

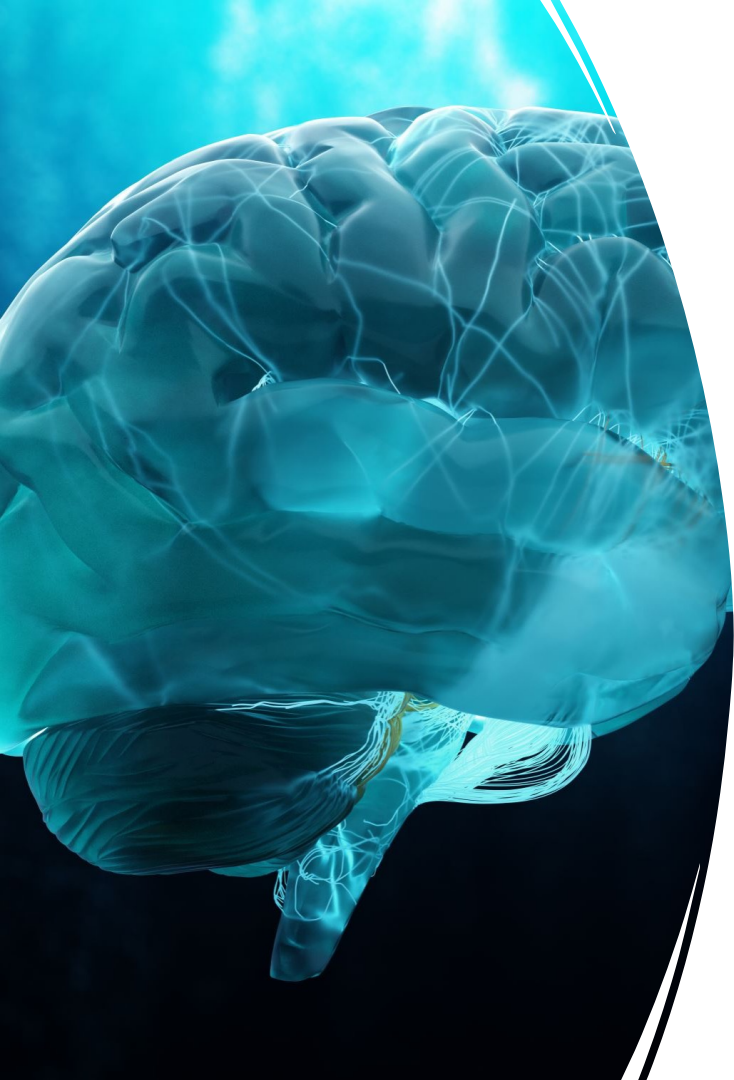


PROJETO
NEUROPSI
PRO

**Como RESOLVER as dificuldades dos seus
pacientes em consultório através da
NEUROCIÊNCIA e se tornar REFERÊNCIA na
sua profissão.**

Hoje

- Vamos entender como começar a preencher alguns GAPS da aula 1 (chegaremos a 2,6% do que podemos saber)
- Vamos entender na prática o que fazer
- Vamos mudar a nossa mente de uma forma permanente
- Vamos ter sorteio do livro
- Falarei sobre o PNP amanhã.



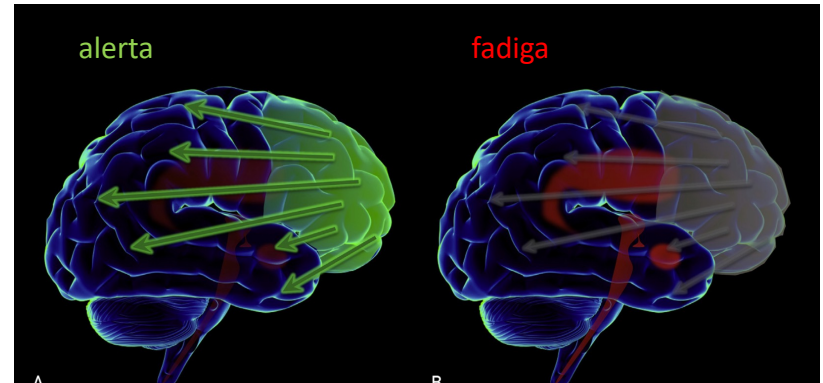
Resumo da aula 01

- O foco não está na doença.
- O que aprendemos na faculdade que precisa ser atualizado.
- Existem sintomas invisíveis
- O corpo é com a mente
- O cérebro não age de maneira aleatória
- As emoções fazem parte do processo
- Desamparo
- Trauma

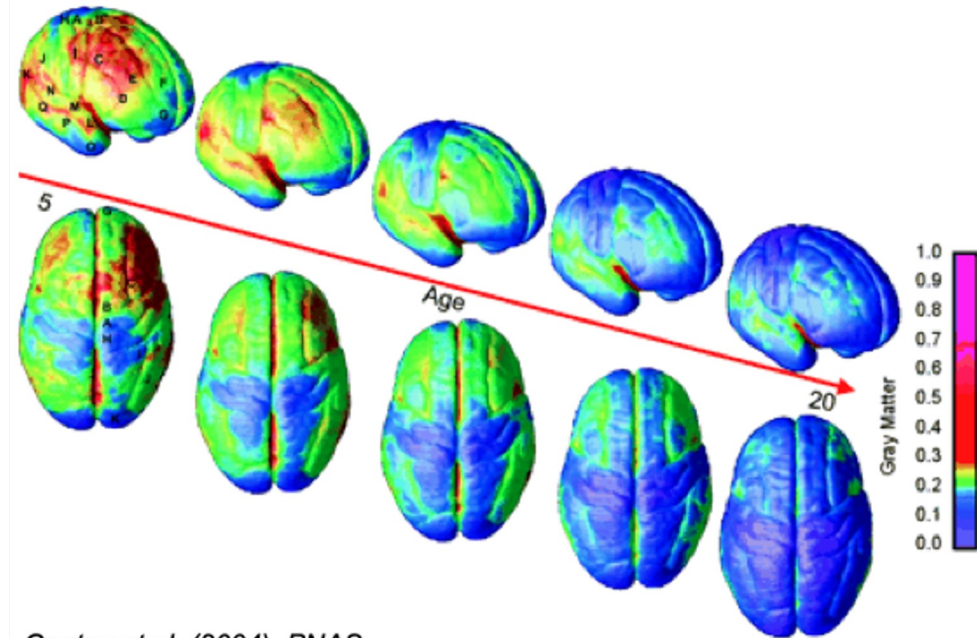
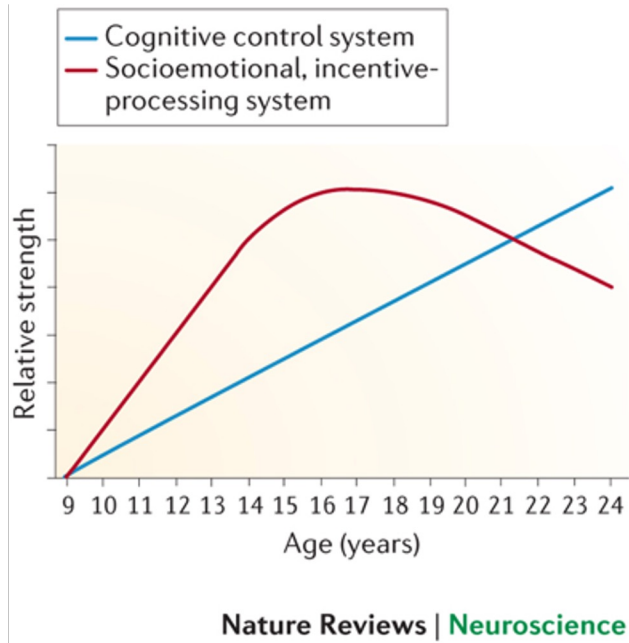
Como conduzir essa leitura biológica?
Como conduzir os sintomas invisíveis?

