

Stress et Cœur



Club Mont Blanc
Cœur et Sport

Jean-Pierre Houppe

17^e journée
du Club Mont-Blanc Cœur et
Sport

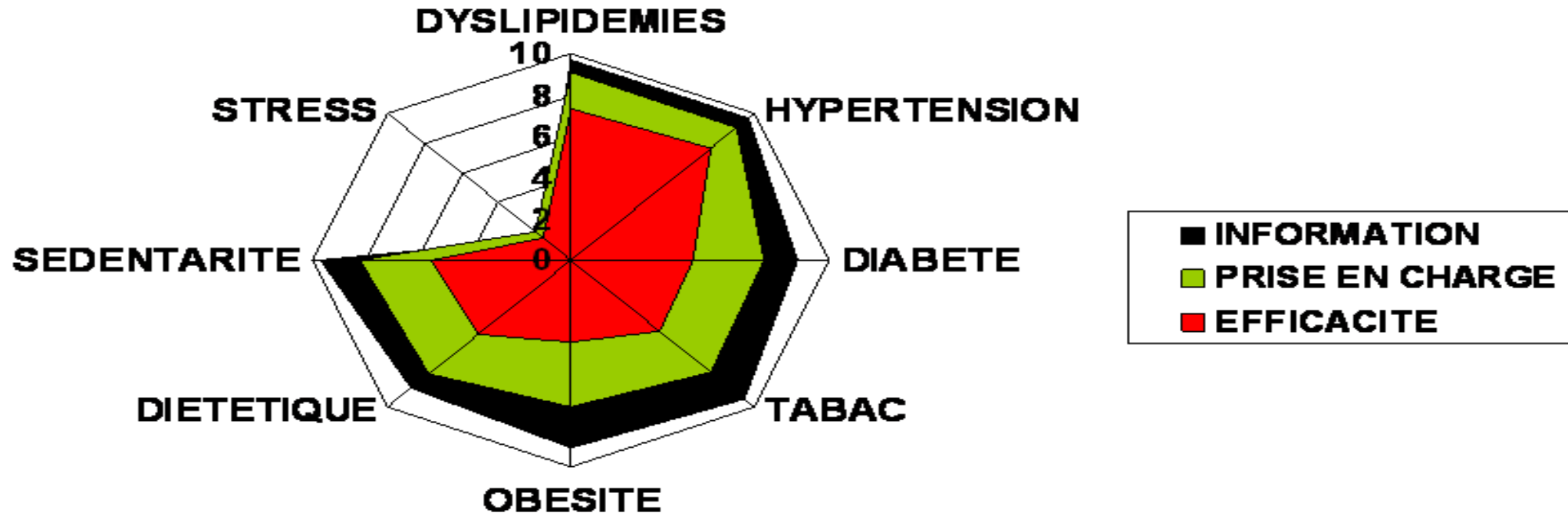
Le stress et les cardiologues ou ... Les cardiologues et le stress



Vous avez le droit de ne pas vous intéresser au stress mais, sachez que le stress s'intéresse à vous...!

ETAT DES LIEUX 2007

attitude des cardiologues



Hypertension et stress



MISE AU POINT

FACTEURS ENVIRONNEMENTAUX ET HYPERTENSION ARTERIELLE

Mise au point de la Société Française d'Hypertension Artérielle*

*SFHTA filiale de la Société Française de Cardiologie

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JUIN 2025

Hypertension et stress



Société Française
d'HyperTension Artérielle

Pression artérielle et syndrome de stress post traumatique

A ce jour, qui dit rôle des facteurs environnementaux dans l'HTA pense d'abord à la pollution, au bruit ou aux changements climatiques. Cependant l'environnement psychologique constitue un élément au moins aussi important de l'écologie humaine, avec un impact potentiellement majeur sur la santé.

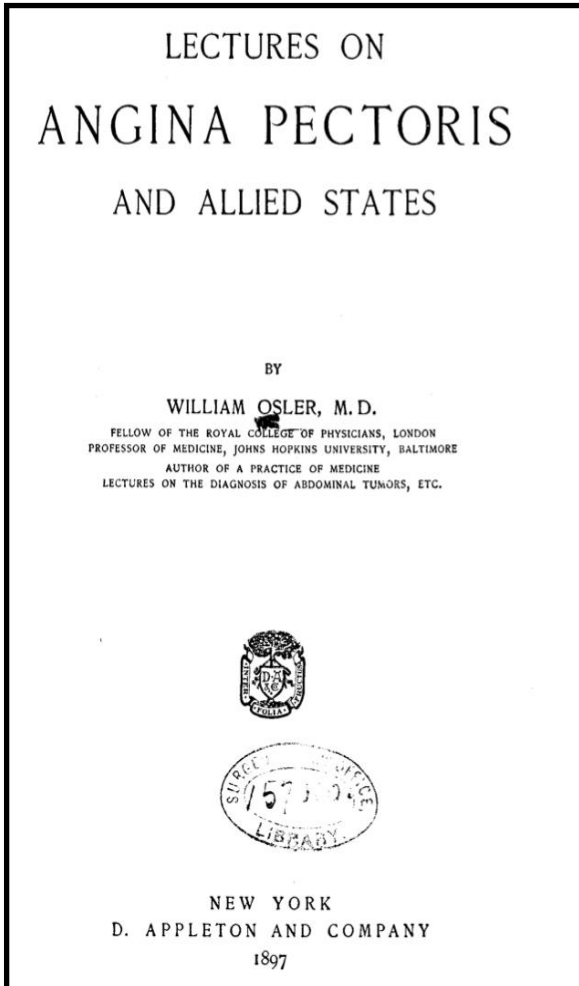
L'association d'un syndrome de stress post-traumatique (SSPT) avec certaines formes d'HTA est aujourd'hui bien documentée, particulièrement chez les vétérans de guerre mais également dans la population générale. Des travaux plus récents ont également montré une association du SSPT avec l'HTA chez les patients hypertendus résistants, dans les populations exposées à la guerre et à la violence et chez les réfugiés. En dépit d'une prévalence plus élevée de SSPT chez les femmes

que chez les hommes, la plupart des données actuelles ont été obtenues dans des populations à prédominance masculine.

Des données fragmentaires suggèrent qu'une prise en charge adéquate du SSPT limite le risque de développer une HTA. Les mécanismes sous-jacents à la pathogénie de l'HTA liée au SSPT pourraient impliquer à la fois des mécanismes organiques, tels que l'inflammation chronique, l'activation du système rénine-angiotensine ou du système nerveux sympathique et des mécanismes comportementaux tels que l'adoption de comportements à risque, une hygiène de vie déficiente et un manque d'adhérence aux traitements médicamenteux.

- Le syndrome post-traumatique constitue une cause sous-estimée d'HTA.
- L'anamnèse des patients hypertendus devrait inclure l'exposition à des traumatismes au sein de la famille, dans le cadre professionnel ou liés à des catastrophes à l'échelle des populations, particulièrement en cas d'HTA sévère, résistante ou maligne.
- Ceci est particulièrement vrai dans les groupes à risque de SSPT : femmes, réfugiés, migrants, militaires.
- Dans ces groupes, il est également conseillé de proposer un auto-questionnaire validé de dépistage du SSPT.
- En cas de score suggestif, les patients devraient être référés à un(e) psychiatre disposant d'une expertise dans le diagnostic et la prise en charge des traumatismes et du SSPT.
- Le dépistage et la prise en charge des traumatismes et d'une éventuelle SSPT devraient faire partie du cahier de charge des centres d'excellence d'HTA, y compris dans le cadre de l'évaluation pour dénervation sympathique rénale.

Une vieille histoire



« Exercer un métier à haute responsabilité augmente le risque de maladie cardiaque »

Sir William OSLER.1907

1954

Psychosomatic Study of 46 Young Men with Coronary Artery Disease

HENRY H. W. MILES, M.D.,* SAMUEL WALDFOGEL, Ph.D.,†
EDNA L. BARRABEE, M.S., and STANLEY COBB, M.D.

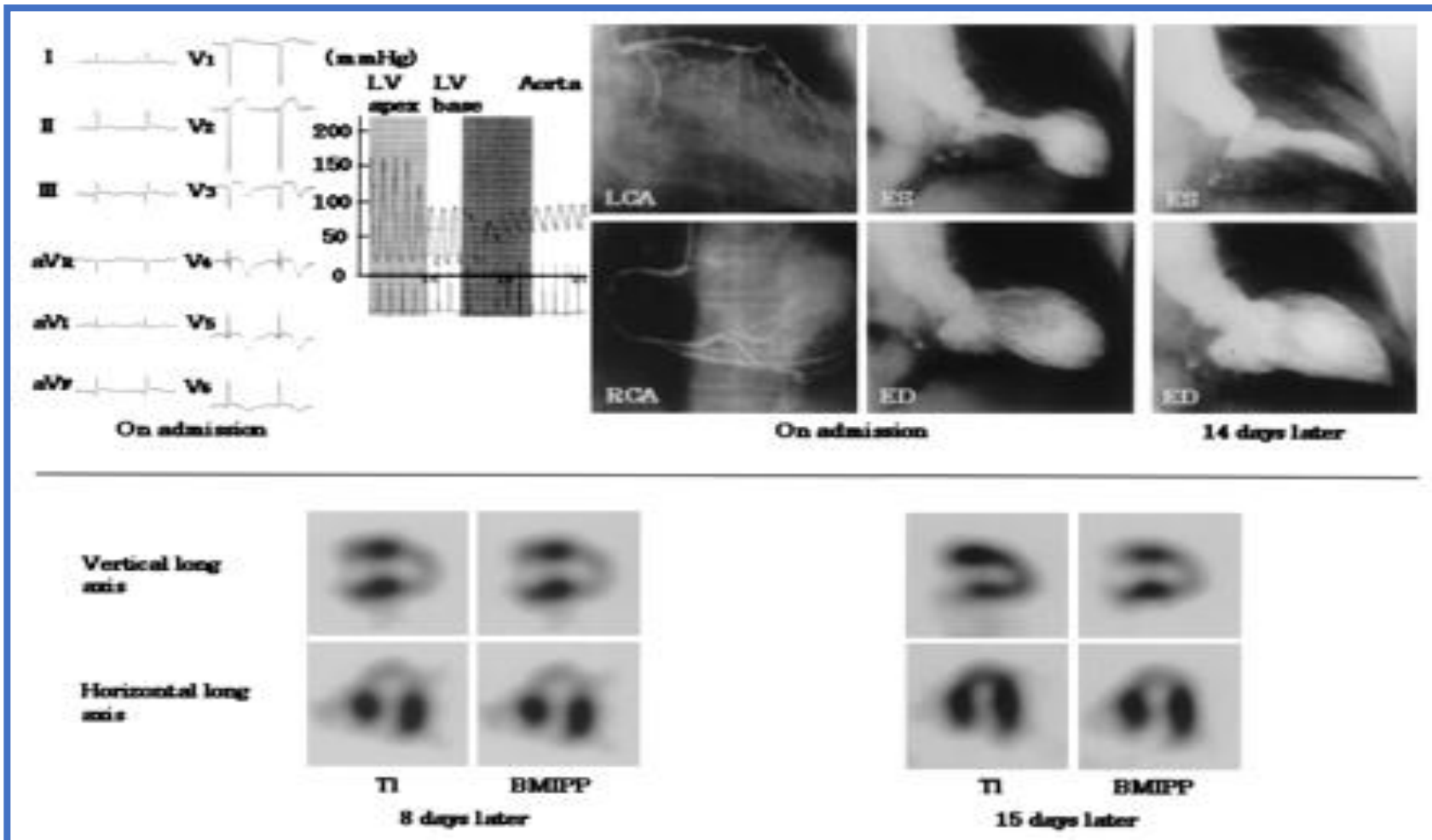
THE HYPOTHESIS that definite patterns of personality dysfunction are associated with specific psychosomatic disorders has been widely entertained during the last decade. With respect to coronary artery disease certain correlations have been generally recognized. For example, the severity of anginal pain may be influenced considerably by the emotional state of the patient, and acute coronary occlusion with myocardial infarction can be precipitated by a severe emotional crisis. Thus a patient's life expectancy may depend upon his capacity to deal with life stresses and his psychologic adjustment to the illness. However, both angina pectoris and coronary occlu-

sion represent the climax rather than the beginning of a chronic pathologic process which almost invariably has gone on for a long time without clinical symptoms. The fundamental question, therefore, is not whether personality factors are important in the end stages of the disease (when the coronary arteries are already irreversibly damaged), but whether or not a causal relationship exists between such factors and the genesis of the atherosclerosis.

Gildea summarized and synthesized the views of several writers on the relationship of personality factors and coronary artery disease and respect for authorship. Stick to one or

- Complexe
- Multifactoriel
- Psycho-socio-économique

Le TAKO-TSUBO



INTERHEART

Risk of AMI associated with Risk Factors in the Overall Population

Risk factor	% Cont	% Cases	OR (99% CI) adj for age, sex, smok	OR (99% CI) adj for all
ApoB/ApoA-1 (5 v 1)	20.0	33.5	3.87 (3.39, 4.42)	3.25 (2.81, 3.76)
Current smoking	26.8	45.2	2.95 (2.72, 3.20)	2.87 (2.58, 3.19)
Diabetes	7.5	18.4	3.08 (2.77, 3.42)	2.37 (2.07, 2.71)
Hypertension	21.9	39.0	2.48 (2.30, 2.68)	1.91 (1.74, 2.10)
Abdo Obesity (3 v 1)	33.3	46.3	2.22 (2.03, 2.42)	1.62 (1.45, 1.80)
Psychosocial Stress	-	-	2.51 (2.15, 2.93)	2.67 (2.21, 3.22)
Veg & fruits daily	42.4	35.8	0.70 (0.64, 0.77)	0.70 (0.62, 0.79)
Exercise	19.3	14.3	0.72 (0.65, 0.79)	0.86 (0.76, 0.97)
Alcohol Intake	24.5	24.0	0.79 (0.73, 0.86)	0.91 (0.82, 1.02)
All combined	-	-	129.2 (90.2, 185.0)	129.2(90.2, 185.0)
All combined (extremes)			333.7 (230.2, 483.9)	333.7 (230.2, 483.9)

32%



2021 ESC Guidelines on cardiovascular disease prevention in clinical practice

Developed by the Task Force for cardiovascular disease prevention in clinical practice with representatives of the European Society of Cardiology and 12 medical societies

With the special contribution of the European Association of Preventive Cardiology (EAPC)

3.3.1. Psychosocial factors

Psychosocial stress is associated, in a dose-response pattern, with the development and progression of ASCVD, independently of conventional risk factors and sex. Psychosocial stress includes stress symptoms (i.e. symptoms of mental disorders), as well as stressors such as loneliness and critical life events. The RRs of psychosocial stress are commonly between 1.2 and 2.0^{108,109} (Supplementary Table 4). Conversely, indicators of mental health, such as optimism and a strong sense of purpose, are associated with lower risk.¹⁰⁹ Psychosocial stress has direct biological effects, but is also highly correlated with socioeconomic and behavioural risk factors (e.g. smoking, poor adherence).^{100,109–113} Although the associations of psychosocial stress with CV health are robust, only 'vital exhaustion' has been proven to improve risk reclassification.¹⁰¹ Owing to the importance of stress symptoms among ASCVD patients, several guidelines and scientific statements recommend screening of ASCVD patients for psychological stress^{113–115} (Box 2 and Supplementary Table 5). A recent prospective cohort study with a median follow-up of 8.4 years reported favourable effects of screening for depression on major ASCVD events.¹⁰²

