine interfaces and digital health technologies) are also expected to contribute to brain health.

6. International Initiatives to Promote Brain Health

6.1. Neurological Disorders

In recent decades, several initiatives have been launched to promote the better care and prevention of single NDs including stroke and epilepsy [59,60].

The years 2020–2022 marked a paradigm shift, leading to the recognition of the importance of brain health “as a whole” and across the entire spectrum of NDs [61]. Of note is that in 2020, the World Health Organization (WHO) established a dedicated unit for “brain health” and created an intersectoral Global Action Plan (IGAP) on epilepsy and other neurological diseases [23]. This plan was adopted by the World Health Assembly on 27 May 2022. Its aims are to “improve the care, recovery, wellbeing and participation of people with neurological conditions across the life course”. The IGAP provides a comprehensive roadmap of actions for member states, international partners, and intergovernmental agencies to optimize brain health (see Table 1). With this global action plan, the WHO defines neurological diseases for the first time as a public health priority for which the member states are expected to define national action plans. This is a turning point

because health policies and plans provide the foundation for concerted actions to define attainable, and actionable goals, as well as the associated implementation steps, targets, and indicators to monitor progress.

The European Academy of Neurology (EAN) launched several activities in recent years to support the preparation and promote the approval of the intersectoral Global Action Plan of the WHO (see below). The year 2022 saw also the publication of the EAN landmark policy paper (“Brain Health: One Brain, One Life, One Approach”) and the organization of a “Brain Health Summit” (<https://vimeo.com/705339023#t=13min06s> (accessed on 12 October 2023)) attended by multiple European stakeholders including Dr. Valek, Minister of Health of the Czech Republic (which secured the Presidency of the EU Council in the second half of 2022) [4]. A second summit was organized by the EAN in 2023.

Table 1. WHO intersectoral Global Action Plan on epilepsy and other neurological disorders, 2022–2031 (adopted by the WHO Assembly in May 2022) [23].

The following five factors are essential for brain health: physical health, healthy environments, safety and security, learning and social connection, and access to quality services.

A. Strategic objectives

- (1) Raise the prioritization and strengthen governance;
- (2) Provide effective, timely, and responsive diagnosis treatment and care;
- (3) Implement strategies for promotion and prevention;
- (4) Foster research and innovation and strengthen information systems;
- (5) Strengthen the public health approach to epilepsy.

B. Guiding principles

- (1) People-centered primary health care, and universal coverage;
- (2) An integrated approach of care across the life course;
- (3) Evidence-informed policy and practice;
- (4) The empowerment and involvement of persons with neurological disorders and their carers;
- (5) Gender, equity, and human rights.

In its 2023 Strategic Neurological Research Agenda for Europe, the EAN has listed Brain Health as a key priority [58].

The European Federation of Neurological Associations (EFNA), which brings together European umbrella organizations of neurological patient advocacy groups to work with other associations in the field of neurology, was launched with the support of the EAN and other stakeholders of the “One Neurology” initiative, which was very important in the preparation and eventual approval of the IGAP [21,61].

The World Federation of Neurology (WFN) dedicated World Brain Days in 2022 and 2023 to the theme of brain health [62].

6.2. Mental (Psychiatric) Disorders

The WHO Comprehensive Mental Health Action Plan 2013–2030 builds upon its predecessor and sets out clear actions to promote mental health and wellbeing for all, to prevent mental health conditions for those at risk and to achieve universal coverage for mental health services. The action plan includes four major objectives: more effective leadership and governance for mental health; the provision of comprehensive, integrated mental health and social care services in community-based settings; the implementation of strategies for promotion and prevention; and strengthened information systems, evidence, and research [63]. Another important part of WHO’s global mandate is that devoted to a reduction in the harmful use of alcohol [64].