Sintomas de exaustão

- Dificuldade de tomar decisões triviais
- Impulso para decisões extremas: CHEGA
- Vontade de fazer as coisas e falta de energia
- Tristeza e irritabilidade sem explicação
- Explosões de raiva, frente às responsabilidades de qualquer grau - cuidar de filhos, fazer trabalhos, etc.
- Sensação de injustiça
- Sensação de "não consigo mais"
- Cansaço extremo no final do dia
- "Vontade parar o mundo"
- Hiperfoco nos problemas (situacionais)



Entenda o desenvolvimento cerebral afetivo e cognitivo

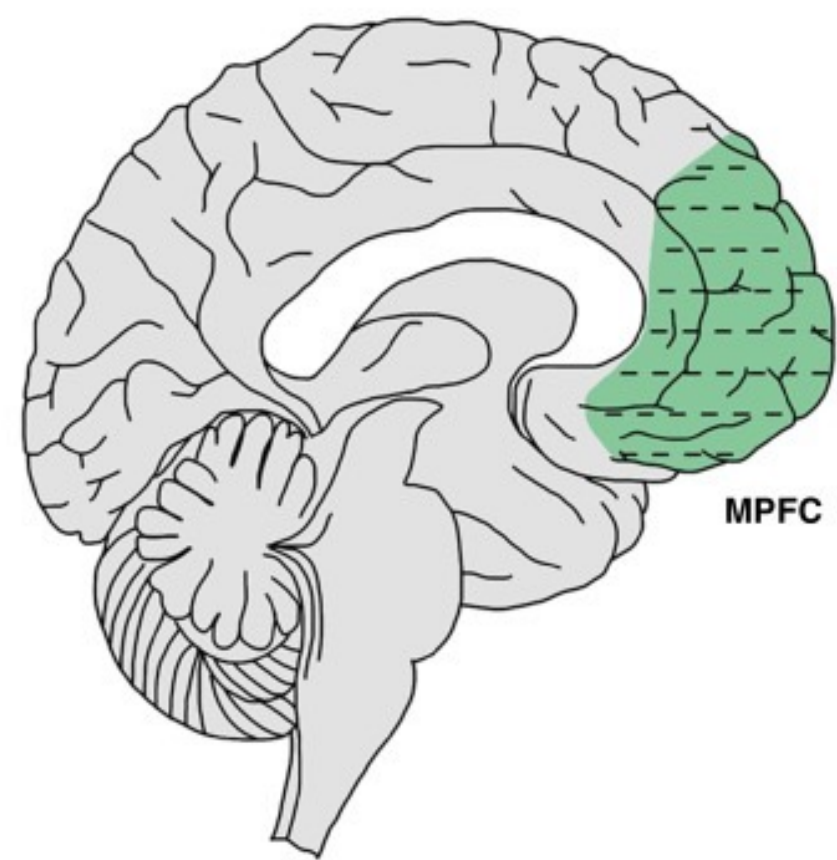
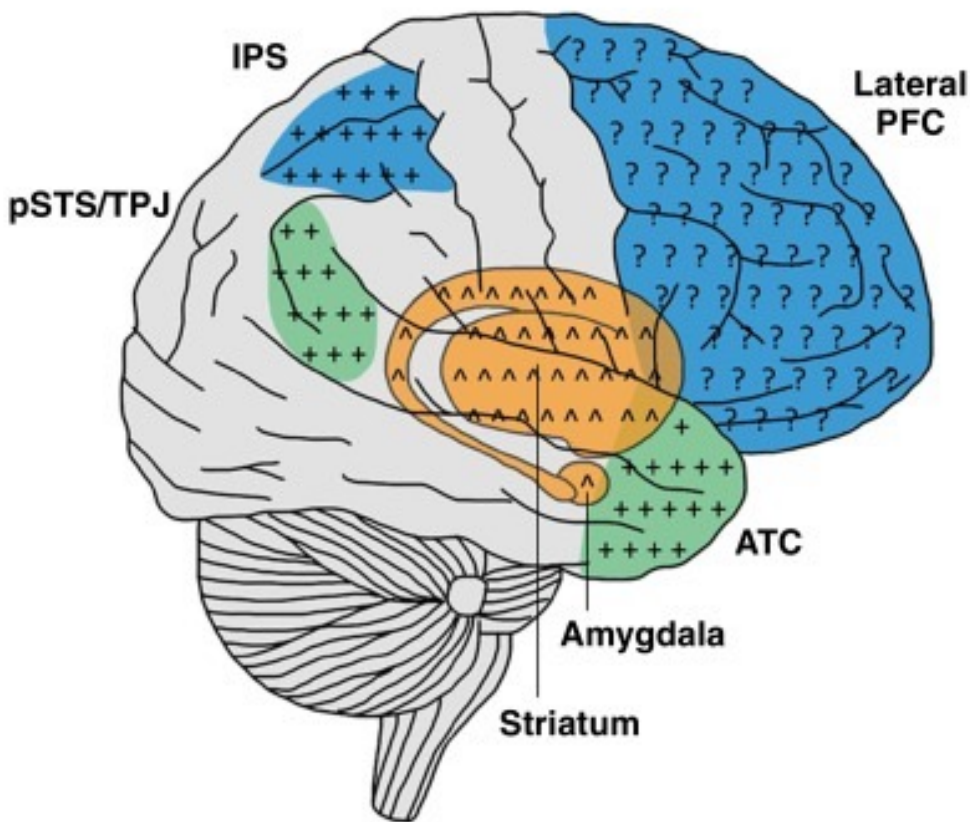


Gogtay et al. (2004), PNAS

**COGNITIVE CONTROL
(EXECUTIVE) NETWORK**

**SOCIAL (MENTALISING)
NETWORK**

**SUBCORTICAL (EMOTION
AND REWARD) NETWORK**



Como começamos a enxergar...