3.3. Potential risk modifiers

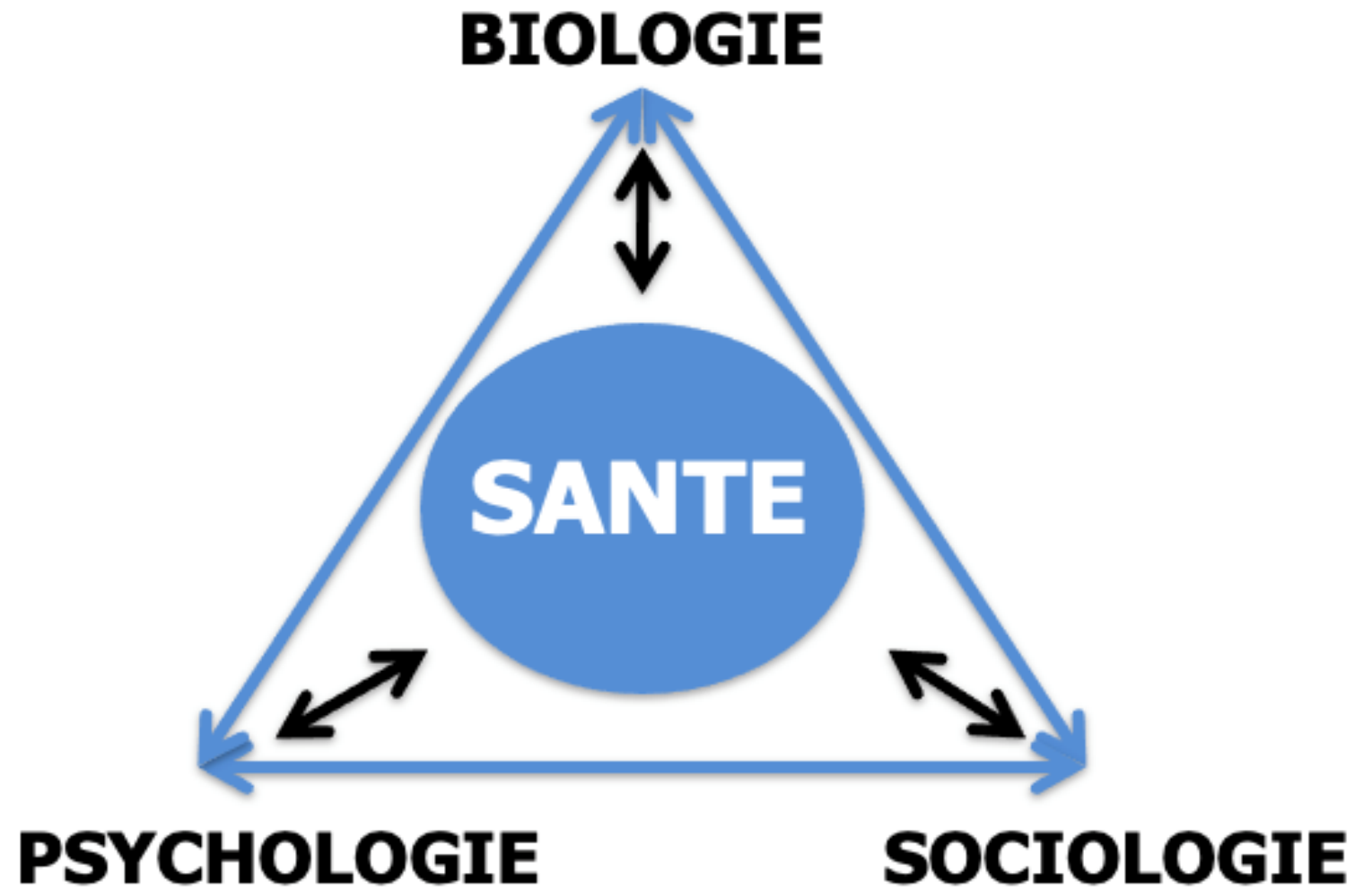
Apart from the conventional CVD risk factors included in the risk charts, additional risk factors or types of individual information can also modify calculated risk. Assessment of a potential modifier may be considered if:

- It improves measures of risk prediction, such as discrimination or reclassification (e.g. by calculation of net reclassification index)
- Public health impact is clear (e.g. number needed to screen or net benefit)
- It is feasible in daily practice
- Information is not just available on how risk increases with an unfavourable result, but also on how risk decreases if the modifier shows a favourable result
- The literature on this potential modifier is not distorted by publication bias.

Quelques généralités et banalités...

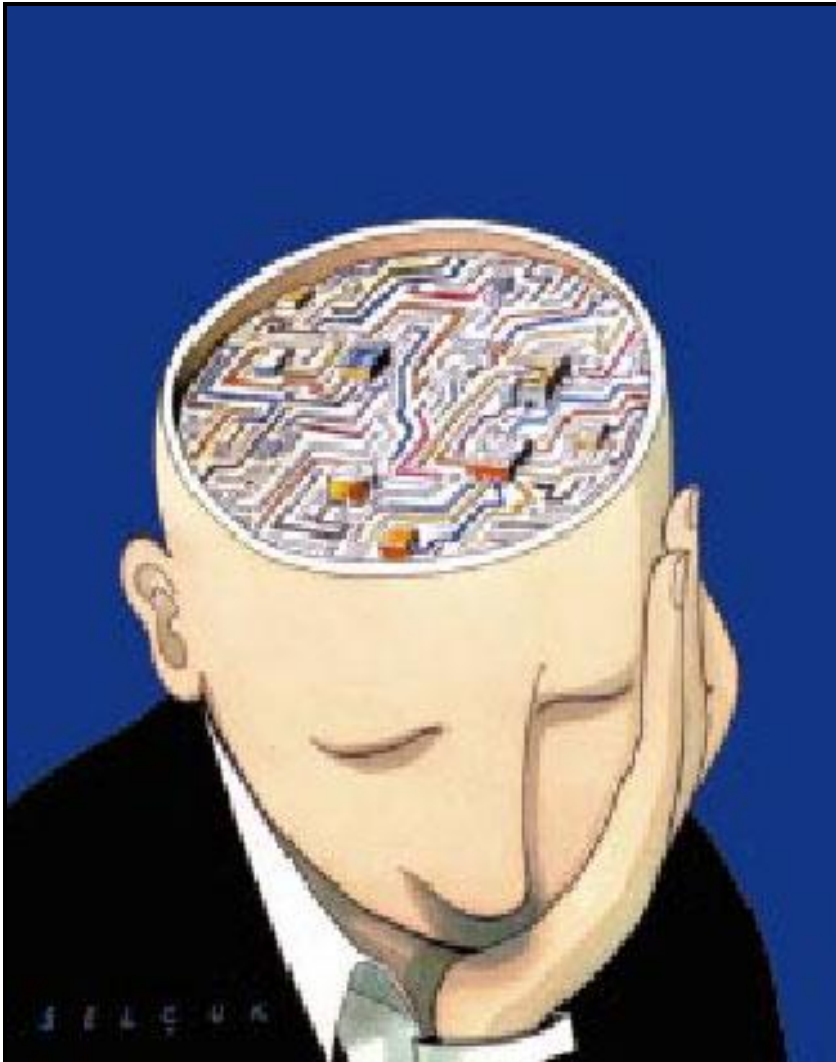


Le modèle biopsychosocial



• Engel GL. Science. 1977 ;196(4286):129-36.

Facteurs psychosociaux et cardiologie



1. PSYCHOLOGIE

1. Stress, Anxiété, Dépression
2. Hostilité, cynisme
3. Pessimisme, désespoir
4. Colère
5. Personnalité Type D
6. SSPT
7. BURN-OUT

2. SOCIOLOGIE

1. Origine et Support sociaux
2. Relation de couple, solitude
3. Sentiment religieux

3. STATUT SOCIO-ECONOMIQUE

1. Revenu financier
2. Position sociale
3. Niveau d'études

Mais c'est quoi le stress...!!!

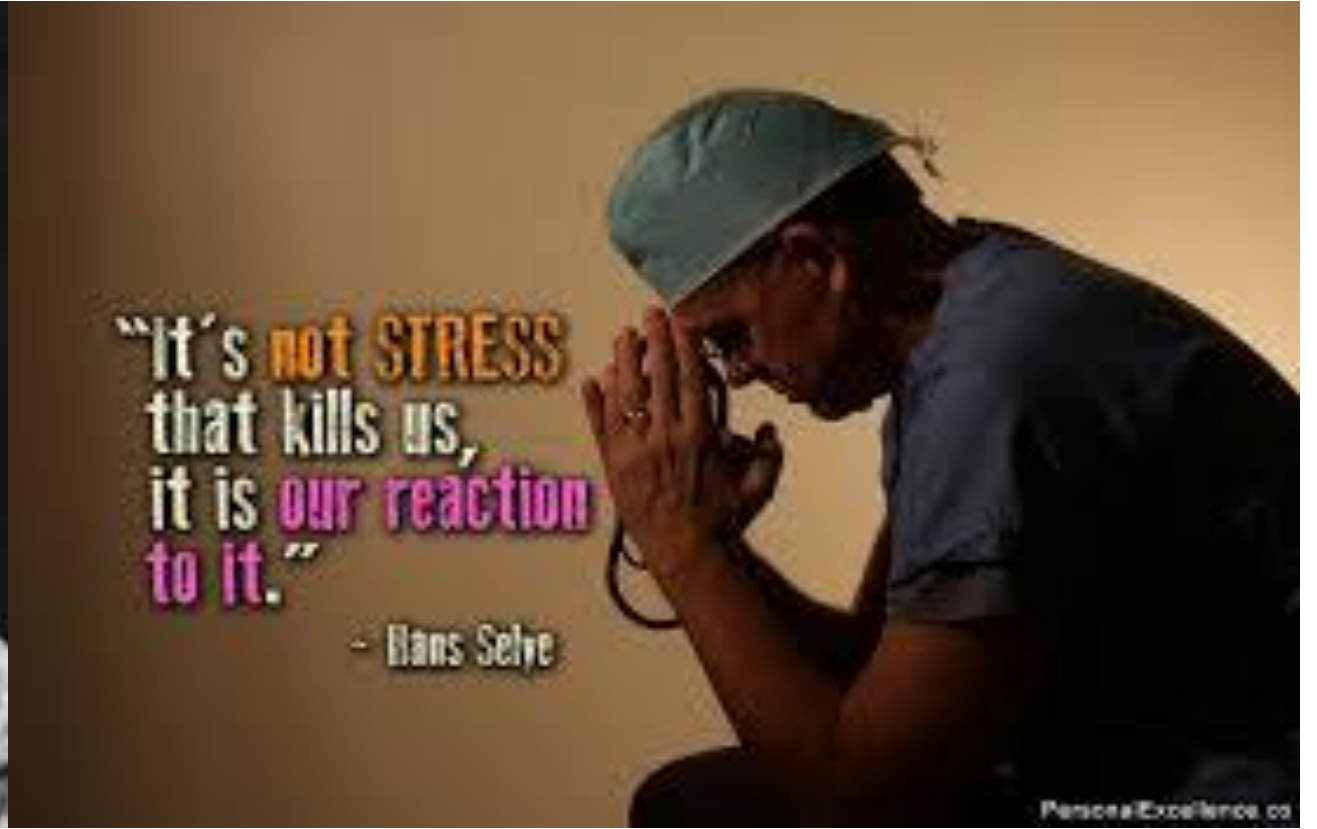
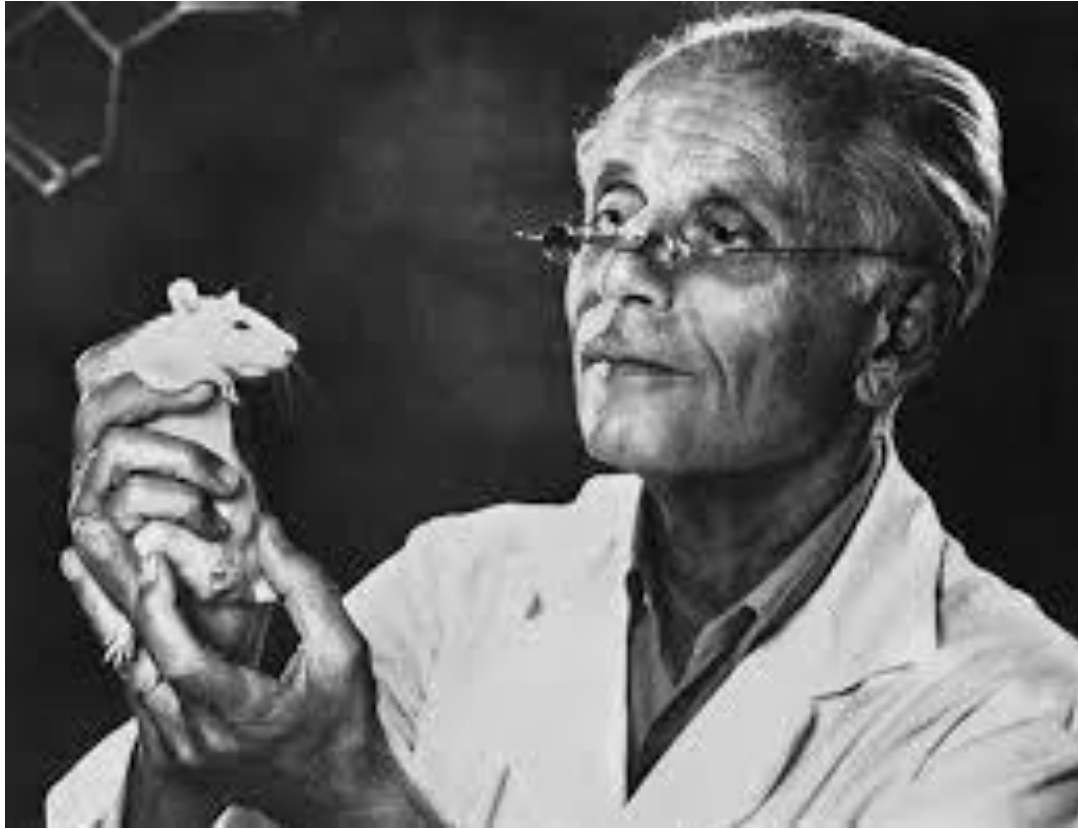


Le stress est la réponse non spécifique de l'organisme à toute demande. Par définition, il ne peut être évité. La complète liberté par rapport au stress , c'est la mort.