6.3. Brain (Neurological and Mental) Disorders

The European Commission launched the Healthier Together—EU Non-Communicable Diseases Initiative (EU NCD Initiative) in 2022 to support EU countries in identifying and implementing effective policies and actions to reduce the burden of major non-

communicable diseases (NCDs) and improve citizens' health and wellbeing [65]. The initiative covers the period 2022–2027 and includes five strands: (1) a horizontal strand on shared health determinants, focusing on population-level health promotion and the disease prevention of NCDs (complementing the actions of Europe's Beating Cancer Plan); (2) diabetes; (3) cardiovascular diseases; (4) chronic respiratory diseases; and (5) mental health and NDS. These areas were prioritized because of their significant health, societal, and economic burden. Actions on cancer, a pivotal NCD, are covered in Europe's Beating Cancer Plan. While the strands enable us to address the challenges of each disease group, the initiative as such promotes a holistic and coordinated approach to prevention and care.

The European Brain Council (EBC) has launched several initiatives to advocate for patients with brain disorders and to promote more research on brain disorders and brain health; specifically, 17 initiatives have been launched, including a policy roadmap on brain health (https://www.braincouncil.eu/wp-content/uploads/2021/03/EBC-Policy-Roadmap_FINAL.pdf (accessed on 12 October 2023)), a shared European Brain Research agenda (<https://www.ebra.eu/sebra/> (accessed on 12 October 2023)), and the organization of a summit in New York in September 2023, in light of the 78th Session of the UN General assembly, and has called for action and joint activities to promote brain health worldwide [66].

7. Section 2: The Swiss Brain Health Plan

Several national organizations (e.g., in Norway, Germany, Uruguay, and the USA [67]) have recently launched brain (health) plans. In Norway and Uruguay, the plans are rooted within the respective ministries and have been adopted by the National Parliament (TD; personal communication).

The Swiss Federation of Clinical Neurosocieties (SFCNS), which since 2009 has advocated nationally with “one voice” for patients with brain disorders [68], published in 2022 a “call for action” to conceive, design, and launch a national brain health plan actively involving all relevant stakeholders including experimental neurosciences (represented by the Swiss Society for Neuroscience), patient representatives, and organizations, health and academic organizations and insurance providers [13].

Following the publication of the “call for action” in 2022, the SFCNS has developed the vision of promoting brain health for all across the entire life course, prioritizing a holistic (i.e., non-disease-specific), integrated, person-centered public health approach and fostering collaborations across scientific, health care, commercial, societal, and governmental stakeholders and insurance providers. Strategic objectives of the Swiss Brain Health Policy encompass raising awareness, better training/education of healthcare professionals, fostering research on determinants of brain health (and more generally on brain disorders), and the promotion of a comprehensive public health approach to brain health and brain disorders. The SBHP plans to create synergies and collaborations with other existing or arising similar national and international networks (see above).

The five objectives of the SBHP are depicted in Figure 5 and detailed in the following paragraph.

- (1) To raise awareness about brain health and the burden of brain disorders.

Brain health literacy among the general population, which still has limited knowledge of the subject [69], but also among physicians and health professionals, needs to be promoted. To be better informed and educated about the possibilities to attain optimal, maintain, and promote their own brain health and to de-stigmatize brain disorders, brain health and the prevention of brain disorders should be routinely integrated into public policies and working programs on prevention and health promotion and across non-health policies and sectors, consistent with the framework of the UN Sustainable Development Goals (SDGs).

Awareness should also be improved concerning the burden of brain disorders (including those in children, which have a tremendous impact on their subsequent adult lives). Brain disorders are highly prevalent (recent estimates suggest that they may affect

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up to 50% of the Swiss population; see above), and are markedly burdensome for those who are affected, their family, and society at large. Improved awareness can also substantially contribute to collective, informed advocacy, and eventually leads to specific support activities [7–10,70,71].

- (2) To strengthen the cross-disciplinary and interprofessional training/education of healthcare professionals.

The education and training of physicians, nurses, and other health professionals should emphasize the importance of brain health and raise awareness, knowledge, and understanding about the burden of brain disorders (NDs/MDs). New and dedicated tools to promote cross-disciplinary interprofessional education should be developed. A certificate of Advanced Studies (CAS) on Brain Health will be launched by the University of Bern in Fall 2024 (see below).



Figure 5. The 5 strategic objectives of the Swiss Brain Health Plan.

- (3) To foster research on brain health determinants and the individualized prevention of brain disorders.