- Como fica a raiva em excesso?
- As dores no corpo?
- A insônia?
- O esgotamento?
- O trauma complexo?
- A desregulação emocional?
- A dificuldade de lidar com mudanças e incertezas?
- A procrastinação seguida de compulsão?
- O comportamento “inadequado” da criança?
- Como saber se que o que a pessoa apresenta é uma dificuldade, uma patologia, uma quase patologia ou um sofrimento momentâneo?

Como
trataríamos

...



E as questões mais tradicionais?

- Ansiedade
- Depressão
- Perfeccionismo
- Procrastinação
- TOC
- TEPT
- Bipolaridade
- Relações tóxicas
- Etc..

Nos tornamos pesquisadores eficientes e solucionadores de problemas complexos

- E tudo muda porque quando entendemos o funcionamento do cérebro e do corpo, das emoções e da memória, da cognição, do humor e do sistema nervoso em operação conseguimos ter um olhar de pesquisador com as dores das pessoas ou somente com as dificuldades.
- Os sintomas passam a ser consequências e dificilmente algo passará despercebido aos nossos olhos.

Resgatamos a nossa humanidade de uma maneira que nunca imaginamos ser possível

Como,
então,
começar a
olhar para
isso tudo?

• **Passemos para algumas premissas que são introdutórias:**

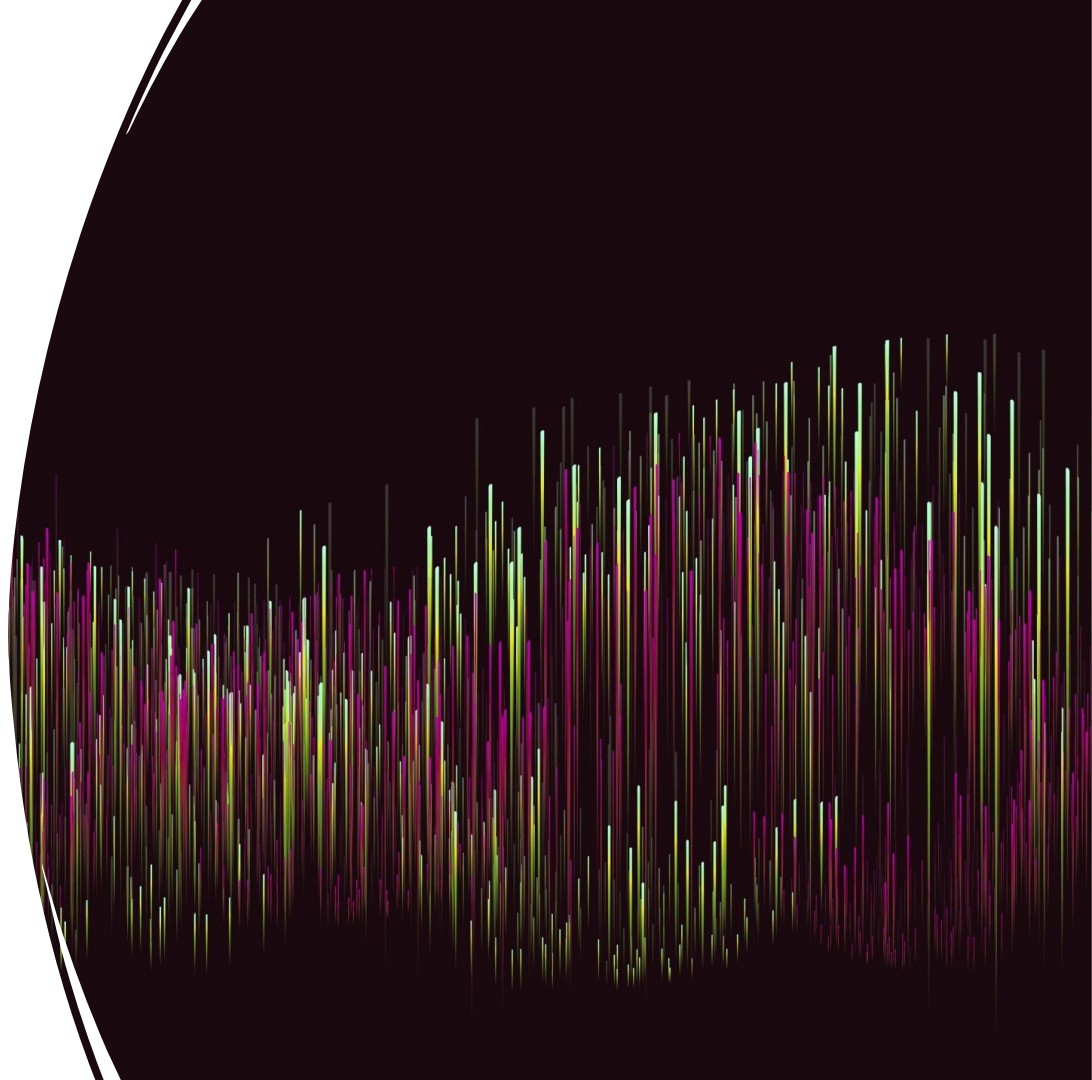
- O cérebro aprende por repetição
- Nada do que ele produz é aleatório
- Todas as decisões passam por um processo emocional
- As emoções são parte de quase 24 horas do nosso dia
- Temos uma tendência a termos **vieses negativos** de pensamento a maior parte do tempo
- E o acúmulo de decisões e mudanças gera um stress social no sistema nervoso e uma necessidade de adaptação rápida.
- Precisamos do outro para regular e viver bem. Quem não te ve amor na infancia, não encontrará amor em si mesmo até que receba isso de alguém.