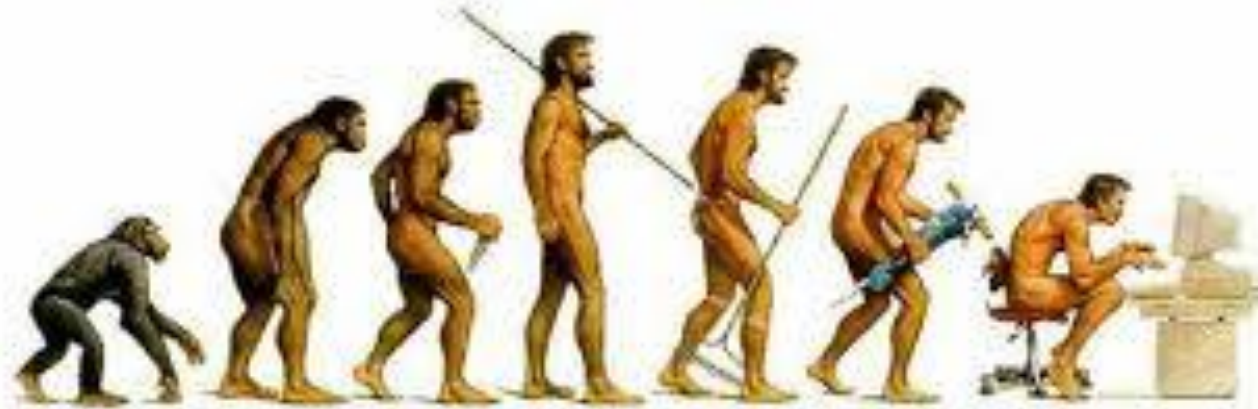
Hans Selye 1956

- REACTION D'ADAPTATION
 - REACTION NORMALE
- REACTION INDISPENSABLE

Ce n'est pas le stress qui nous tue mais notre réaction face à lui (Hans Selye)



L'être humain est performant



Une espèce adaptative

Les lois de l'adaptation



Dans un sens, nous prenons rarement de décision au cours de notre vie.
Nous nous adaptons et si nous ne nous adaptons pas, nous dépérissons
Nicolas de Tonnac. Chacun porte en soi une force insoupçonnée.

2 situations: Est-ce vraiment aussi simple?



Stress



No stress

Adaptation: Les 5 situations

1...2...3...4...5

Adaptation: Les 5 situations

3



2



Adaptation: Les 3 situations simples

3



Danger Mortel



Danger Potentiel



Sécurité

Adaptation: Les 3 situations simples

3



Danger Mortel



Immobilisation



Danger Potentiel



Lutte, fuite



Sécurité



Coopération

Adaptation: Les 2 situations mixtes

2



Le jeu



La Lutte sécurée



L'intimité



L'immobilisation sécurée

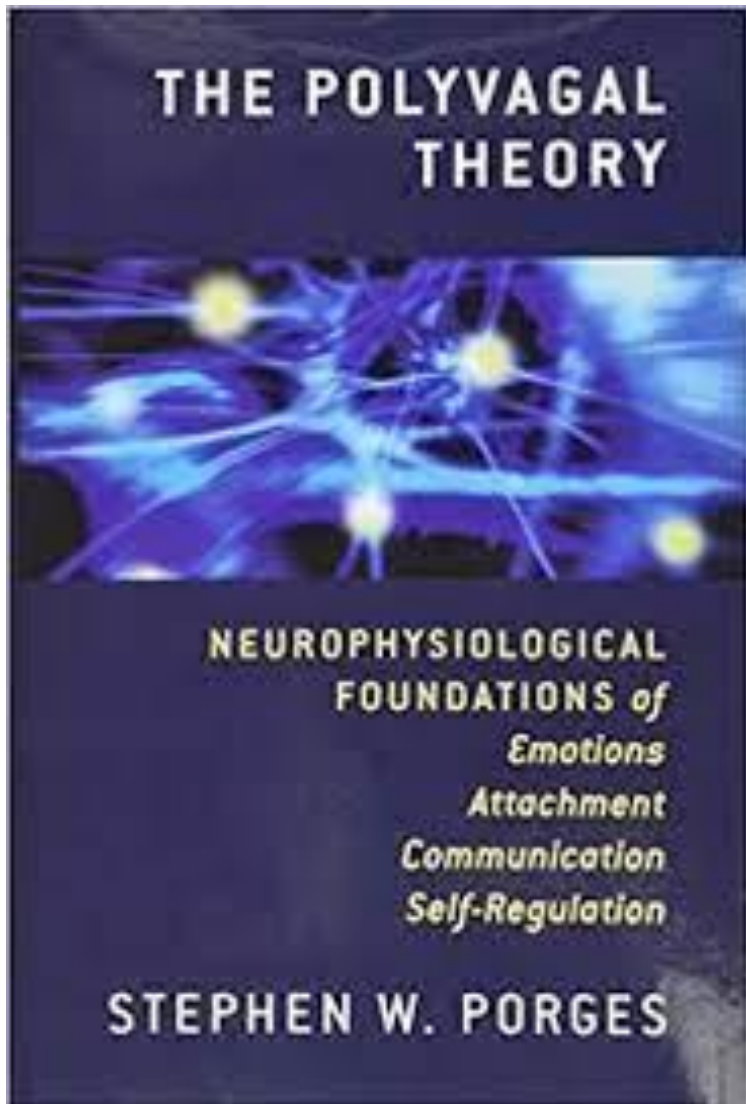
Quelle différence ?



Fréquence cardiaque : 35 / Minute

Qui , parmi vous, peux m'expliquer la physiopathologie du malaise et de la syncope vaso-vagale ?

La Théorie polyvagale de PORGES



La Théorie polyvagale de PORGES

Biol Psychol. 2007 February ; 74(2): 116–143.

The Polyvagal Perspective

Stephen W. Porges

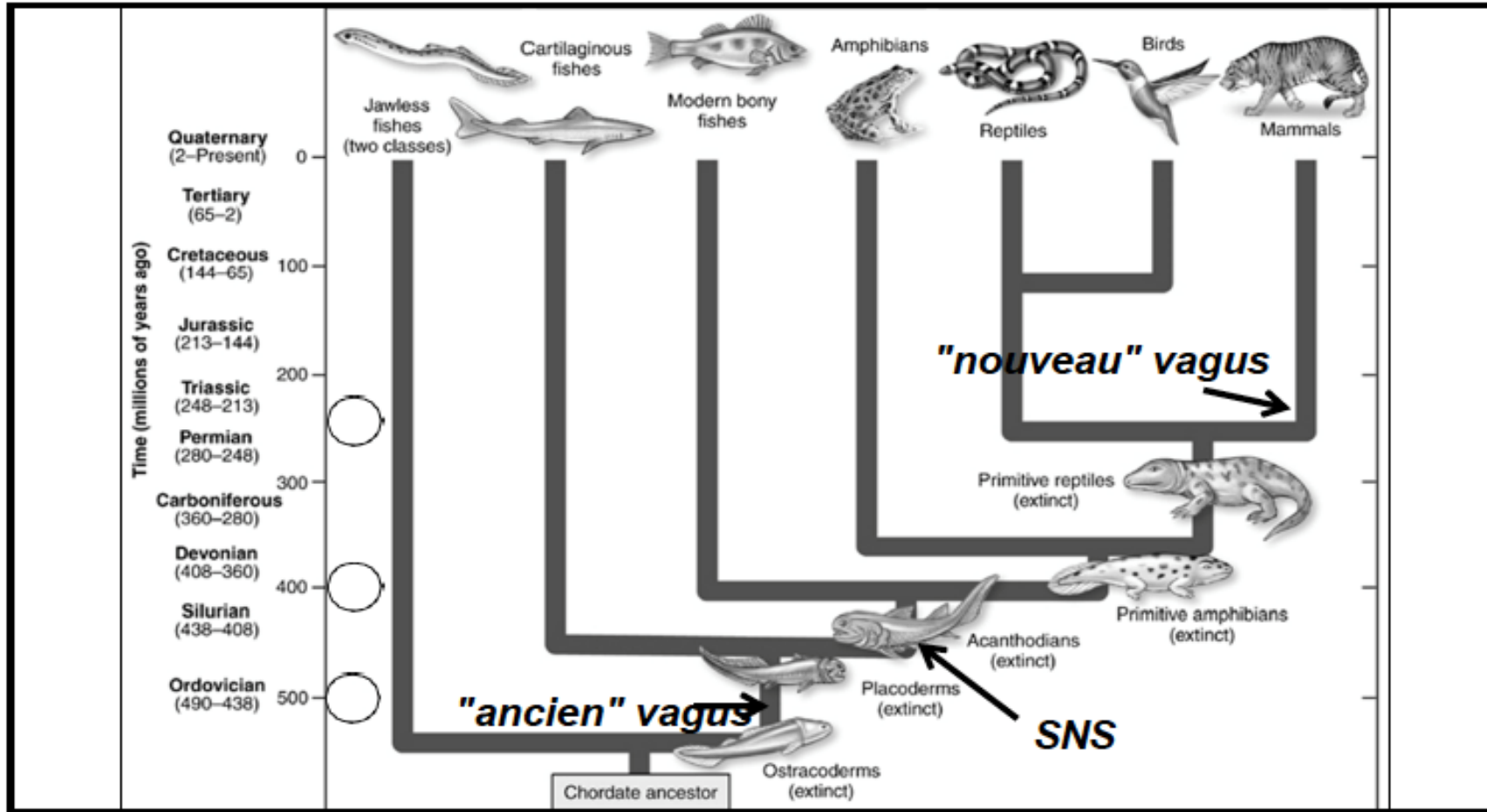
University of Illinois at Chicago

Abstract

	ANS Component	Behavioral Function	Lower motor neurons
	Myelinated vagus <i>(ventral vagal complex)</i>	Social communication, self-soothing and calming, inhibit "arousal"	Nucleus ambiguus
	Sympathetic-adrenal system	Mobilization (active avoidance)	Spinal cord
	Unmyelinated vagus <i>(dorsal vagal complex)</i>	Immobilization (death feigning, passive avoidance)	Dorsal motor nucleus of the vagus

Figure 1. Phylogenetic stages of the Polyvagal Theory

L'évolution du Système Nerveux Autonome



500

400

200



PARA SYMPATHIQUE
VENTRAL



SYMPATHIQUE



PARA SYMPATHIQUE
DORSAL





PARA SYMPATHIQUE
VENTRAL



SYMPATHIQUE



La lutte séculaire



PARA SYMPATHIQUE
VENTRAL



PARA SYMPATHIQUE
DORSAL



L'immobilisation sécurée

Adaptation : La loi de l'évolution cérébrale



SURVIE et ADAPTATION

ANNALS OF THE NEW YORK ACADEMY OF SCIENCES

Issue: *The Biology of Disadvantage*

Central role of the brain in stress and adaptation: Links to socioeconomic status, health, and disease

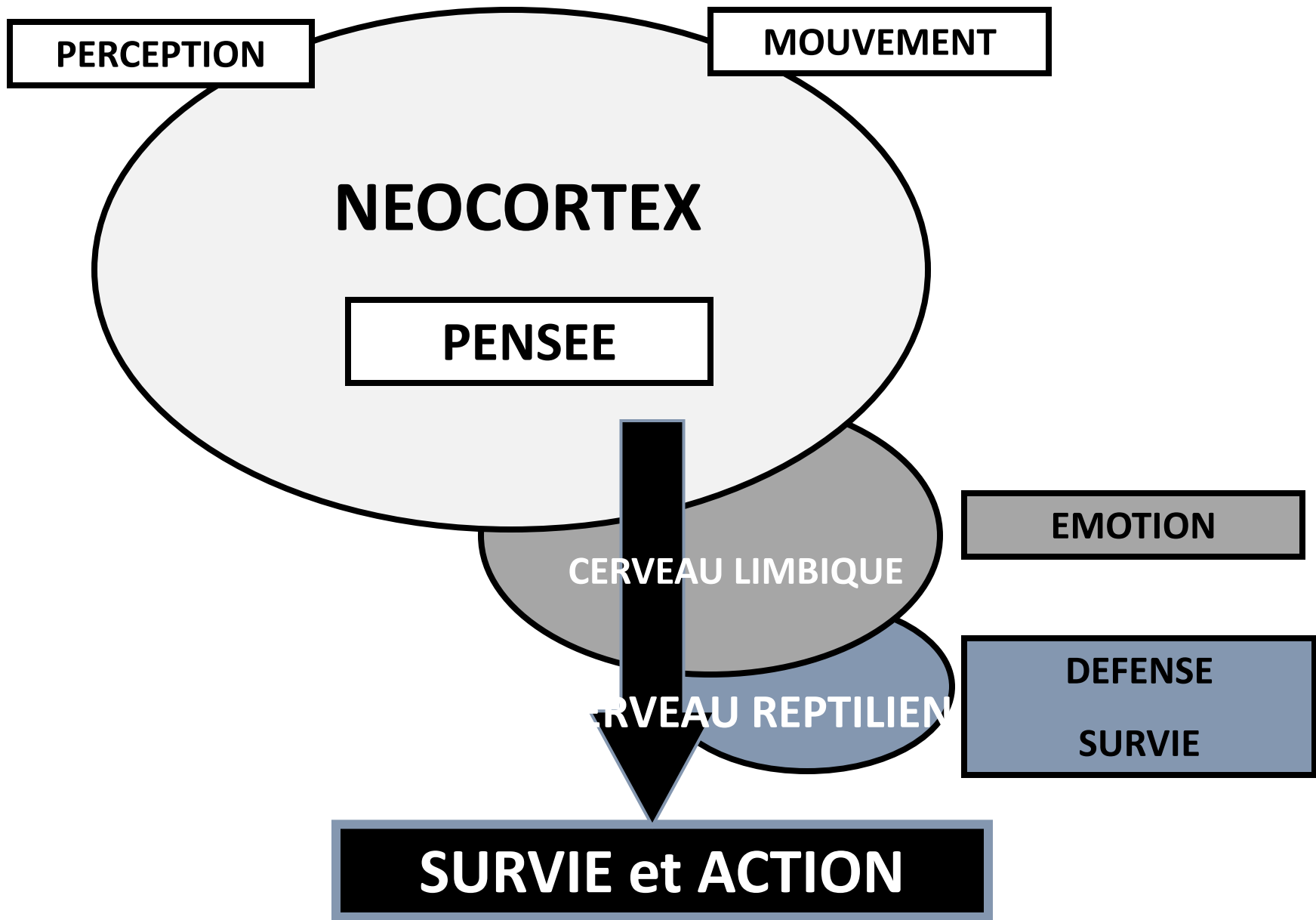
Bruce S. McEwen¹ and Peter J. Gianaros²

¹Harold and Margaret Milliken Hatch Laboratory of Neuroendocrinology, The Rockefeller University, New York, NY, USA. ²Departments of Psychiatry and Psychology, University of Pittsburgh, 3811 O'Hara Street, Pittsburgh, PA, USA

Address for correspondence: Bruce S. McEwen, The Rockefeller University, 1230 York Avenue, New York, NY 10065. mcewen@mail.rockefeller.edu

The brain is the key organ of stress reactivity, coping, and recovery processes. Within the brain, a distributed neural circuitry determines what is threatening and thus stressful to the individual. Instrumental brain systems of this circuitry include the hippocampus, amygdala, and areas of the prefrontal cortex. Together, these systems regulate physiological and behavioral stress processes, which can be adaptive in the short-term and maladaptive in the long-term. Importantly, such stress processes are linked to bidirectional processes of communication between the brain and the autonomic, cardiovascular, and immune systems, which are in turn influenced by mechanisms underpinning cognition, experience, and behavior. In one respect, these bidirectional stress mechanisms can be positive in that they promote short-term adaptation (*allostasis*). In another respect, however, these stress mechanisms can lead to a long-term dysregulation of allostasis in that they promote maladaptive wear-and-tear on the body and brain under chronically stressful conditions (*allostatic load*), compromising stress resiliency and health. This review focuses specifically on the links between stress-related processes embedded within the social environment and embodied within the brain, which is viewed as the central mediator and target of allostasis and allostatic load.