The knowledge about brain disorders, determinants of brain health, and the precise/individualized prevention of brain disorders is still incomplete (see above) [58,72,73]. Real progress in diagnosing and treating brain disorders will only come from an understanding of the human pathophysiology at the most basic level, from mechanistic studies in animal models, and from developing new tools for combatting that pathophysiology [73]. However, research on brain disorders (and their prevention) is generally underfunded as evidenced by several studies [74,75]. With novel scientific and methodological advances including artificial intelligence (AI), precision brain medicine will lead to the better prediction, prevention, and individualized treatment of brain disorders.

Switzerland needs to support more brain research and promote targeted activities, which could include the following: (A) In-depth/new studies could be conducted on the burden of brain disorders in Switzerland, based also on the collection of reliable data. These are lacking for most brain disorders (NDs and MDs) in Switzerland and should be considered a high priority for public health funding. In the future, the financial burden of brain disorders should include not only direct and indirect costs but also the loss of income for patients, families, and caregivers. (B) Interdisciplinary research integrating behavioral sciences as well as healthcare and health systems research could define how to raise awareness, promote healthy behaviors, and achieve the cost-effective delivery of treatment and care for patients with brain disorders. Action and dissemination plans and information sessions should also be planned to better inform the wider public about the key role of basic (including animal experimentation), translational, and clinical research data to guide a sustainable SBHP. (C) A research program and funding dedicated to brain health could be established to coordinate research and increase the impact of studies, e.g., a SNSF NRP on brain health. Linked to strategic objective 1, action plans and information sessions should also be planned to better inform the wider public about the relevance of basic (including animal experimentation) and translational research for a sustainable SBHP that evolves along the most recent scientific insights.

- (4) To prioritize a holistic and concerted (synergistic) public health approach to promote brain health and prevent brain disorders.

Currently, the promotion of brain health at local, national, and international levels is highly fragmented. The consequence is a multiplication of isolated efforts, a waste of resources and as a result an insufficient impact.

In Switzerland, additional challenges in the promotion of brain health and prevention of NDs and MDs are the lack of a federal prevention law (an initiative in 2012 was rejected by the council of states), and the limited federal support for prevention (less than 3% of the entire national health costs in 2019) [76]. In fact, national strategies for prevention are rare in Switzerland.

The health crisis related to brain disorders and the promotion of brain health require a comprehensive, holistic, and concerted (synergistic) public health approach which is well conveyed by the motto “One brain, one life, one approach” [21]. This approach should include individual-, societal-, and global-level responses and the promotion of collaborations across scientific, health care, commercial, societal, and governmental stakeholders and insurance providers. Good interaction and coordination with existing initiatives on non-communicable disorders and mental health must be guaranteed. All collaborations should be guided by principles of gender perspective, equity (“no one left behind”), and human rights [23].

Concerted actions are needed to improve collaborations of neurologists, psychiatrists, and other specialists concerned with brain disorders with general practitioners, public health specialists, other health professionals, patients, relatives, and caregivers [8,40]. New models of care linking primary, secondary, and tertiary prevention are necessary and could include interdisciplinary services including the use of new technologies/digital tools and approaches, which should also be tested [60].

At the community level, education and training programs on healthy lifestyles promoting brain health and the prevention of NDs and MDs should be offered, starting early in life (e.g., schools) through to primary, secondary, tertiary, and continuing education. Curricula should be evidence-based and provide interactive opportunities tailored to diverse target population subgroups.

Current and future needs can be addressed through specialized outpatient clinics and brain health services, and centers designed around specific needs and gaps and taking advantage of the increasing options offered by precise medicine interventions. Brain health literacy in the general population is insufficient (see above) and should be strengthened. This will promote positive attitudes and behavioral changes in individuals,

and a better adoption of evidence-based policies and strategies, and related population-wide interventions and actions.

(5) To support, empower, and engage patients, caregivers, and patient organizations

The support, empowerment, and engagement of patients affected with brain disorders, and their caregivers (often females [1]), is insufficient. The involvement of patients' organizations is also often limited. Patients and families (often female members bear the majority of the burden) face not only an important emotional and economic burden but also suffer from a lack of information, support, and assistance. What is more, they are often silent, silenced, and stigmatized (with so called second-hand stigma), and may be discriminated because of the stigma associated with brain disorders.