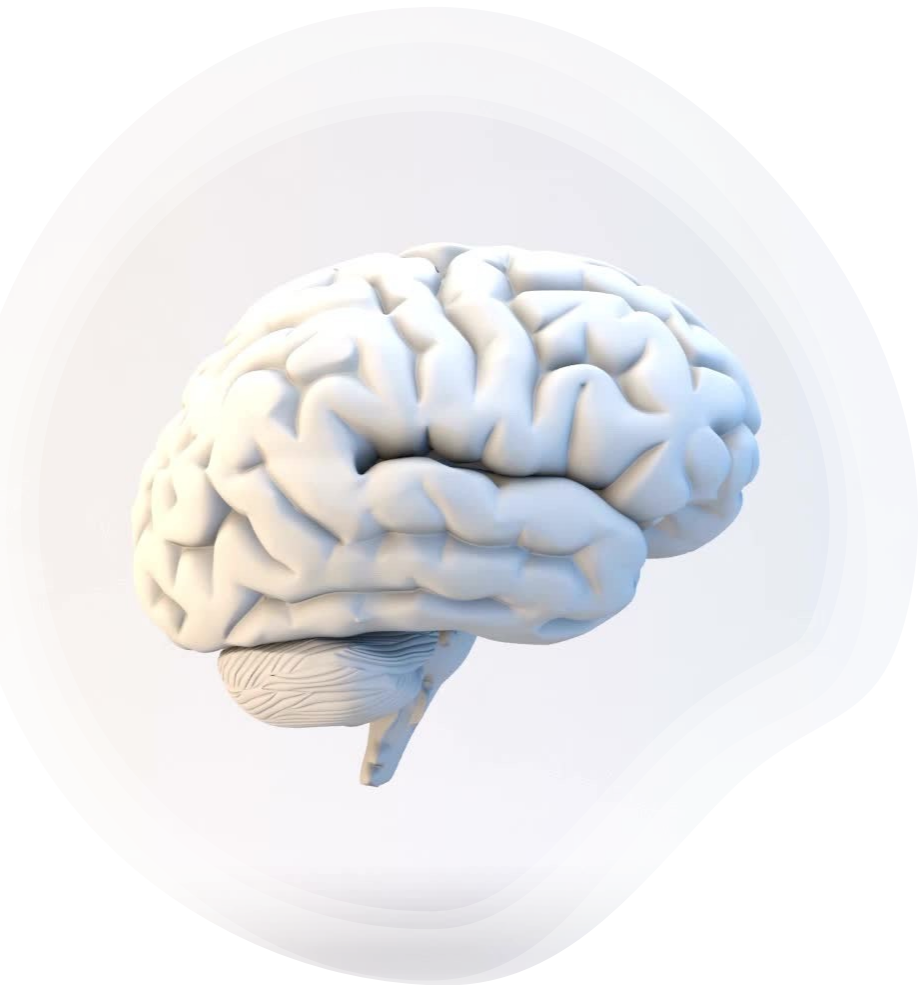
Como um corpo machucado reage?

Uma mulher caminhando pela rua ouve um estrondo. Logo depois, ela descobre que o seu namorado, que estava andando à sua frente, foi baleado. Um mês depois, ela vai até uma enfermaria relatando ter ataques de pânico com o barulho feito por caminhões de lixo. Como seu cérebro formou essa conexão entre o acidente com seu namorado e os sons barulhentos? É isso que os cientistas tentam responder ao analisar o hipocampo, pequena região em forma de cavalo-marinho localizada no interior do [cérebro](#) e importante sede de aprendizado e memória.

E isso tudo...

- Causa diversas e sucessivas reações luto fuga
- E quando não entendemos o que sentimos essas reações permanecem por mais tempo
- Gerando sintomas patológicos ou não patológicos





1. Entenda o funcionamento presente

- Como esse cérebro está agora?
- O que ele sente?
- Quando sente?
- O que ele pensa?
- Quais são as anestésias?
- Como o corpo reage?

É preciso
entender o
funcionamento
em cada um dos
temas de traços e
psicopatologias...