LE CERVEAU

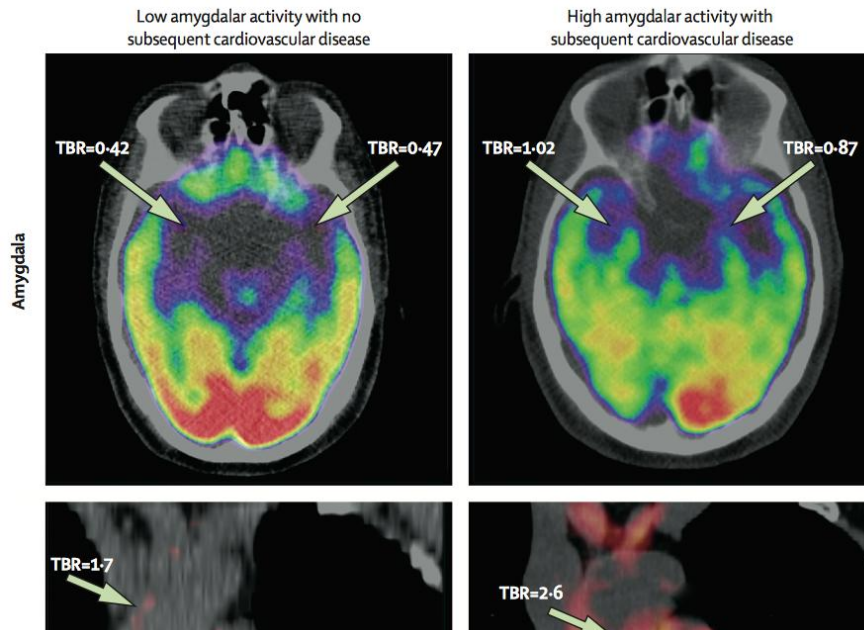


...STAYING ALIVE...

Relation between resting amygdalar activity and cardiovascular events: a longitudinal and cohort study



Ahmed Tawakol*, Amorina Ishai*, Richard AP Takx, Amparo L Figuerao, Abdelrahman Ali, Yannick Kaiser, Quynh A Truong, Chloe JE Solomon, Claudia Calcagno, Venkatesh Mani, Cheuk Y Tang, Willem JM Mulder, James W Murrrough, Udo Hoffmann, Matthias Nahrendorf, Lisa M Shin, Zahi A Fayad†, Roger K Pitman†



	Mean mean		Mean max		Max max	
	Correlation coefficient	p value	Correlation coefficient	p value	Correlation coefficient	p value
Aortic inflammation	0.49	<0.0001	0.45	<0.0001	0.41	<0.0001
Carotid inflammation*	0.47	<0.0001	0.43	<0.0001	0.40	<0.0001
Splenic activity	0.50	<0.0001	0.47	<0.0001	0.46	<0.0001
Bone-marrow activity	0.44	<0.0001	0.40	<0.0001	0.40	<0.0001
Control tissue uptake of ¹⁸ F-FDG uptake (subcutaneous fat)	0.02	0.73	0.02	0.80	0.02	0.79

Pearson product-moment correlations. All measures are uncorrected SUVs. Mean mean is the mean of the mean SUVs in the right and left amygdalae. Mean max is the mean of the maximum SUVs in the right and left amygdalae. Max max is the maximum SUV for the right and left amygdalae. ¹⁸F-FDG=¹⁸F fluorodeoxyglucose. SUV=standardised uptake value. *Mean of the right and left carotid mean maximum SUVs.

Interpretation In this first study to link regional brain activity to subsequent cardiovascular disease, amygdalar activity independently and robustly predicted cardiovascular disease events. Amygdalar activity is involved partly via a path that includes increased bone-marrow activity and arterial inflammation. These findings provide novel insights into the mechanism through which emotional stressors can lead to cardiovascular disease in human beings.

La loi du Vivant

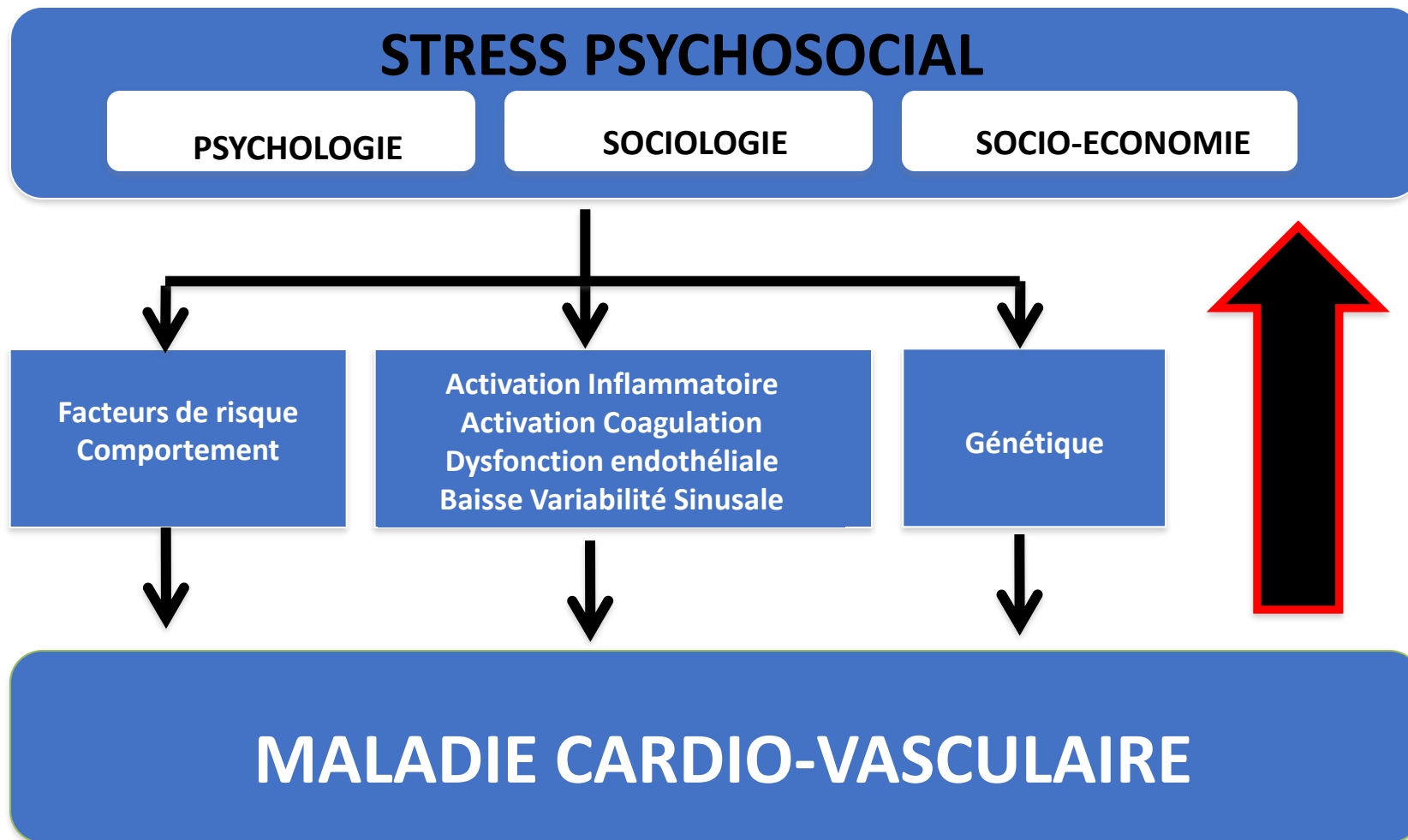


*La seule raison d'être d'un être
c'est d'être, c'est-à-dire de maintenir sa structure en vie*

Henri Laborit

Conséquences

- **Un phénomène bénéfique pour la survie peut être néfaste pour la santé**
- **Un phénomène bénéfique à court terme peut être néfaste à long terme**



MODES D'ACTION DU STRESS PSYCHOSOCIAL EN CARDIOLOGIE

Quelles pathologies?

- **Infarctus et pathologie coronaire**
- Insuffisance cardiaque
- Accident vasculaire cérébral
- Embolie pulmonaire
- Pathologie artérielle périphérique
- Mort subite
- Troubles du rythme auriculaire et ventriculaire



ORIGINAL ARTICLE




Psychosocial Stressors at Work and Coronary Heart Disease Risk in Men and Women: 18-Year Prospective Cohort Study of Combined Exposures

Mathilde Lavigne-Robichaud¹, MSc; Xavier Trudel, PhD; Denis Talbot, PhD; Alain Milot², MD; Mahée Gilbert-Ouimet, PhD; Michel Vézina, MD; Danielle Laurin³, PhD; Clermont E. Dionne⁴, PhD; Neil Pearce, PhD; Gilles R. Dagenais⁵, MD; Chantal Brisson, PhD

Journal of the American Heart Association

ORIGINAL RESEARCH

Job Strain as a Risk Factor for Peripheral Artery Disease: A Multi-Cohort Study

Katriina Heikkilä , PhD; Jaana Pentti, MSc; Ida E. H. Madsen, Marianna Virtanen, PhD; Lars Alfredsson, MD, PhD; Jakob Bjorner, Eric Brunner, PhD; Hermann Burr, PhD; Jane E. Ferrie, PhD; Anja Constanze Leineweber, PhD; Linda L. Magnusson Hanson, PhD; Solja T. Nyberg, PhD; Tuula Oksanen, MD, PhD; Jan H. Pejtersen, Reiner Rugulies, PhD; Archana Singh-Manoux, PhD; Andrew Steptoe, Töres Theorell, PhD; Jussi Vahtera, MD, PhD; Ari Väänänen, PhD

CONCLUSIONS

Findings of this multi-national multi-cohort study show that job strain is associated with a small but consistent increase in the risks of hospitalization with PAD. The strength of the observed association is approximately the same as that of job strain with other atherosclerotic diseases, such as coronary heart disease and ischemic stroke.



OPEN ACCESS

ORIGINAL ARTICLE

The association between job strain and atrial fibrillation in Swedish men

Kjell Torén,^{1,2} Linus Schiöler,¹ Mia Söderberg,¹ Kok Wai Giang,³ Annika Rosengren³

¹Section of Occupational and Environmental Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

²Department of Occupational Medicine, Respiratory Diseases and Toxicology, University of Perugia, Italy

³Department of Molecular and Clinical Medicine, Institute of

ABSTRACT

Objectives The purpose of this study was to investigate whether psychosocial stress defined as high strain based on the job demand–control model increases risk for atrial fibrillation.

Methods The present study comprised 6035 men born between 1915 and 1925 and free from previous coronary heart disease, atrial fibrillation and stroke at baseline (1974–1977). Work-related psychosocial stress was measured using a job-exposure matrix for the job

What this paper adds

- ▶ Men with high strain may have an increased risk for atrial fibrillation.
- ▶ The observed risk is small and residual confounding may be present.
- ▶ This is the first longitudinal general population-based study in this field.

Hypertension artérielle et stress au travail

Conclusion

In this article we perform the first assessment of the association between a large panel of occupational environmental stressors and blood pressure, when occupational environmental stressors were considered separately and in combination in a French general working population (including men and women). Occupational environmental stressors play a role on SBP mainly when initial SBP is in normal range but not on incident cases of hypertension over a 5-year follow-up. Cardiovascular risk factors explain most of these associations. The recognition of completed tasks has an independent protective role on SBP.

Highlighting the adverse effects of some organisational and psychosocial factors could be helpful in order to implement primary prevention strategies in the workplace by occupational health teams and at individual level by cardiologists and general practitioners.

Huo Yung Kai et al. *Environmental Health* (2018) 17:79
<https://doi.org/10.1186/s12940-018-0423-9>

Environmental Health

RESEARCH

Open Access



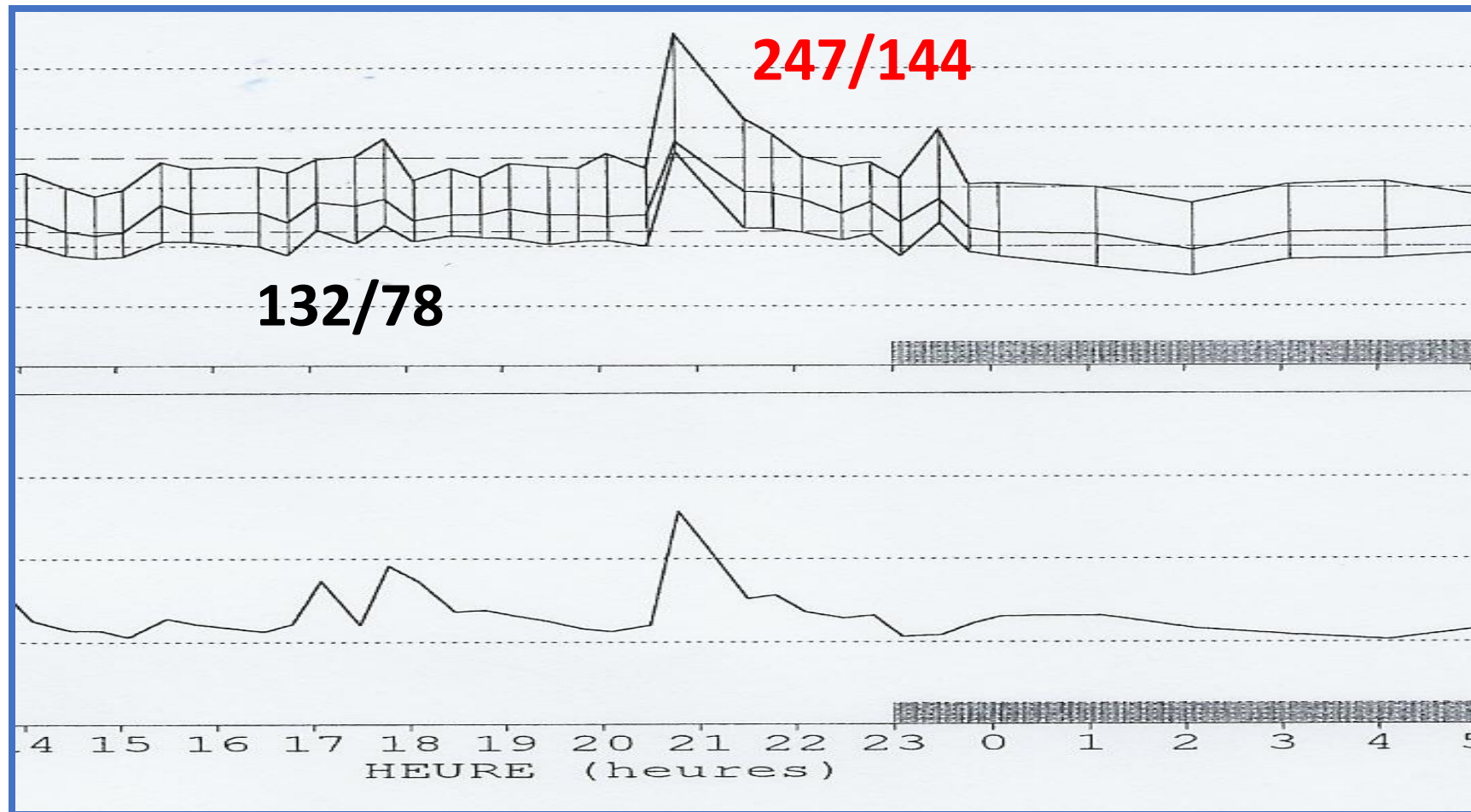
Impact of occupational environmental stressors on blood pressure changes and on incident cases of hypertension: a 5-year follow-up from the VISAT study