The implementation of SBHP will occur with the contribution and participation of representatives of patients, caregivers, and patient organizations. Specific initiatives and measurable targets need to be defined to improve the information, engagement, motivation, and wellbeing of patients with brain disorders, their families, and caregivers. Initiatives to expand social and financial benefits (e.g., pensions; flexible work hours) will also be discussed.

8. Section 3: The Next Steps in the Implementation of the Swiss Brain Health Plan

The SBHP will be officially launched in Zurich on 22 November 2023. The first steps in the implementation of the SBHP will include the following activities:

(1) A definition of the overall organization, governance, specific targets, action areas, communication, and evaluation concepts of the SBHP. The recommendation of the IGAP will guide the preparation of the SBHP. Collaborations with other national and global initiatives (including those of the EAN, EBC, EFNA, and WHO) are considered crucial and will be searched for actively. The SFCNS will organize specific meetings in 2024 to discuss the implementation of the SBHP and define specific targets and measures.

While the exact organization of the SBHP still remains to be defined, a three-tier structure of the local (mainly primary), regional (mainly secondary), and national (mainly coordinative) prevention of brain disorders and promotion of brain health is currently envisaged (Figure 6).

At the national level, it will entail the promotion of cross-disciplinary and inter-professional synergistic activities and the appropriate engagement of health professionals, researchers, patients, patients' and caregivers' organizations, and other relevant stakeholders (including those involved in other health plans). The community-based intervention would be secured by family physicians and other primary care health professionals. The regional/secondary intervention should be delivered by specialized regional units (divisions, centers, and departments) involved in the prevention and management of specific (e.g., stroke, dementia, head trauma, anxiety, depression, and neurorehabilitation) brain disorders. These units should deploy disease-specific protocols for risk assessment, prevention, and care, and work in synergy with primary care providers. At the Neurology Department in Bern, a Brain Health Clinic (www.neurologie.insel.ch/de/unser-angebot/brain-health (accessed on 12 October 2023)) was inaugurated in Summer 2023 to promote collaboration between the different specialists and general physicians in the prevention of brain disorders.

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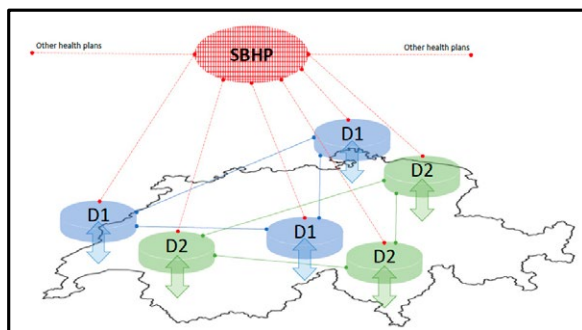


Figure 6. Three-level organization in the implementation of the Swiss Brain Health Plan. **SBHP:** Swiss Brain Health Plan of the Swiss federation of Clinical Neurosocieties (SFCNS), promoting at the national level the implementation of the strategic objectives and collaboration with other national health initiatives. **D1/D2:** Regional (e.g., departments, neurocenters, and clinics) organizations delivering specialized care (including targeted primary and secondary prevention) for specific brain disorders (stroke, dementia, and depression) and interactions with primary care providers (including primary prevention). Interaction between the regional neuro-organizations and the primary care level. New models of care linking primary, secondary, and tertiary prevention are needed to promote brain health in healthy subjects and in patients with brain disorders and to coordinate interactions between the different stakeholders at local, regional, and national levels.






(2) The patronage and/or co-organization of events on specific brain topics such as brain research (7.2.2024, organizer: Swiss Society of Neuroscience, Lausanne, Switzerland), dementia (8.2.2024, Geneva, Switzerland), neurohumanities (26.4.2024, organizer: Sir John Eccles Foundation, Bellinzona, Switzerland), stroke (15–17.5.2024, organizer: European Stroke Organization, Basel, Switzerland), sleep (3.10.2024, organizer: European Sleep Foundation, Lugano, Switzerland), and psychiatry (6.11.2024, Zurich, Switzerland). Additional events with patients' and caregivers' organizations are currently in discussion.