Saúde

Stress

Ansiedade

Perfeccionismo

Depressão

Flexibilidade ou rigidez emocional e cognitivas

Exaustão

TDAH

Autismo

Recompensas x anestesias

Exaustão

Cognição

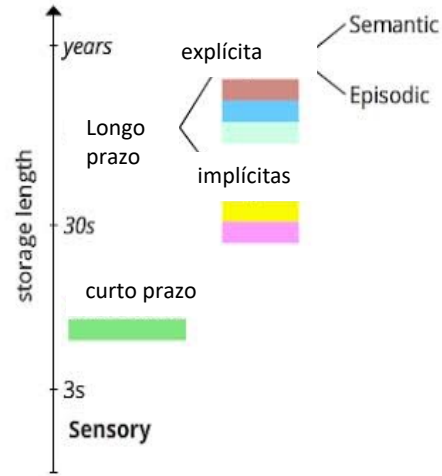
Emoções

Psicopatologias em geral

Dificuldades e anestesias

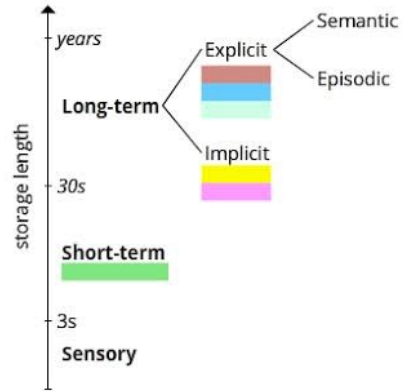
Cognição

Entender as memórias e o corpo nas memórias



Jeito de operar da pessoa

Memórias emocionais
Cognitivas
Relacionais
Situacionais



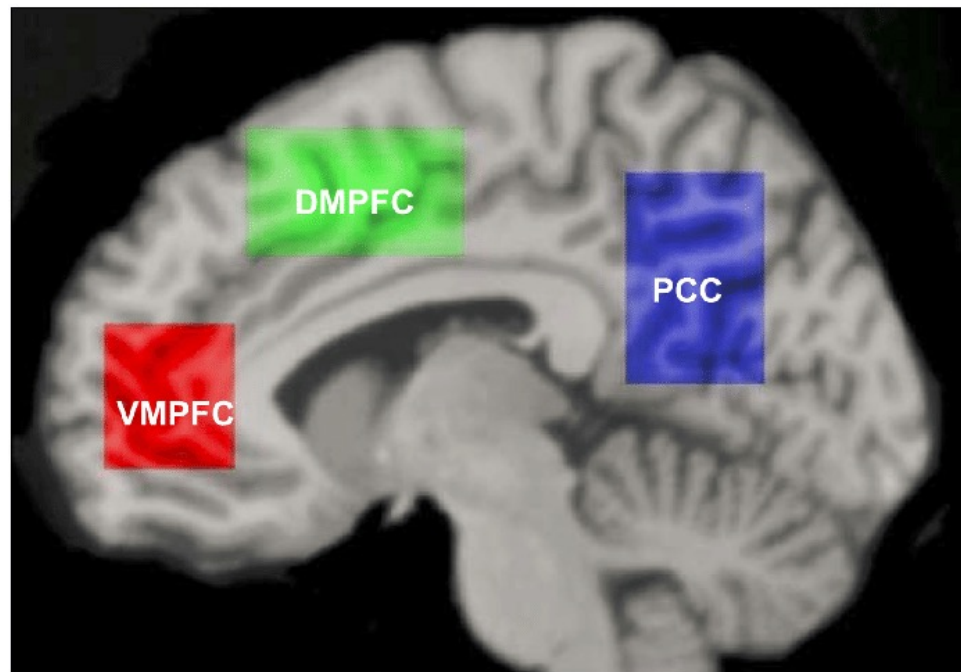
Regular o sistema emocional



Autorreferência

- Há atividade no córtex pré-frontal ventromedial, ligada ao pensamento autorreferencial e avaliativo e se comunica com o córtex parietal, associado ao processamento sensorial e à visualização. Junte-os e você terá um pensamento negativo e crítico (o avaliativo) sobre suas ações e experiências (a visualização), diz McGonigal (2015) .

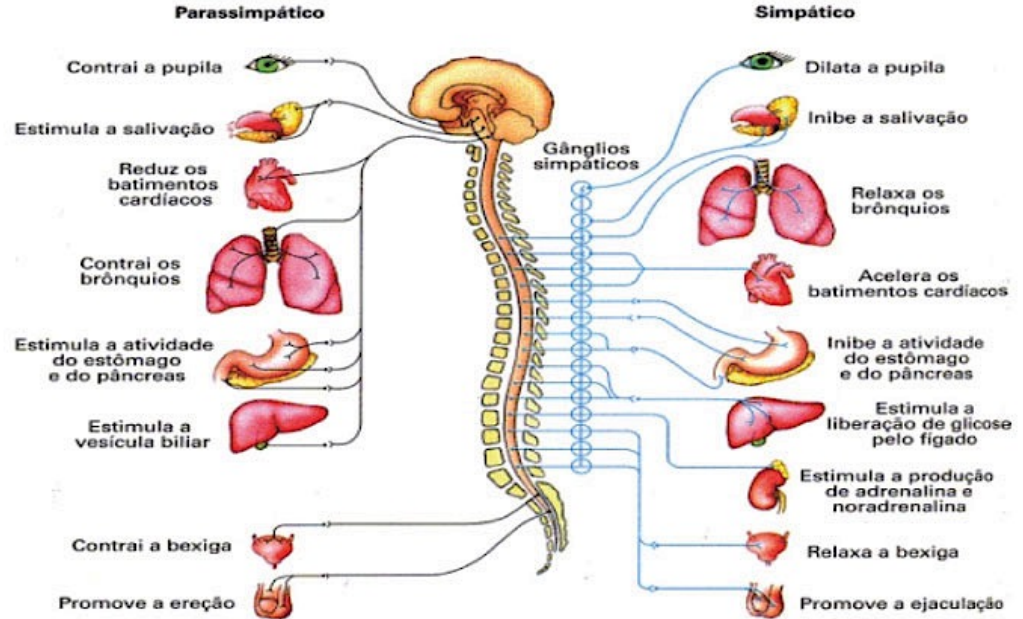
- É a enxurrada de 'está muito quente', 'está muito frio', 'eu pareço tão estúpido com essa roupa', 'por que essa pessoa estava agindo dessa maneira?'"



Neural correlates of the self-reference effect: evidence from evaluation and recognition processes
Yaoi Ken, Osaka Mariko, Osaka Naoyuki, 2015

Sistema Nervoso Autônomo

Entenda
o todo:



Entenda da biologia das emoções



Em alguns casos, antes da informação atingir encontrar o cérebro para formar um pensamento, a biologia já agiu!



As reações são sentidas internamente (batimentos cardíacos, temperatura, respiração, sudorese) e somente às vezes vistas externamente.




As emoções são uma experiência do corpo e do cérebro e não são aleatórias.