Samantha Huo Yung Kai¹, Jean-Bernard Ruidavets¹, Camille Carles^{2,3}, Jean-Claude Marquie⁴, Vanina Bongard^{1,5}, Damien Leger⁶, Jean Ferrieres^{1,7} and Yolande Esquirol^{1,8,9*} 

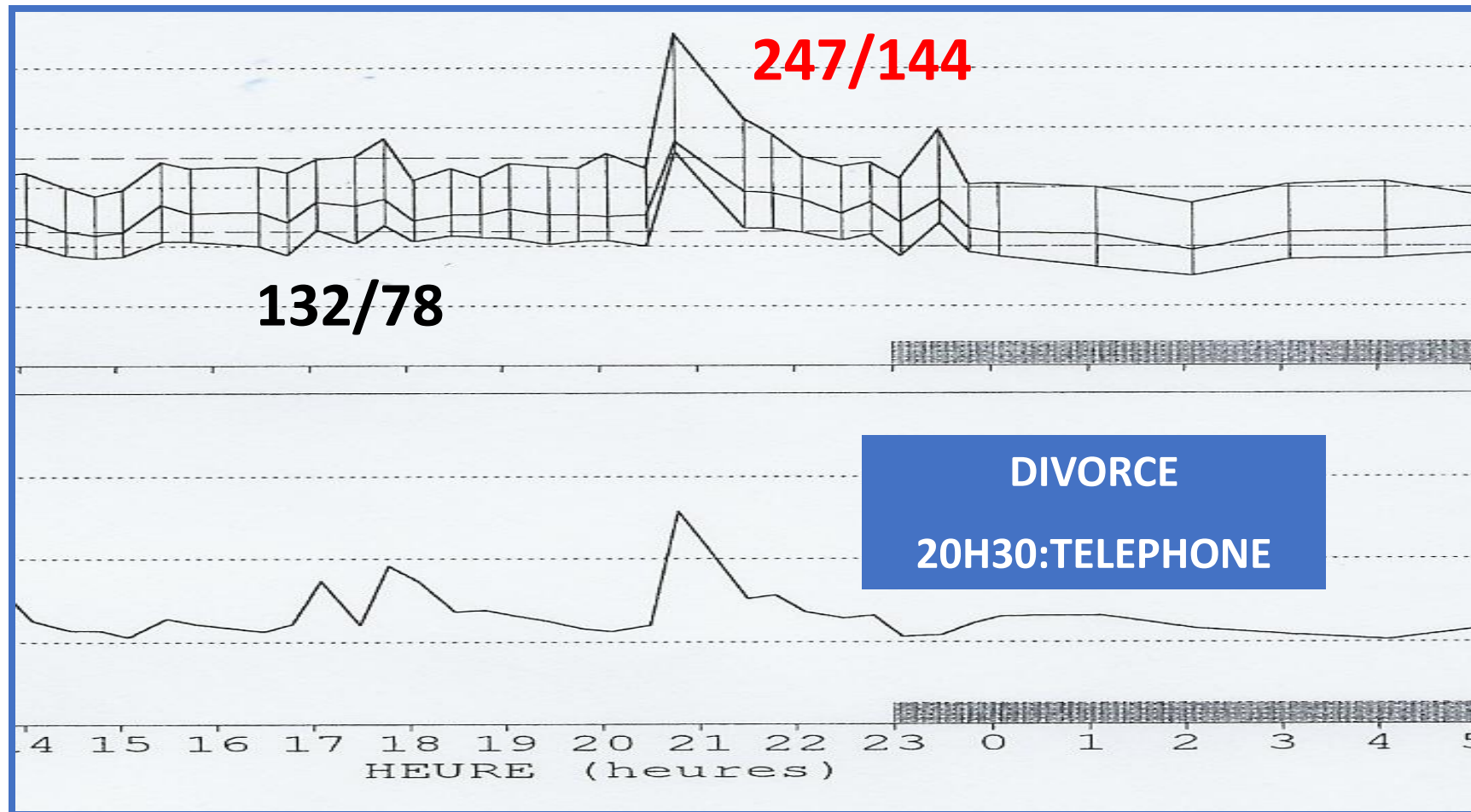
A tall, conical stone cairn made of stacked, flat, grey and brown stones stands in the foreground. The background features a vast, snowy mountain landscape under a cloudy sky. A prominent, sharp, snow-capped mountain peak is visible in the distance. The ground is covered in snow, with some rocky patches and tracks visible.

Quelques exemples plus ou moins connus...

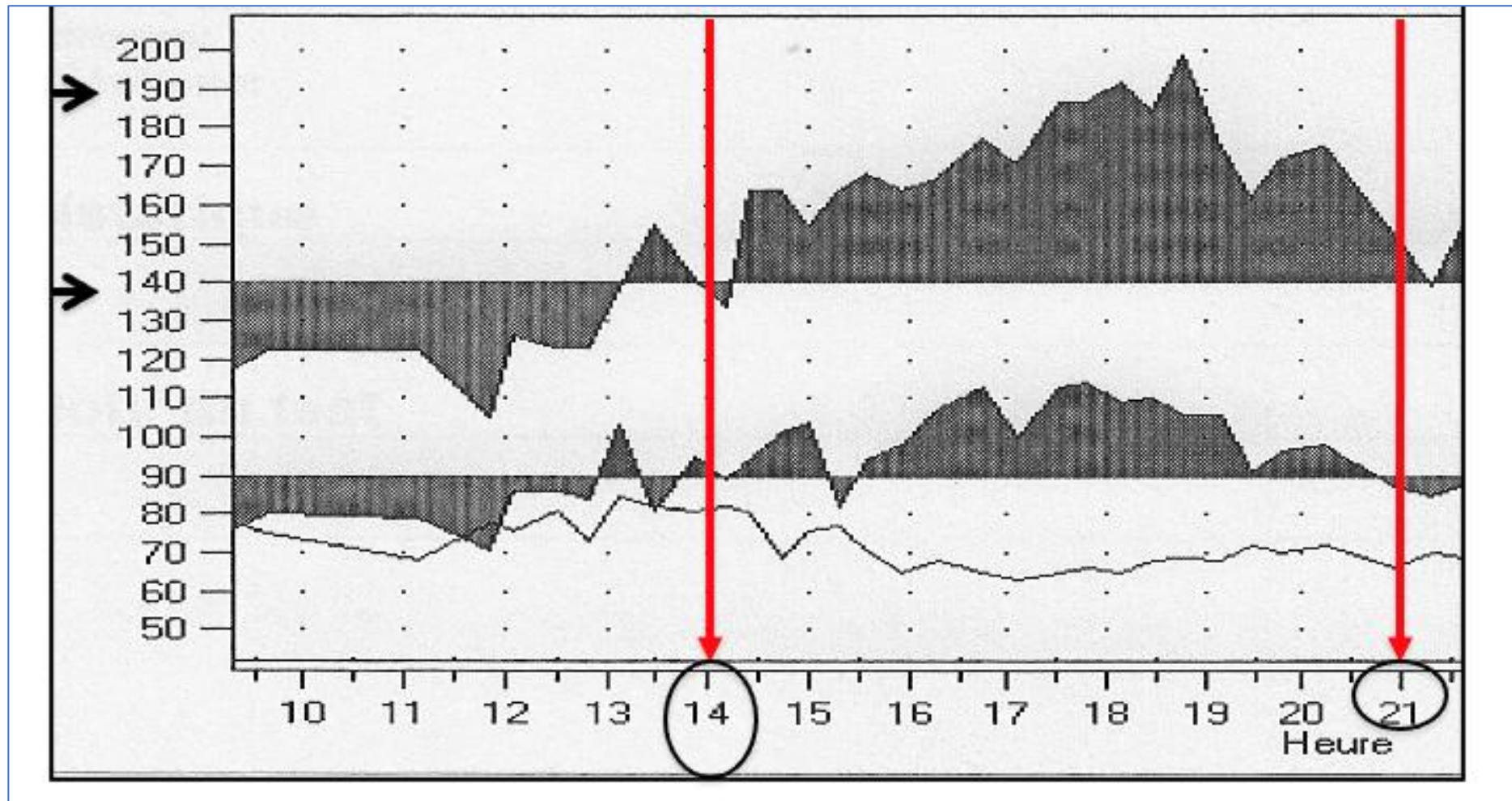
Hypertension et stress



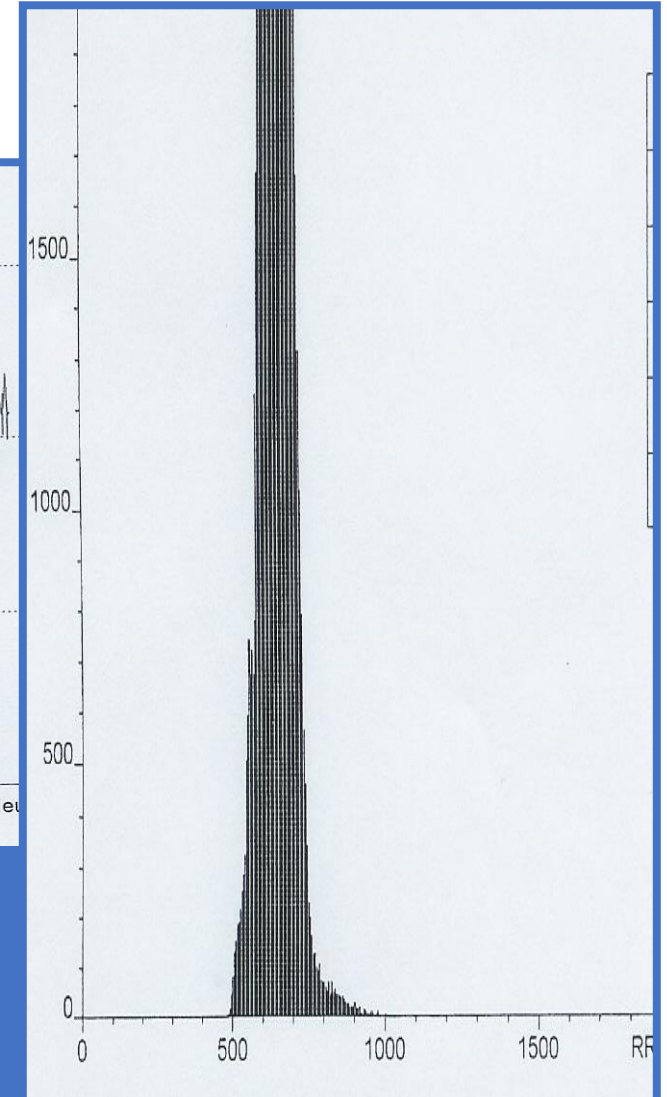
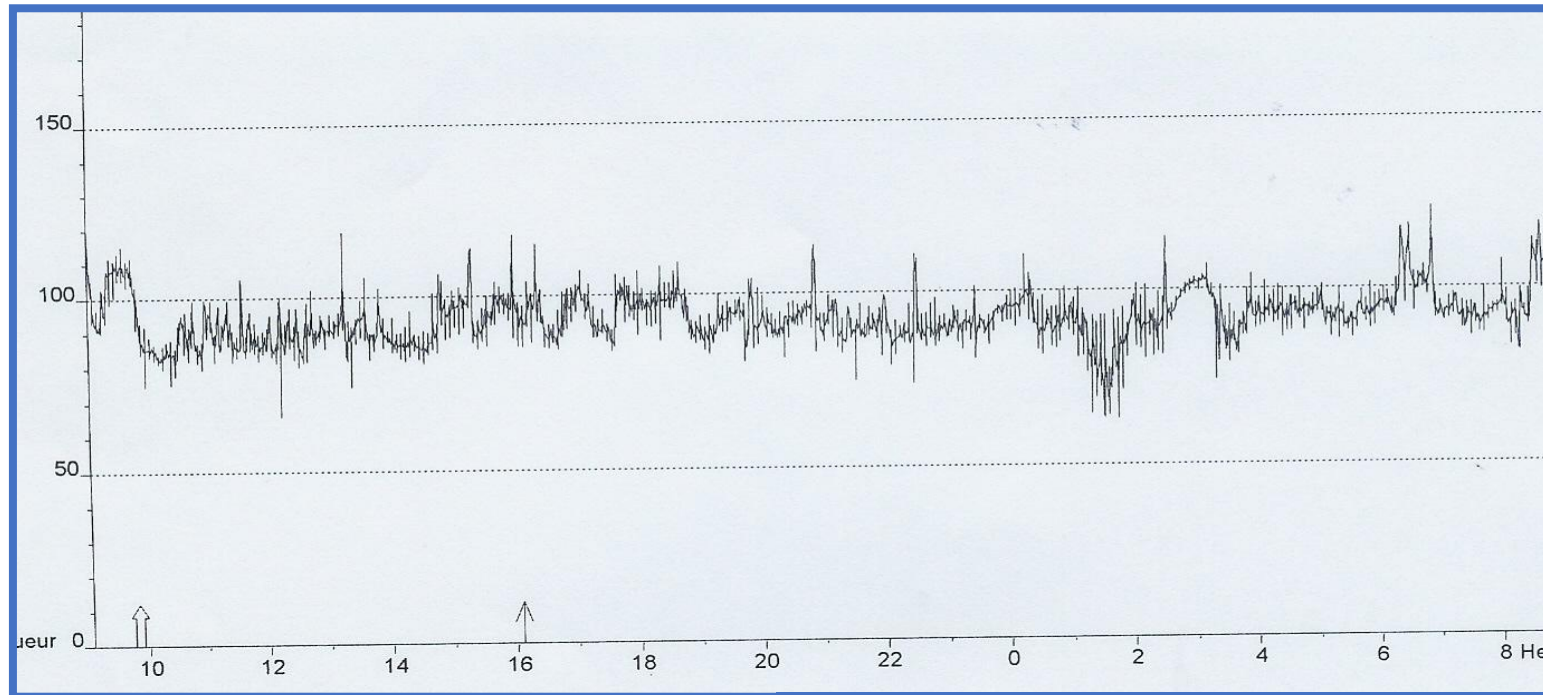
Hypertension et stress



Hypertension artérielle et stress au travail



Stress chronique au travail et risque de mort subite



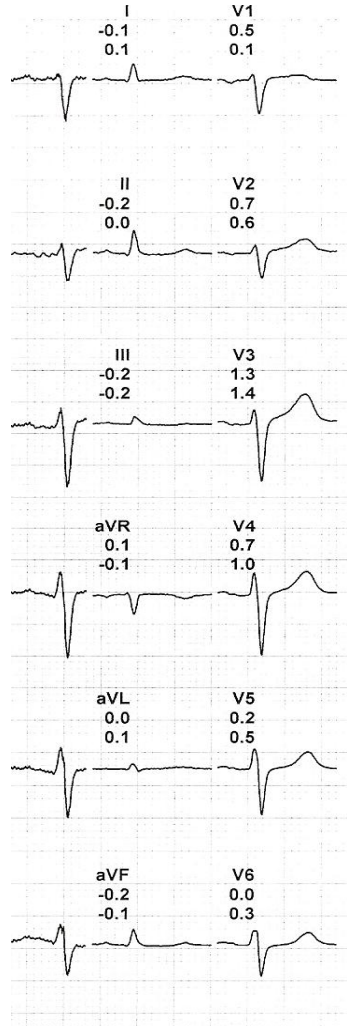
Homme de 43 ans
Milieu bancaire
Tableau clinique de Burn-out