(3) An in depth/new analysis of the global burden of brain disorders in Switzerland will be performed in collaboration with the Institute for Health Metric and Evaluation (IHME) of the Washington University in Seattle, WA, USA.

(4) In Summer 2024, an international Certificate of Advanced Studies (CAS) on Brain Health will be launched at the University of Bern (Figure 7). This CAS in English will be virtually accessible to national and international attendees. In-depth knowledge and skills related to the maintenance and promotion of brain health and the prevention of brain disorders will be offered. An international faculty will provide interactive online lectures on a state-of-the-art all-in-one interactive learning platform.

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Facts and Highlights:

-  Start
October 2024
-  Application deadline
March 2024
-  Credits CAS
15 ECTS
-  Duration
12 months
-  Language
English

State of the art all-in-one Learning Platform for convenient online learning

International Faculty of World Leading Experts

1. Brain Health and its Determinants	3. Brain Health Interventions
2. Brain Diseases and Disorders	4. Brain Health Action Plan

Who can apply

Eligible for the program are applicants with the following backgrounds

- medical degree with or without specialization
- psychologists and neuropsychologists
- sport scientists
- nurses
- physical, occupational and speech therapists
- health care providers

Figure 7. The Certificate of Advanced Studies on Brain Health of the University of Bern.

9. Section 4: Concise Executive Summary of the Swiss Brain Health Plan (SBHP)

The SBHP is a comprehensive initiative in Switzerland to promote brain health and the prevention of brain disorders across all stages of life. More awareness, education, and research about the burden of brain disorders, brain health, mechanisms of brain disorders, and opportunities for their prevention are needed. In addition, the SBHP aims at establishing a person-centered, integrated, coordinated, and cost-effective public health approach based on novel and strong synergies between healthcare professionals, scientists, patients, caregivers, insurance providers, and commercial, societal, and governmental stakeholders, and emphasizing gender perspectives, equity, and humans rights.

The first activities of the SBHP after its launch in November 2023 will include the organization of educational and scientific events across the country, a systematic analysis of the global burden of brain disorders in Switzerland, the launch of an international Certificate of Advanced Studies on Brain Health, and the creation of international collaborations.

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Conflicts of Interest: We declare that some of the co-authors involved in this article hold positions that may be considered directly or indirectly related to the content. However, in our view, this does not influence the objectivity and validity of this article and every effort has been made to present an unbiased and evidence-based perspective.