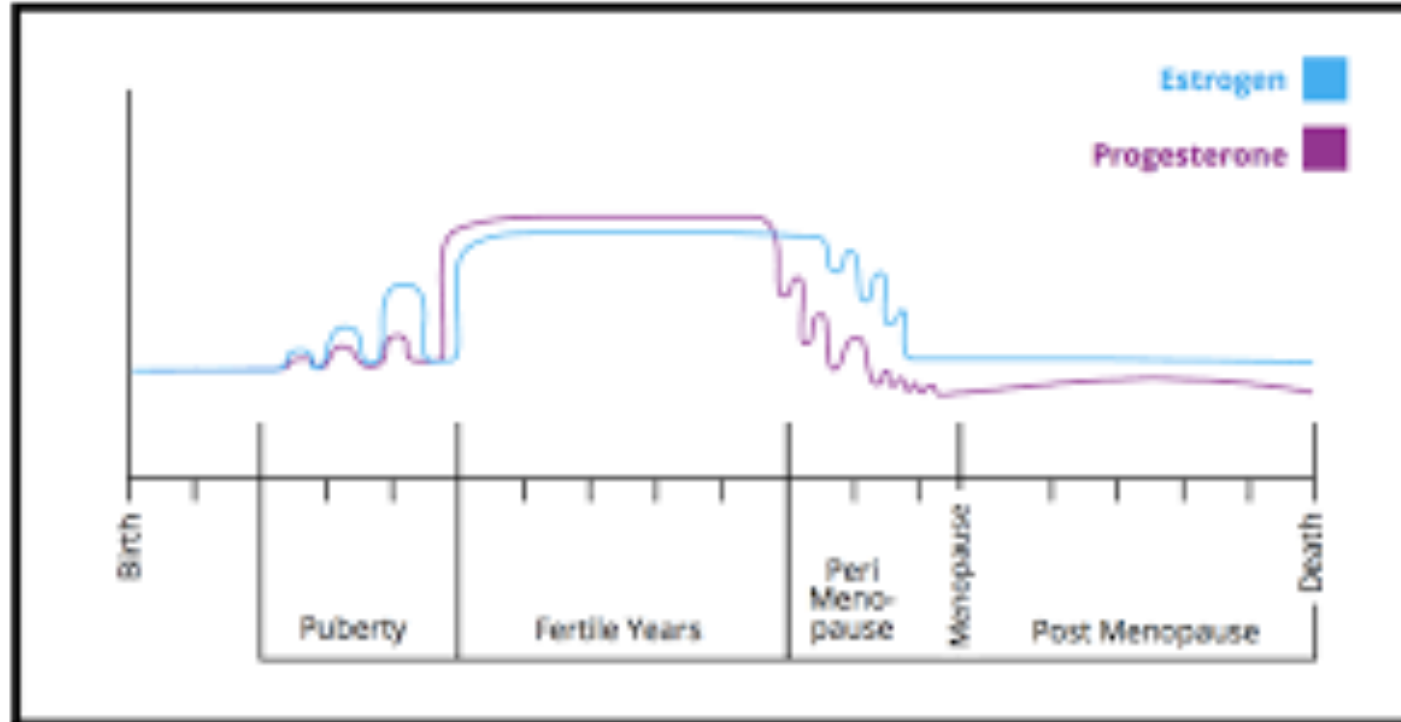
O segundo passo de um bom tratamento é entender o que se sente.

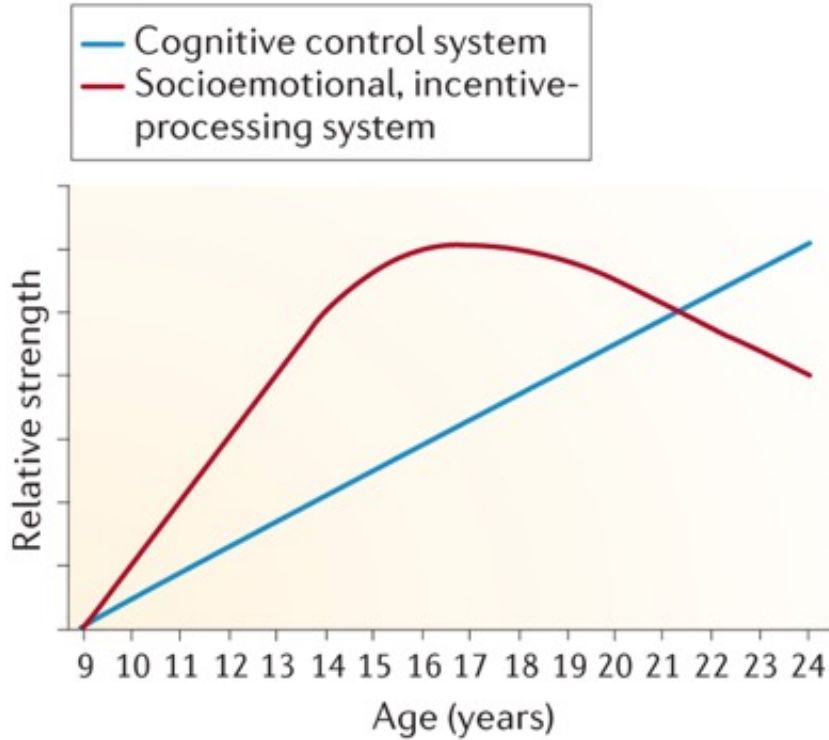




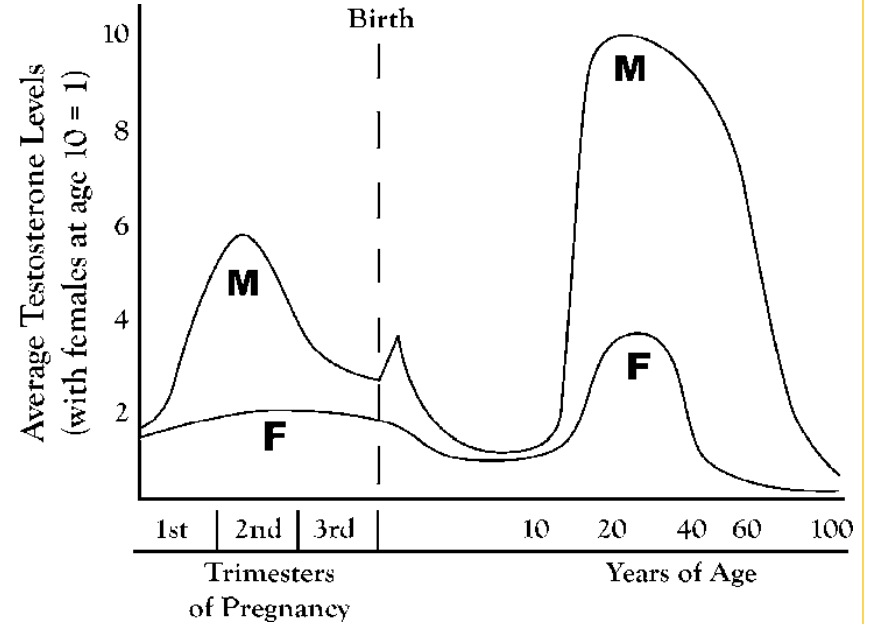
Entenda o “vício do sistema” tudo importa

-
- Qual é o caminho que esse cérebro costuma pegar? E por que? Existe disfunção? Quando ela é patológica? O que tratar primeiro?





Nature Reviews | Neuroscience





Explique o que
está
acontecendo





Ajudar a pessoa a mudar o processo (literalmente) e a regular as emoções

-
- Consciência do seu funcionamento – dos gatilhos, do corpo, das anestésias
 - Estar seguro, amparado
 - Agir diferente
 - Regular a emoção com uma técnica ou movimento
 - Iniciar um processo de autocompaixão e autocuidado – o estilo de vida que suporte a saúde mental

Enhanced Immune Activation Following Acute Social Stress Among Adolescents With Early-Life Adversity

Kate R. Kuhlman, Steve W. Cole, Michelle G. Craske, Andrew J. Fuligni, Michael R. Irwin, and Julienne E. Bower

ABSTRACT

BACKGROUND: Early-life adversity (ELA) has been linked to higher depression risk across the life span and chronic inflammatory conditions that contribute to earlier mortality. In this study, we characterized innate immune responses to acute social stress in a community sample of adolescents (mean age = 13.9 ± 1.6 years; 46.4% female) using as a potential pathway linking ELA and depression pathogenesis.