Fréquence moyenne : 92/mn

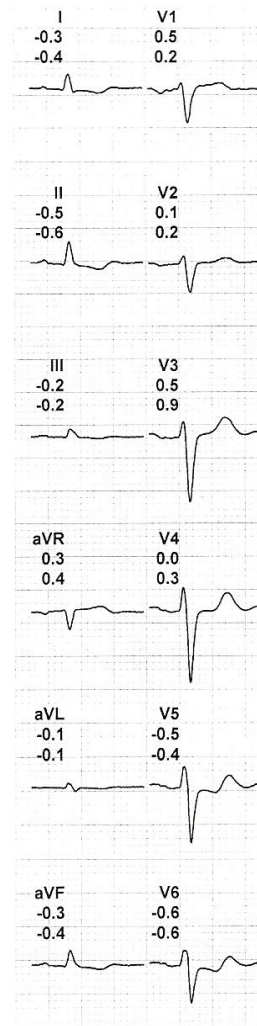
R-R moyen : 651 ms

SDNN: 49 ms

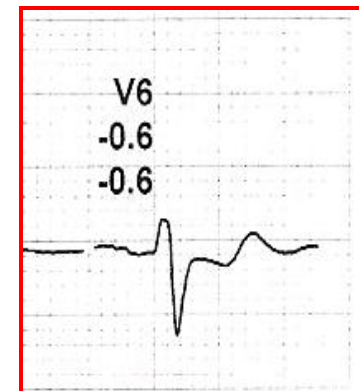
Stress et ischémie coronaire

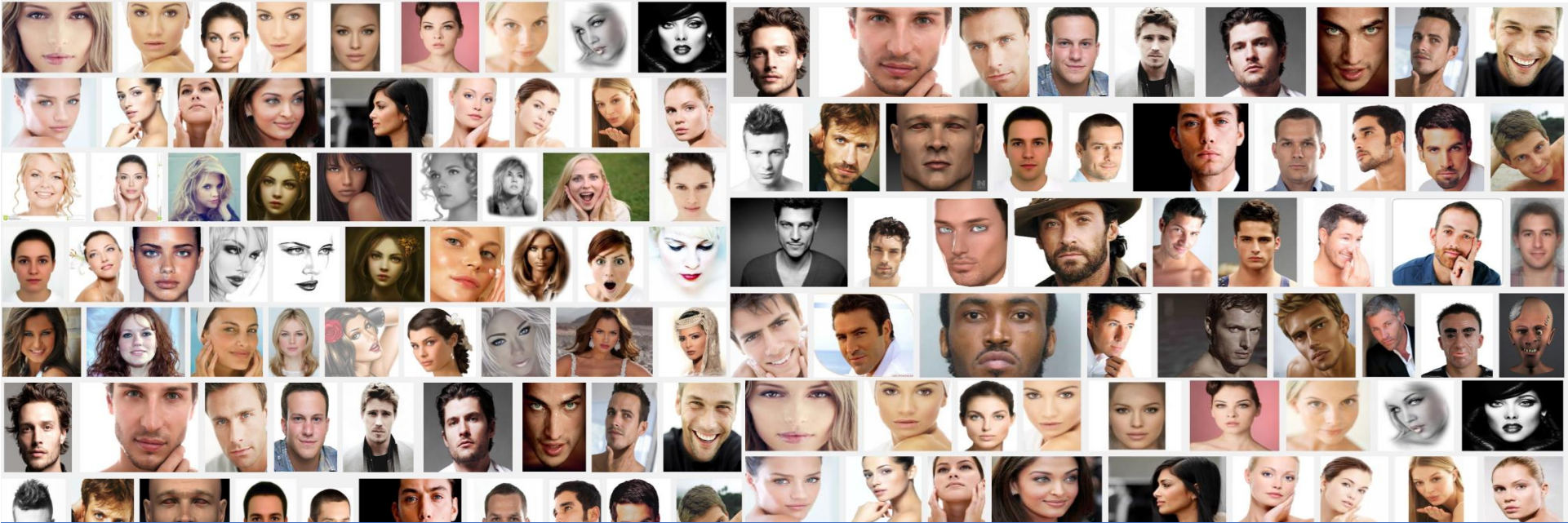


FC: 69
TA: 124/74

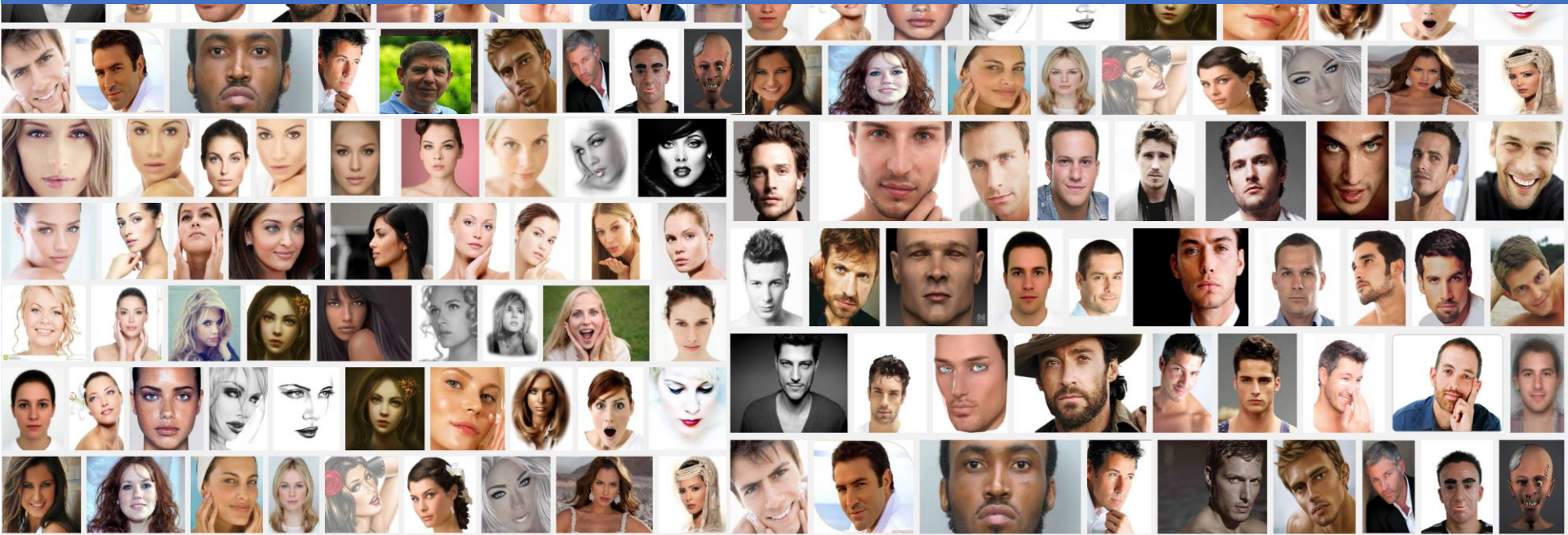


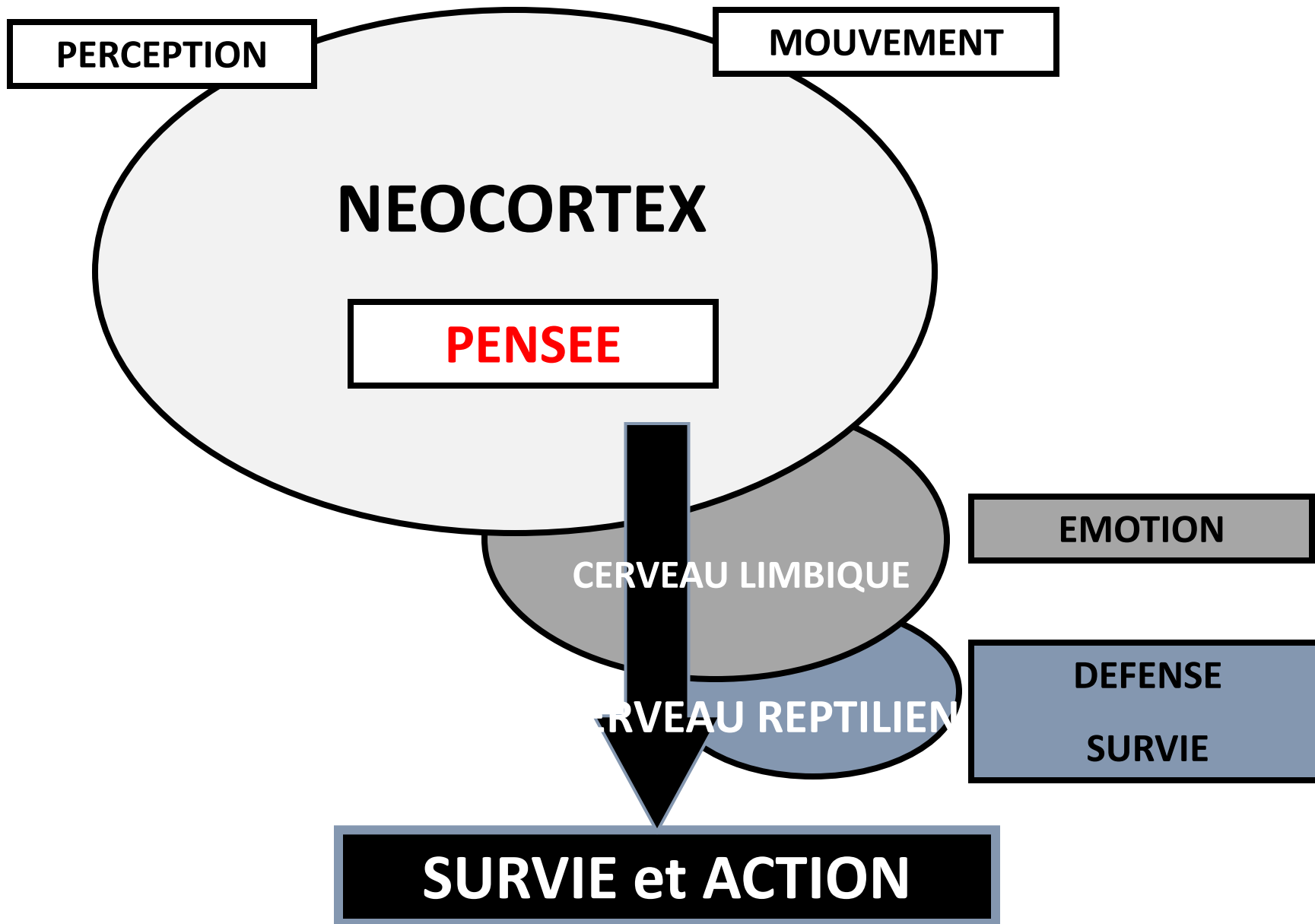
FC: 91
TA: 156/87



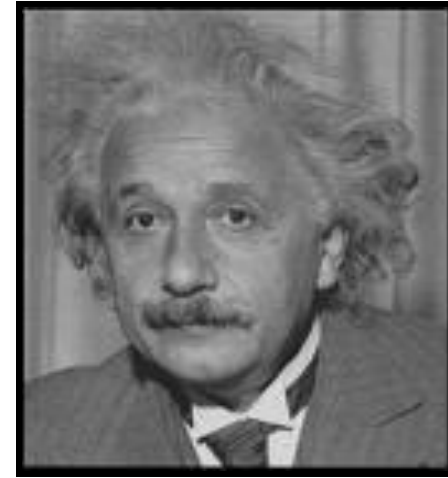


Sommes nous égaux face au stress?





...STAYING ALIVE...



« La présence chez l'homme d'un appareil mental qui le fait penser, se souvenir, fantasmer, confère à la notion de stress en clinique humaine toute sa spécificité »