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Appendix A

Appendix A.1 The Burden of Seven Illustrative Groups of Brain Disorders

Dementia <ul style="list-style-type: none">• Prevalence: Briefly, there is a prevalence of 1% of the general population and of up to 30% of older adults [77,78]. In 2019, over 57 million people worldwide and 14.1 in Europe were affected by dementia [78]. A global increase to 153 million people in 2050 is expected [78].• Burden: In 2019, the WHO ranked dementia as the seventh most common cause of death globally (https://www.who.int/data (accessed on 12 October 2023)). A 2016 global burden of disease (GBD) study ranked dementia as the third most disabling ND globally [22]. For Europe, the total costs for dementia were estimated to be EUR 105 billion in 2010 and EUR 392 billion in 2019 [16,79,80].• Prevention: Up to 40% of dementia cases are potentially preventable because they are caused by 12 modifiable risk factors [43]. Intervention studies have shown the best effects so far through lowering of blood pressure [81].• Recent advances in prevention: Multi-domain interventions delaying age-associated cognitive deterioration, blood biomarkers for population screening, and well-tolerated anti-amyloid drugs are effective in decreasing the incidence of cognitive impairment and dementia.
Stroke <ul style="list-style-type: none">• Prevalence: Briefly, there is a prevalence of 0.6% of the general population [82]. The lifetime risk of stroke is estimated to be 25% [83].• Burden: In 2019, the WHO ranked stroke as the second most common cause of death and the third most disabling disorder globally (https://www.who.int/data (accessed on 12 October 2023)). In a 2016 GBD study, stroke was ranked as the most disabling ND globally [22]. For Europe, the total costs for stroke were estimated in 2010 to be EUR 64.1 billion [16].• Prevention: Over 90% of the stroke burden can be attributed to nine modifiable risk factors [84,85]. Over 50% of strokes could potentially be prevented [57].• Recent advances in prevention: These include new strategies for the detection of atrial fibrillation, new oral anticoagulants, new diabetes mellitus medication reducing the risk of stroke, and new strategies to treat dyslipidemia and sleep apnea.
Depression <ul style="list-style-type: none">• Prevalence: There is a prevalence of 20% of the general population during lifetime. The incidence of depression has increased in the past two decades [5].• Burden: In 2019, the WHO ranked depression as the 12th most disabling disorder globally (https://www.who.int/data/gho/data (accessed on 12 October 2023)). A 2019 GBD study ranked depression at the 13th most disabling disorder globally [5]. For Europe, the total costs for mood disorders were estimated in 2010 to be EUR 113.4 billion [16].• Prevention: Data from intervention studies are positive for populations with increased risk (e.g., children of depressed parents [86]).• Recent advances in prevention: These include the promotion of physical health, physical activity, and emotion regulation strategies (involvement of social environment) [86].
Addiction <ul style="list-style-type: none">• Prevalence: There is a prevalence of 8% for alcohol and 2% for illicit drugs of the general population (lifetime prevalence) [87].• Burden: In Europe, the total costs for addiction were estimated in 2010 to be EUR 65.5 billion [16].• Prevention: This includes messaging, routine screening, and pathways for referral to (early) treatment in all (including pediatric) settings.• Recent advances in prevention: These include campaigns for increased awareness, offers for safer use and harm reduction, poly- measures, and evidence-based technological interventions [88].
Headache <ul style="list-style-type: none">• Prevalence: There is a prevalence of 17% (migraine) to 30% (tension headache) of the general population. In 2019, over 1 billion people worldwide were affected by migraine [89].• Burden: A 2016 GBD study ranked migraine as the second most disabling ND globally [22]. For Europe, the total costs for headache were estimated in 2010 to be EUR 43.5 billion [16].• Prevention: Lifestyle factors including, stress, a lack of physical activity, unhealthy diet, bad posture, excessive use of digital technology, and many not seeking professional help increase the problem (“21st century headache”) [90].• Recent advances in prevention: These include raised awareness and support, the development of non-pharmacological interventions, the prevention of chronic conditions through targeted and new treatments (i.e., CGRP-antagonist) [91].

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Epilepsy

- **Prevalence:** There is a prevalence of 0.4% of the general population [92]. In 2016, nearly 50 million people worldwide had epilepsy [93]. The global lifetime risk of epilepsy is estimated to be 0.8% [92].
- **Burden:** The total costs of epilepsy worldwide were recently estimated to be USD 119 billion [94]. For Europe, the total costs for epilepsy were estimated in 2010 to be EUR 13.8 billion [16].
- **Prevention:** Up to 25% of epilepsies can be prevented [4]. Primary prevention can be promoted, reducing peripartur damage, stroke, neuro-infections, and brain trauma in traffic, sport, and professions [95].
- **Recent advances in prevention:** The association between vascular risk factors, focal epilepsy, and dementia offer novel targets for prevention [96].

Sleep disorders

- **Prevalence:** Insufficient sleep duration and sleep disorders (e.g., insomnia, excessive daytime sleepiness, restless legs syndrome, and sleep apnea) affect more than 30% of the general population [97,98].
- **Burden:** Insufficient (and/or fragmented) sleep and sleep disorders are linked with an increased risk of NDs (e.g., stroke, attention/cognitive problems, and dementia) and MDs (e.g., depression; emotional problems) [97,99–103]. For Europe, the total costs for sleep disorders were estimated in 2010 to be EUR 35.4 billion [16].
- **Prevention:** Sleep hygiene can prevent (some) sleep disorders. This includes setting a regular sleep schedule, creating a relaxing bedtime routine, turning off electronic devices, avoiding/limiting sleep-disturbing factors (caffeine, alcohol, nicotine, and stimulants), and, during the day, exercising and limiting naps.
- **Recent advances in prevention:** Several (measurable) dimensions of sleep including depth, duration, continuity, and timing have been linked to health outcomes and are becoming the target of interventions to prevent multiple disorders (including NDs and MDs) and wellbeing [102].