METHODS: Parents reported their child's exposure to 9 ELAs, and adolescents participated in the Trier Social Stress Test for Children, with blood collected immediately before and then at 60 and 90 minutes thereafter. Overall, 65 adolescents had complete data for analysis of stress-induced changes in gene expression and 84 adolescents had

Early life stress and brain function: Activity and connectivity associated with processing emotion and reward

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¹Institute of Child Development, University of Minnesota, USA

ARTICLE INFO

Keywords:
 Early life stress
 HPA axis
 Brain function
 Functional connectivity
 Emotion processing
 Reward processing

ABSTRACT

Investigating the developmental sequelae of early life stress has provided researchers the opportunity to examine adaptive responses to extreme environments. A large body of work has established mechanisms by which the stressful experiences of childhood poverty, maltreatment, and institutional care can impact the brain and the distributed stress systems of the body. These mechanisms are reviewed briefly to lay the foundation upon which the current neuroimaging literature has been built. More recently, developmental cognitive neuroscientists have identified a number of the effects of early adversity, including differential behavioral and brain function. Among the most consistent of these findings are the processing of emotion and reward-related information. The neural correlates of emotion processing, particularly frontolimbic functional connectivity, have been well studied in early life stress samples with results indicating accelerated maturation following early adversity. Reward processing has received less attention, but here the evidence suggests a deficit in reward sensitivity. It is as yet unknown whether the accelerated maturation of emotion regulation circuits comes at the cost of delayed development in other systems, most notably the reward system. This review addresses the early life stress neuroimaging literature that has investigated emotion and reward processing, identifying important next steps in the study of brain function following adversity.

1. Introduction

The important influence of early experience on later development is a core tenet of developmental science. Indeed, a large proportion of the developmental psychology literature focuses on the early years of life as a period of rapid change, laying the foundation for much of an individual's physical, emotional, and cognitive development. Given this, it is unsurprising that the experience of stress in infancy and childhood is associated with an increased probability of atypical outcomes. Indeed, adverse early environments have been suggested to contribute to up to 45% of childhood and over 30% of adult-onset mental health disorders (Green et al., 2019; McLaughlin et al., 2010). These atypical outcomes are thought to arise in part due to adaptive responses of physiological stress systems. When individuals are exposed to stress a number of biological systems become more active, providing the resources that the body and brain need to respond appropriately. As such, many of the atypical outcomes associated with early life stress (ELS) may be adaptive in the immediate adverse environment but detrimental across the life course. Whether or not these immediately adaptive but ultimately detrimental outcomes are the result of developmental trade-offs initiated by the responses of stress-mediator systems is a crucial question for

understanding the neurobiological outcomes of ELS.

Any discussion of brain development following ELS must be rooted in the underlying mechanisms by which stress "gets under the skin" (McEwen, 2012). This particular turn of phrase has been used to characterize the effects of stressful experiences in several systems associated with emotion and reward processing, particularly in the context of the neuroendocrine stress system (Carlson and Earls, 1997; Danese and McEwen, 2012; Hostinar et al., 2014). Of all the systems involved in the developmental trajectories precipitated by ELS, the hypothalamic-pituitary-adrenal (HPA) axis may be the most influential and well-studied. The HPA axis acts to mobilize metabolic resource in response to external threats of sufficient intensity or specific topology (e.g. life-threatening situations or psychosocial evaluation, respectively) and shape brain systems in anticipation of future threats. Cortisol is the primary end-hormone of this system. Importantly, basal levels of cortisol are important for maintaining healthy brain development and function (McEwen et al., 2015). Repeated exposures to high levels of cortisol or its releasing hormone (corticotropin releasing hormone), however, can have negative effects throughout the brain. For example, elevated levels of cortisol exposure over periods of 48-72 h can promote the formation of free radicals that are toxic to neurons themselves (Du et al., 2009).

Check for updates

TOXIC STRESS AND PTSD IN CHILDREN

Adversity in childhood is linked to mental and physical health throughout life

The prevalence of "toxic stress" and huge downstream consequences in disease, suffering, financial costs make prevention and early intervention crucial, say Charles A Nelson and colleagues

Charles A Nelson, Zullya A Dhutia, Nadine Burke Harris, Andrea Danese, "Millennium Summit" Today's children face enormous challenges, some violence, and/or the accumulated burdens of economic hardship—without adequate adult biological and psychological help it yet to be fully quantified. Climate change, terrorism, and war are associated with displacement and trauma. Economic disparities create a chasm between the haves and have nots, and, in the US at least, gun violence has reached epidemic proportions. Children may grow up with a parent with untreated mental illness. Not least, a family member could contract COVID-19 or experience financial or psychological hardship associated with the pandemic.

The short and long term consequences of exposure to adversity in childhood are of great public health importance. Children are at heightened risk for stress-related health disorders, which in turn may affect adult physical and psychological health and ultimately exert a great financial toll on our healthcare systems.

Growing evidence indicates that in the first three years of life, a host of biological (eg, malnutrition, infectious disease) and psychosocial (eg, maltreatment, witnessing violence, extreme poverty) hazards can affect a child's developmental trajectory and lead to increased risk of adverse physical and psychological health conditions. Such impacts can be observed across multiple systems, affecting cardiovascular, immune, metabolic, and brain health, and may extend far beyond childhood, affecting life course health. "These effects may be mediated in various direct and indirect ways, presenting opportunities for mitigation and intervention strategies.

Defining toxic stress

It is important to distinguish between adverse events and toxic stress.

Developmental status and critical period (tm) child's developmental status at the time he experienced the adversity will influence the child's response to the adversity.