Silla CONSOLI

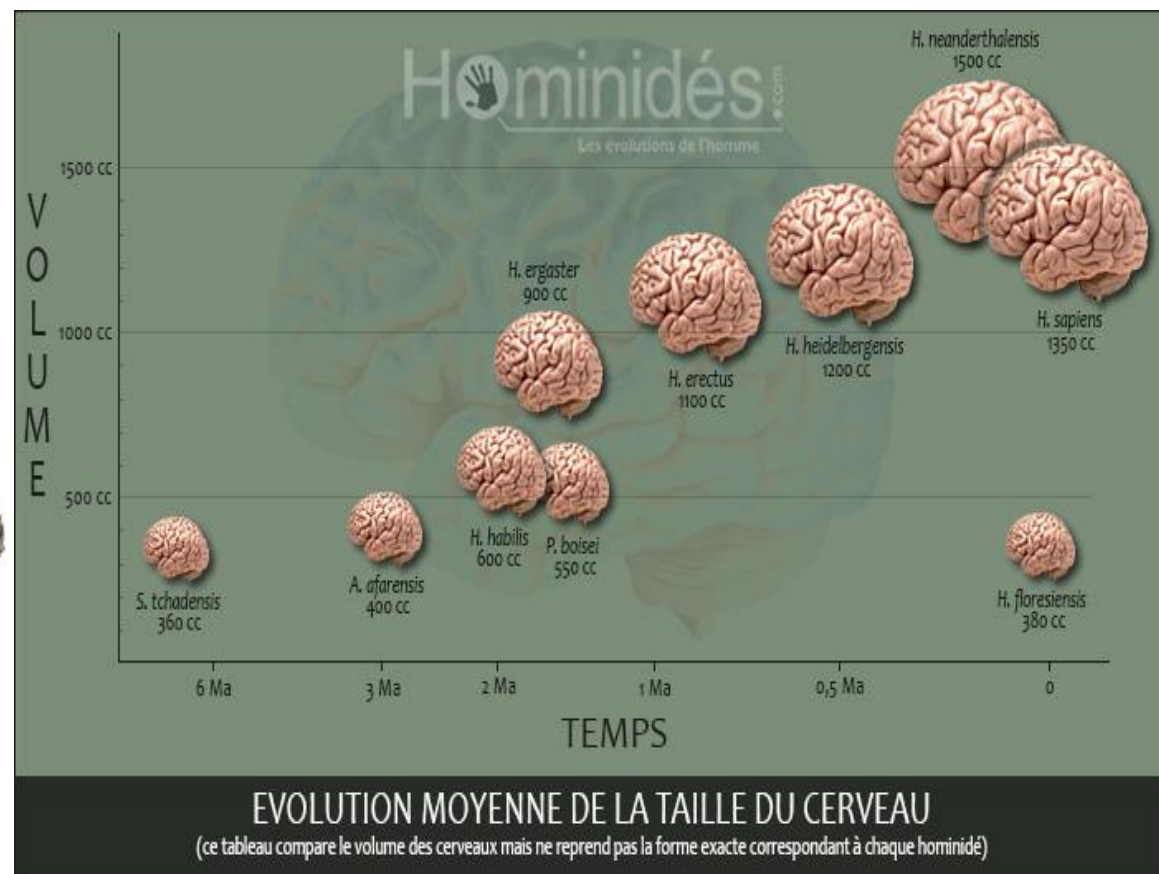
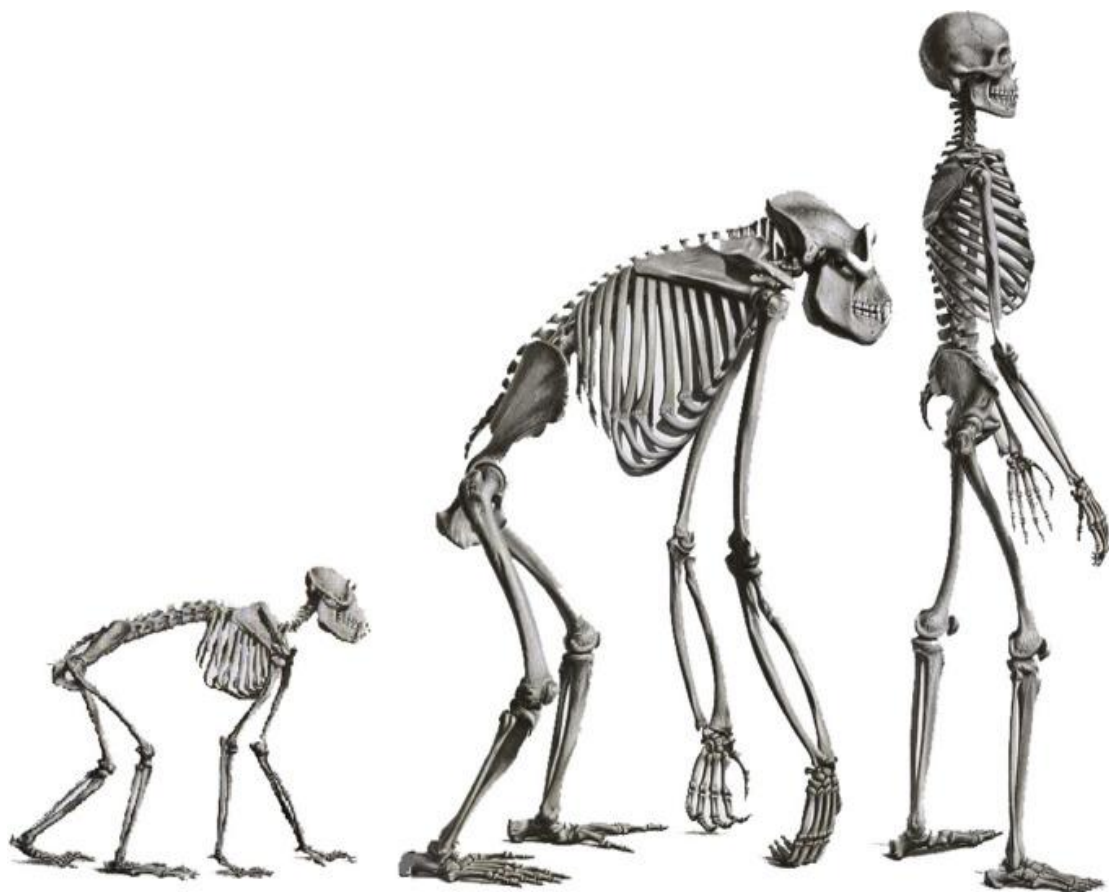
Le syndrome du Bazooka



**Notre réaction de stress ressemble souvent à
une chasse au lapin armé d'un Bazooka...**

et ..un bazooka...c'est plus dangereux qu'un lapin !

Le dilemme obstétrical





Le cerveau n'est pas la cause de l'élan vers le monde extérieur mais la conséquence de nos relations.

Sans la présence de l'autre , nous ne pouvons devenir nous-mêmes.

Boris Cyrulnik . De chair et d'âme

Adverse Childhood Experiences (ACE)

> [Am J Prev Med.](#) 1998 May;14(4):245-58. doi: 10.1016/s0749-3797(98)00017-8.

1998

Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study

[V J Felitti](#) ¹, [R F Anda](#), [D Nordenberg](#), [D F Williamson](#), [A M Spitz](#), [V Edwards](#), [M P Koss](#), [J S Marks](#)

Affiliations + expand

PMID: 9635069 DOI: [10.1016/s0749-3797\(98\)00017-8](#)

Abstract

Background: The relationship of health risk behavior and disease in adulthood to the breadth of exposure to childhood emotional, physical, or sexual abuse, and household dysfunction during childhood has not previously been described.

Violences Sexuelles: 1 enfant sur 5

The screenshot shows the Council of Europe website page for the 'One in Five' campaign. The header includes the Council of Europe logo and the text 'Human Rights and Rule of Law'. The navigation menu includes 'The Council in brief', 'Human Rights', 'Democracy', 'Rule of Law', 'Organisation', '47 Countries', 'Topics', and 'Newsroom'. The main content area features a sidebar with links to 'Our campaign', 'National Campaigns', 'How to join', 'What to do', and 'Parliamentary dimension'. The main text area is titled 'Is it really ONE in FIVE?' and discusses the prevalence of sexual violence, citing research from Unicef, the ILO, and the WHO. It lists several factors that make it difficult to obtain accurate data, such as underreporting, differing methodologies, and ethical issues in interviewing children.

1 Fille sur 5
1 Garçon sur 8

1 Fille sur 5
1 Garçon sur 10

1 Fille sur 5
1 Garçon sur 13

AGRESSION SEXUELLE
65% avant 18 ans
10% avant 6 ans
22% entre 6 et 11 ans
36% entre 12 et 18 ans

Montréal : Éditions CEC, 2009, pp. 145-160.


Fréquence +++
Sous estimée
FILLE +++
FAMILLE ++++
30% avant 12 ans

ACE et Cardiologie

ORIGINAL RESEARCH

Coronary artery risk development Study

Association of Childhood Psychosocial Environment With 30-Year Cardiovascular Disease Incidence and Mortality in Adults Age

Jacob B. Pierce , BA; Kiarri N. Kershaw, PhD, MPH; Catarina I. Kiefe, PhD, MD; David Stephen Sidney, MD, MPH; Sharon Stein Merkin, PhD, MHS; Joe Feinglass, PhD

3646 Patients
Age : 25.1 ans
Mortalité. HR:1.68
Ins. Coro. HR:1,5

Table 3. Frequencies of CVD Events in Each CFE Adversity Group: CARDIA, 1985–2018

Outcome, No (%)	Study Population (n=3646)	CFE Adversity Group			P for Trend
		Low Range: 0–1 (n=1781)	Moderate Range: 2–3 (n=1043)	High Range: 4–7 (n=822)	
All-cause mortality	201 (5.5)	72 (4.0)	71 (6.8)	58 (7.1)	<0.001
All CVD events*	198 (5.4)	80 (4.5)	63 (6.0)	55 (6.7)	0.01
Coronary artery disease	93 (2.6)	34 (1.9)	28 (2.7)	31 (3.8)	<0.01

CONCLUSIONS: Adverse CFE was associated with CVD incidence and all-cause mortality later in life, even after controlling for CVD risk factors in young adulthood.

ACE: Les conséquences profondes

Atteinte
globale



Variable selon
l'âge

- Taille du cerveau
- Diminution Substance Blanche et Grise
- Réduction Hippocampe (Mémoire et apprentissage)
- Cortex préfrontal et amygdale
 - **Hyperréactivité aux stress et émotions**
- Pauvreté neuronale (apprentissage)
- Déficit en facteur de croissance cérébrale (neurogénèse)
- Atteinte du corps calleux (dissociation)



Comment gérer le stress



Heart rate variability and occupational stress— systematic review

Susanna JÄRVELIN-PASANEN^{1*}, Sanna SINIKALLIO² and Mika P. TARVAINEN^{3, 4}

¹Institution of Public Health and Clinical Nutrition, Ergonomics, Faculty of Health Sciences, School of Medicine, University of Eastern Finland, Finland



Conclusions

This systematic review showed that occupational stress is associated with lowered HRV, specifically with reduced parasympathetic activation. Thus, analysis of HRV can be used as an informative marker for physiological impacts of workplace stressors. In addition, this systematic review showed the diversity of assessing occupational stress or measuring of HRV in the studies. Consequently, the utilizing of stress theories/models and valid stress indicators would improve the comparability of results. Further, more unified HRV assessment and analysis methods, as well as longitudinal study settings, are called for.

**La variabilité sinusale peut être employée comme un marqueur de
l'impact physique du stress**



En Attendant...Un petit truc



Mesure variabilité sinusale

- À l'état basal Allongé
- En position debout
- En position assise

Mesure variabilité sinusale

- À l'état basal Allongé
- En position debout avec calcul mental
- Après 5 minutes de respiration lente




Information

- Sur l'état de stress
- Sur les capacités de régulation



Review

Generalized Unsafety Theory of Stress: Unsafe Environments and Conditions, and the Default Stress Response

Jos F. Brosschot ^{1,*}, Bart Verkuil ²  and Julian F. Thayer ³

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² Institute of Psychology, Unit Clinical Psychology, Leiden University, 2300 RB Leiden, The Netherlands; bverkuil@fsw.leidenuniv.nl

³ Department of Psychology, The Ohio State University, Columbus, OH 43210, USA; thayer.39@osu.edu

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Received: 31 December 2017; Accepted: 27 February 2018; Published: 7 March 2018

Overall, GUTS identifies and explains far more stress-related physiological activity that is responsible for disease and mortality than current stress theories. Furthermore, it does so in a more parsimonious fashion, by using an overarching explanatory principle—generalized unsafety and the default stress response—than the various biological pathways for all these conditions that are more commonly used (and that still may be partially accurate). As such, GUTS provides a revolutionary evolutionary perspective on contemporary health problems related to among others obesity, depression, loneliness, the aging society and the anthropogenization of the environment.

GUTS

Generalized unsafety Theory of Stress

- 1. Stress : réponse par défaut**
- 2. Notre état basal dépend aussi de la perception de sécurité**
- 3. Sécurité :évaluation cérébrale de nos chances de survie**
- 4. Le stress est en grande partie inconscient**
- 5. Une réponse prolongée n'a pas besoin d'un stress prolongé**
- 6. L'effet de persévérance cognitive**
- 7. Les signaux de sécurité pour les humains sont principalement sociaux et appris.**



INQUIETUDE



QUIETUDE

La question ne devrait pas être
«qu'est-ce qui provoque une prolongation du stress ?», mais «qu'est-ce qui l'arrête ?»

La stimulation du vague Ventral



INQUIETUDE



QUIETUDE

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«qu'est-ce qui provoque une prolongation du stress ?», mais «qu'est-ce qui l'arrête ?»

La stimulation du vague Ventral





La Révolution du mois d'Aout

La révolution du mois d'Aout 2025



European Heart Journal (2025) 46, 1–70
<https://doi.org/10.1093/eurheartj/ehaf191>

ESC GUIDELINES

2025 ESC Clinical Consensus Statement on mental health and cardiovascular disease: developed under the auspices of the ESC Clinical Practice Guidelines Committee

Developed by the task force on mental health and cardiovascular disease of the European Society of Cardiology (ESC)

Endorsed by the European Federation of Psychologists' Associations AISBL (EFPA), the European Psychiatric Association (EPA), and the International Society of Behavioral Medicine (ISBM)

- ESC 2025 Madrid
- Consensus d'experts
- Cardiologues
- Psychiatres
- Psychologues
- Patients
- 70 pages
- 687 références
- France peu représentée

La révolution du mois d'Aout 2025



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4 Parties

1. Santé mentale en Amont
2. Santé mentale en aval
3. Psychiatrie et cardiologie
4. Populations particulières

Exclusion

1. Pathologies organiques
2. Démence

Quel est le constat actuel ?

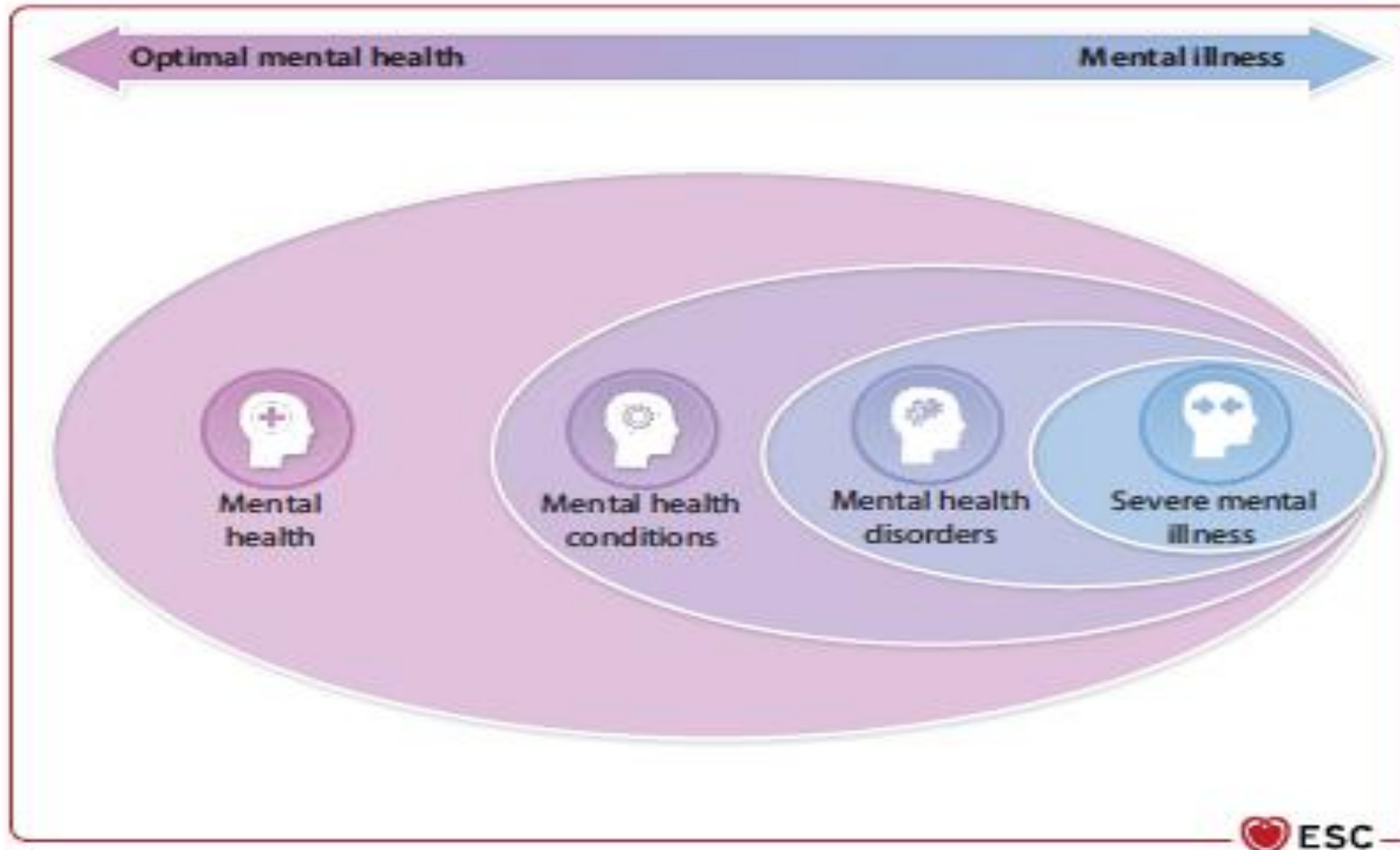
- **Sensibilisation insuffisante des professionnels de santé**
- **Stigmatisation de la maladie mentale**
- **Manque de dépistage et d'évaluation**
- **Manque de connaissances théoriques et pratiques des professionnels**
- **Manque de recherche sur les pistes pour améliorer cette problématique**
- **Manque de conseils pratiques pour améliorer les soins en santé mentale**
- **Manque de sensibilisation à l'entourage et aux soignants**

Les soins cardiovasculaires sont optimaux lorsqu'ils sont centrés sur la personne et visent à améliorer, non seulement la santé cardiovasculaire, mais aussi mentale en tant que composante majeure de la santé globale.