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Appendix A.2 Five Healthy Behaviors to Enhance Brain Resilience/Promote Brain Health

Healthy diet <ul style="list-style-type: none">• A healthy diet is essential for individuals at all ages. It includes at least five portions of fruits and vegetables per day, legumes, nuts and whole grains, less than 10% of the total energy intake coming from free sugars, less than 30% of the total energy intake coming from fats, and less than 5 g of salt per day [104–107]. In children, the intake of free sugars should be reduced and minimized with a desirable goal of <5% of the energy intake in children and adolescents aged 2 to 18 years [107,108].• Adequate nutrition, breastfeeding and the treatment of deficiencies during pregnancy and early life are essential for optimal brain development. Suboptimal diet influences the cognitive development of preschool children and increases the risk of NDs (e.g., stroke) and MDs (e.g., depression) [82,100,109,110].
Good/sufficient sleep <ul style="list-style-type: none">• At least 7–9 h of good (uninterrupted/restful) sleep per day is recommended in adults. Up to 20–40% of the general population sleeps, however, <7 h/day [97,98,102].• Minimal recommendations in children range from 8 to 12 h depending on age [99].• Insufficient sleep duration and sleep disorders have adverse health effects including an increased risk of NDs and MDs (in addition to obesity, diabetes, cancer, and cardiovascular disorders) [97,99–103].
Physical activity/exercise/sport <ul style="list-style-type: none">• Regular physical activity is essential for people of all ages.• At least 150–300 min of moderate-intensity aerobic physical activity, at least 75–150 min of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity activity throughout the week for substantial health benefits among adults, and an average of 60 min of moderate aerobic physical activity per day for children and adolescents is recommended [42,111,112]. The gain is even higher when being active for at least 300 min (5 h) per week [42]. The WHO also emphasizes the importance of muscle strength for optimal health [112].• Greater amounts of physical activity lead to improvements in cognition. Physical activity/exercise and high levels of fitness reduce the risk of dementia and mental disorders including depression [43,100,113].• Low-level physical activity increases the risk of NDs such as stroke and dementia [82,103]. Lower levels of physical activity (and higher levels of screen time) are associated with poorer mental health in children [114,115].
Cognitive/mental activity <ul style="list-style-type: none">• Higher education reduces the risk of dementia [113]. Even in later life, educational, cognitive and leisure activities can promote the cognitive reserve and reduce age-associated cognitive deterioration [116,117].• Primary school education levels (or lower) are associated with an increased risk of dementia [24].
Social activity/interactions <ul style="list-style-type: none">• Lively social interactions (defined by marital status, exchanging support with family members, contact with friends, and participation in community groups) decrease the risk of dementia [43]. Social activities and support have a favorable effect on mental health and, e.g., the risk of depression [100,118].• Social isolation in later life is associated with an independent increased risk of dementia [119], and chronic loneliness is a significant predictor of cognitive decline [120].

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migraine friendly workspace

excellent environment for employees affected by migraine

A Swiss Brain Health Plan Initiative

empowerment

- education
- emergency treatments
- prevention

environment

- room to retreat
- advice and support in trigger management
- create a climate of understanding

engagement

- show one's colours: oppose stigmatisation
- flexibility
- social and legal support

e³ label

rationale

- migraine affects up to 20% of the working population
- most of the migraineurs are working
- costs are mainly driven by migraine attacks due to absenteeism (absence from work) and presenteeism (reduced performance when at work)
- migraine can not be cured, but very well managed

advantages

- better performance of employees affected by migraine
- better work atmosphere and stress reduction for all employees
- healthier workspace and healthier work environment in general

promote your migraine friendly workspace with the **e³ label**. encourage talents to join your company demonstrating optimal workspace conditions and show, that you are a progressive employer.

we are looking forward to your application! please contact us for any further assistance.



Schweizerische Kopfwehrgesellschaft
Société Suisse des Céphalées
Società Svizzera di Cefalea
Swiss Headache Society



SFCNS Swiss
Brain Health Plan

www.sfcns.ch

Upcoming Events on Brain Health

Brain research
Lausanne, 7.2.2024
Organizer:
Swiss Society of
Neuroscience

Dementia
8.2.2024
Geneva

Neurohumanities
26.4.2024, Bellinzona
Organizer:
Sir John Eccles
Foundation

Sleep
3.10.2024, Lugano
Organizer:
European Sleep
Foundation

Stroke
15-17.5.2024, Basel
Organizer:
European Stroke
Organization

Psychiatry
6.11.2024
Zurich

Additional events with patients' and caregivers' organizations are currently in discussion.