Journal homepage: www.elsevier.com/locate/ynpsc

Childhood trauma and dysregulation of multiple biological stress pathways: Results from the Netherlands Study of Depression & Anxiety (NESDA)

Erika Kuzminkaitė ^{1,2}, Christian H. Vinkers ^{3,4}, Berner M. Elzinga ^{1,5}, Klaas J. Erik J. Gilroy ⁶, Brenda W.J.H. Penninx ^{1,7}

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ARTICLE INFO

Keywords:
 Childhood trauma
 Depression
 Anxiety
 Biological stress
 Autonomic nervous system

ABSTRACT

Background: Childhood trauma (CT) is a risk factor for depression and anxiety. However, little is known about the underlying effect of CT on the autonomic nervous system, and the autonomic nervous system. In the Netherlands Study of Depression and Anxiety (NESDA) cohort CT (as assessed by the Childhood Trauma Inventory) was a marker of the HPA axis (cortisol awakening response, evening cortisol), the immune-inflammatory system (C-reactive protein, ANS (heart rate, respiratory sinus arrhythmia, pre-ejection period), and the autonomic nervous system (HRV). The HPA axis (cortisol awakening response, evening cortisol) was significantly associated with depression and anxiety disorders (MDD, ANX). Total sample analyses showed little evidence of an association between CT and depression and anxiety disorders (MDD, ANX). Total sample analyses showed little evidence of an association between CT and depression and anxiety disorders (MDD, ANX). Total sample analyses showed little evidence of an association between CT and depression and anxiety disorders (MDD, ANX). Total sample analyses showed little evidence of an association between CT and depression and anxiety disorders (MDD, ANX).

1. Introduction

emotional, physical, and social

Estudios Novísimos

Dr. Lotte Gerßen
 Department of Clinical Psychology
 Utrecht University, the Netherlands
 Email: l.gerssen@uu.nl website: gerssenlab.com

Interception as a transdiagnostic marker

Results on mood induction and plans of ongoing project on mood and emotional eating behavior

Study 1: Nature exposure and mood

Nationale: Nature has known beneficial effects on mood, stress regulation and health. Possibly this effect can be explained by interoceptive sensitivity.

Aim: Can interoceptive sensitivity explain why some people benefit more than others from nature exposure?

Conclusions:

- After nature exposure we observed significant mood improvements (higher positive affect and lower negative affect), regardless of duration.
- Only after a longer walk there was a buffering effect after stressful task on positive affect.
- Subjects lacking Emotional Awareness and Attention Regulation interact with mood and buffering effects, suggesting a role for interoceptive sensitivity in the beneficial effects of nature on mood.

Study 2: Role of interception in mood induction and food intake

Rationale: Interoceptive skills play a role in emotion regulation and several psychiatric disorders, among which major depressive disorder and eating disorders.

Aim: Can interoceptive sensitivity and accuracy explain the level of mood induction and emotional eating after watching emotional movie clips?

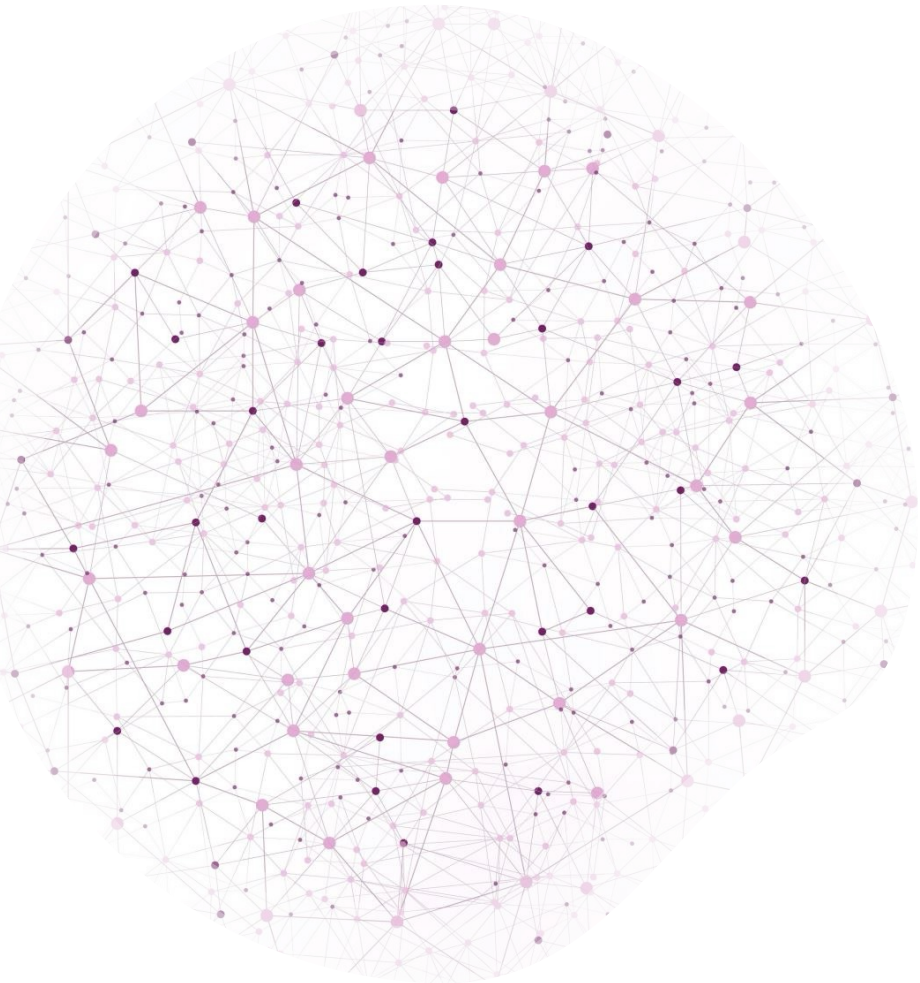
Participants: 90

Findings:

“Toda vez que sentimos emoções [negativas] ou estresse, ou estamos apenas fisicamente cansados, é muito fácil simplesmente seguir o padrão da maneira como costumamos fazer. Portanto, precisamos treinar uma espécie de poder de angústia que nos permita ficar desconfortáveis naquele momento em que normalmente cederíamos ao velho hábito ou comportamento”.

Kelly McGonigal 2015

Mas isso não quer dizer agonizar na dor.. Quer dizer regular a dor



Tudo isso com amparo

- Você precisa ser a referência de amparo que irá constituir esse sistema nervoso.
- Mas isso é assunto para amanhã.

Vimos o que deu né? Resumo de hoje!



Existe um mundo de neurociência aplicada a nossa área que é restaurador da nossa profissão.

Quanto mais sabemos, mais resolvemos as dificuldades dos pacientes ou clientes em organizações.