Cela doit Changer !

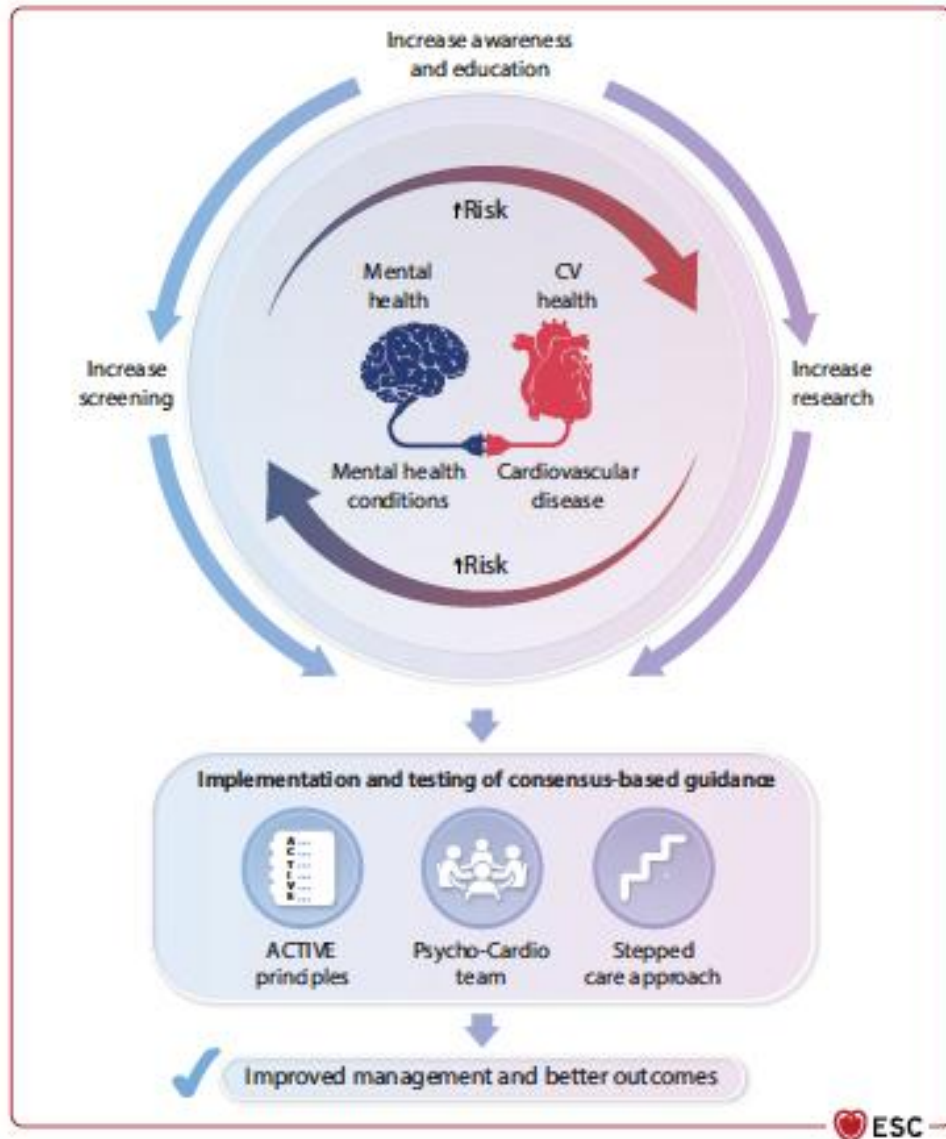
**La pratique clinique cardiovasculaire néglige souvent l'impact de la santé mentale et l'importance de son inclusion dans les soins .
Cela doit changer.**

La santé Mentale



- **Bonne Santé mentale**
 - **Psychologie positive**
- **Stress**
- **Dépression**
- **Bipolarité, schizophrénie**

Principes généraux



- Interactions santé mentale et cardiologie
- Améliorer sensibilisation et éducation
- Améliorer la détection
- Améliorer la recherche

- Mise en œuvre du consensus
 - Equipe de Cardiopsychologie
 - Principes ACTIVE
 - Approche par étapes


- Amélioration de la prise en charge
- Amélioration des résultats


L'équipe de Psychocardiologie




- **Approche holistique**
- **Multidisciplinarité**
 - Soins primaires
 - Infirmier (e) s
 - Travailleurs sociaux
 - Psychiatres
 - Psychologues
 - Cardiologues
 - Autres professionnels


Le Principe ACTIVE


A  Acknowledge the links between mental and cardiovascular health and determinants, bias, disparities and stigma associated with mental health

C  Check for symptoms or mental health conditions at cardiovascular visits regularly and cardiovascular risk factors during mental care

T  Tools. Use validated tools to screen and diagnose mental health symptoms and conditions

I  Implement person-centred management using shared decision-making and stepped care approaches

V  Venture to change cardiovascular care by implementing the structural and functional changes needed to integrate mental health care within cardiovascular practice

E  Evaluate needs for educational support and changes in management and progress in cardiovascular and mental health outcomes

- Reconnaître l'importance du lien
- Rechercher systématiquement
- Utiliser les outils validés
- Mettre en œuvre les soins
- S'engager à convaincre
- Evaluer les soins actuels en pratique

Santé mentale et Cardiologie

1. Les indicateurs de santé mentale positive, tels que l'optimisme, le bonheur et une grande satisfaction dans la vie, sont associés à un risque CV plus faible.
2. Les facteurs psychosociaux dangereux et les problèmes de santé mentale tels que la dépression, l'anxiété et le SSPT sont associés à un risque accru de développer une maladie cardiovasculaire.
3. Les professionnels de santé ont la responsabilité
 - De s'informer sur ce risque mental
 - D'y être attentif en consultation
 - D'informer, de conseiller , de diriger les patients à risque
 - De plaider pour ce changement de paradigme

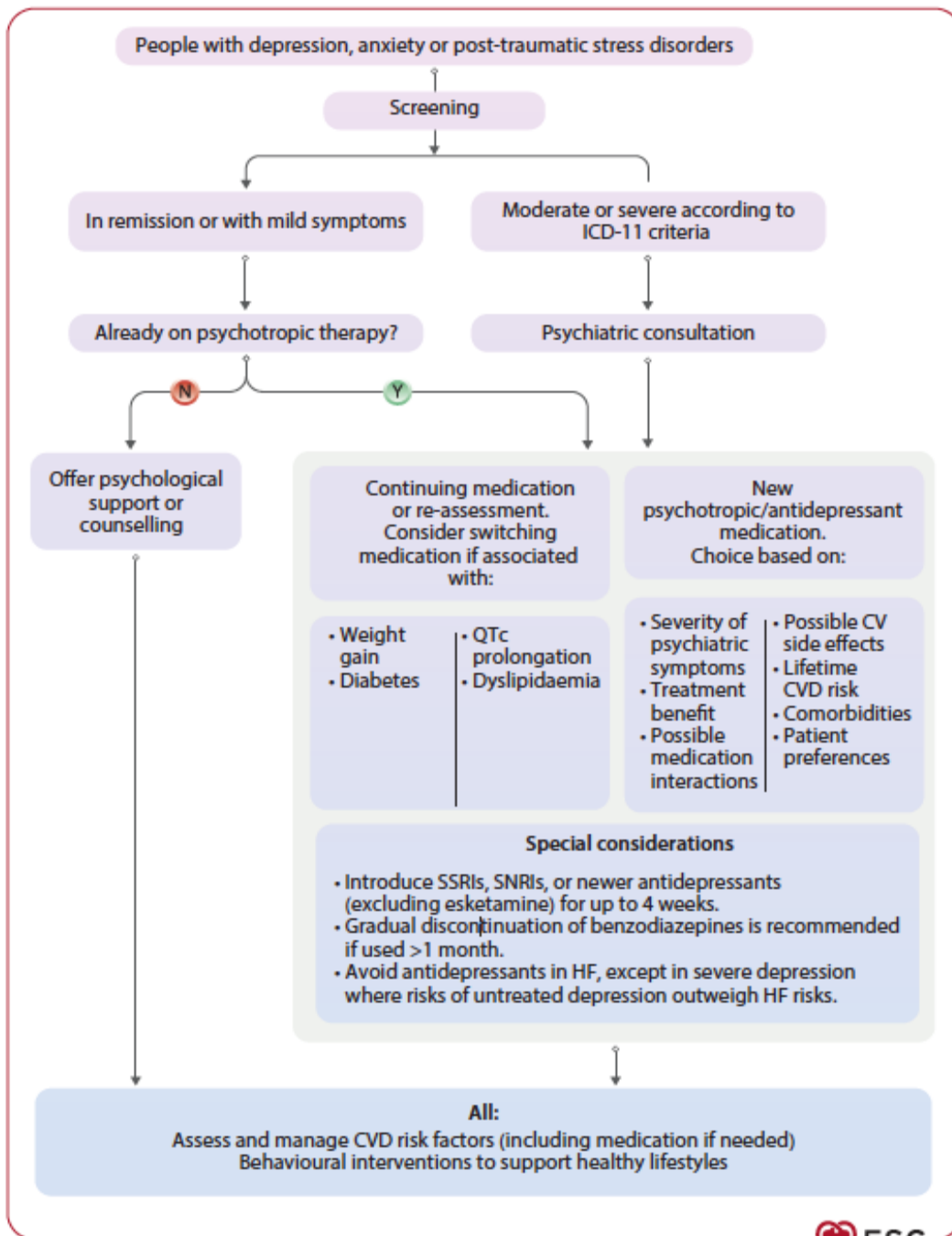
La gestion du stress psychosocial et la promotion du bien-être mental devraient donc faire partie intégrante des soins de santé et de la prévention cardiovasculaire.

Cardiologie et santé mentale

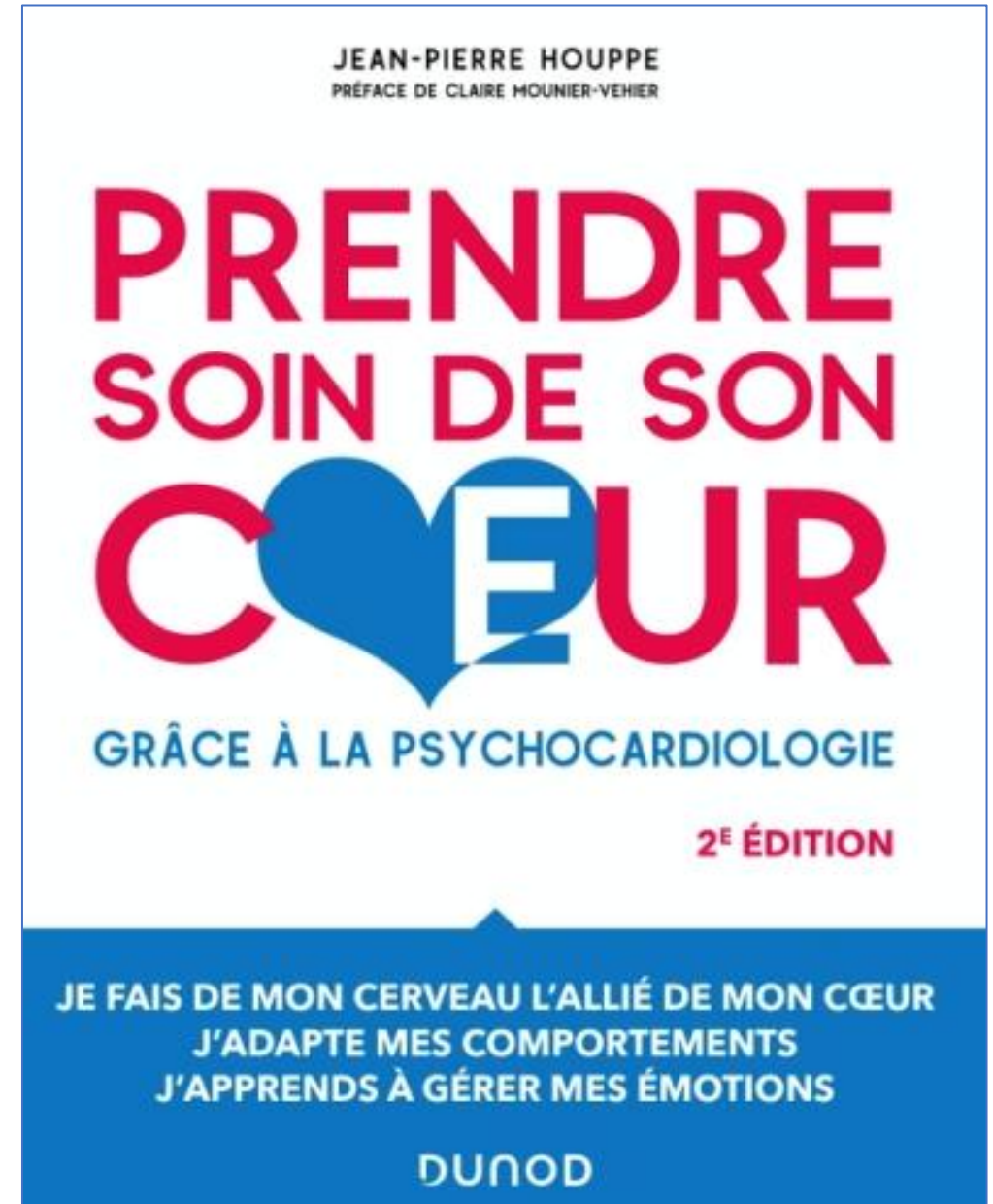
- **Stress chronique**
- **Dépression et syndrome dépressifs**
- **Anxiété**
- **Syndrome de stress post traumatique**
- **Impact de la solitude, vie de couple**
- **Importance des Aidants**

Prendre en charge

- **Psychoéducation**
- **Prescription sociale (lien social)**
- **Interventions psychologiques**
 - **TCC**
 - **EMDR**
 - **Gestion du stress**
 - méditation
- **Interventions sur le mode vie**
 - **Activité physique**
 - **Modifications nutrition**
 - **Arrêt du tabac**
 - **Gestion du sommeil**



**La psychocardiologie doit
faire partie de la réalité
quotidienne des
cardiologues
à la fois pour la prévention
primaire et la prévention
secondaire**



An aerial photograph of a lavender field. The rows of lavender plants are arranged in a V-shape that converges towards the center. In the middle of the V, there is a distinct patch of bright yellow flowers. The overall scene is bathed in soft, natural light, highlighting the textures of the plants and the vibrant colors.

Merci de votre attention

Prenez soin de vous