BRAIN HEALTH SERVICES THE MEMORY CLINICS OF THE FUTURE

Preliminary program and speakers

International Conference and Workshop

Geneva, March 7, 2024

A task force of 43 international experts from 28 countries have identified and structured the knowledge and tools to set up clinical services for the prevention of Alzheimer's disease and related disorders (Brain Health Services).

The event is structured in two parts. The Conference is devoted to the general public and will give an overview of the concept, programmes, and roadmap of Brain Health Services. The Workshop is devoted to professionals and potential initiators of pilot Brain Health Services: European healthcare providers and dementia experts will learn about early international experiences and results and will have the opportunity to network with other stakeholders. Task force members will collect input from scientific societies, professional networks, pharma industry, patient advocates, private foundations and associations, and charities to further advance the roadmap.

Program

Conference, morning

Open to the general public

Welcome address

Keynote lecture

Dementia prevention: concept and outcomes

Brain Health Services

Concept and roadmap

Risk profiling

Risk communication

Risk reduction: multi-domain interventions

Risk reduction: pharmacological strategies

Cognitive enhancement: cognitive training

Cognitive enhancement: non-invasive brain stimulation

Implications and conclusions

Ethical and public health impact

Final remarks

Workshop, afternoon

Reserved to health professionals

Introduction

Objectives of the workshop and expected outcomes

Pilot experiences

The Scottish BHS of NHS Scotland

The Geneva BHS at HUG

The Cologne BHS at Uniklinik Köln

The Stockholm BHS at Karolinska

The Alzheimer's Prevention Clinic at New-York-Presbyterian

Round table

Conclusions

Speakers and chairpersons

Gilles Allali, Director of the Leenaards Memory Center at CHUV, Lausanne CH

Claudio Bassetti, Past President of the European Academy of Neurology, Professor and Dean at the University of Bern CH

Andrea Brioschi, Head Neuropsychologist at the Leenaards Memory Center at CHUV, Lausanne CH

Jeffrey Cummings, Director of the Chambers-Grundy Center for Transformative Neuroscience at the University of Nevada, Las Vegas NV

Bruno Dubois, Former Director of IM2A – Institute of Memory and Alzheimer's Disease at the Hôpital Pitié Salpêtrière, Paris FR

Giovanni B. Frisoni, Director of the Memory Center at HUG, Geneva CH

Samia Hurst, Director of the Institute for Ethics History and the Humanities at the University of Geneva, Geneva CH

Richard Isaacson, Director of the Alzheimer Prevention Clinic at the New-York Presbyterian, New-York NY

Frank Jessen, Director of the Memory Clinic at the University Hospital, Cologne GE

Miia Kivipelto, Director of the Center for Alzheimer Research at Karolinska Institute, Stockholm SE

Giacomo Koch, Director of the Non-invasive Brain Stimulation Laboratory at IRCCS Santa Lucia, Rome IT

Federica Ribaldi, Researcher at the Memory Center at HUG, Geneva CH

Craig Ritchie, Director of Brain Health Scotland, Edinburgh UK

Ayda Rostamzadeh, Director of the Cologne Alzheimer's Prevention Center at Cologne University Hospital, Cologne GE

Philip Scheltens, Chairperson of the World Dementia Council, London UK and Professor Emeritus at Amsterdam University Medical Center, Amsterdam NL

Leonie Visser, Senior researcher in Medical Communication at Amsterdam UMC, Amsterdam NL, and the Karolinska Institute, Stockholm SE



SFCNS Swiss
Brain Health Plan



World Sleep Forum

Sleep loss and sleep disorders: needs, gaps and the way ahead

OCTOBER 3rd, 2024
PALAZZO DEI CONGRESSI
Lugano, Switzerland

More information will follow on: www.europeansleepfoundation.ch



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Brain Health Plan**



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