

Conséquences cardio-vasculaires du stress des attentats

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Stress et évènements cardiaques

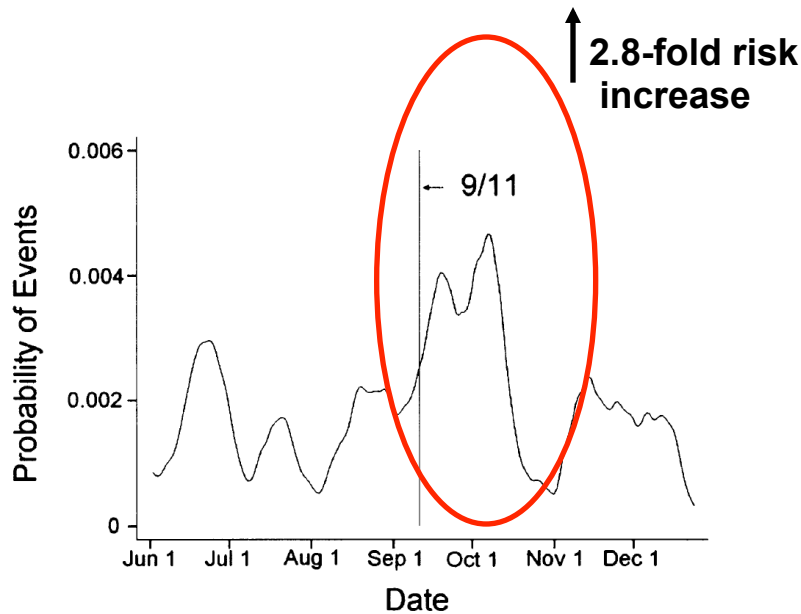


Figure 2. The day-to-day incidence of ventricular tachyarrhythmia triggering implantable cardioverter-defibrillator therapy during an eight-month observation period, with a substantial increase in event rate in the 30-day period after September 11, 2001, followed by a return to baseline.

New York

Florida

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The World Trade Center Attack: Increased Frequency of Defibrillator Shocks for Ventricular Arrhythmias in Patients Living Remotely From New York City

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OBJECTIVES The goal of this study was to determine whether the World Trade Center (WTC) attack on September 11, 2001, had an effect on the occurrence of ventricular arrhythmias among patients with implantable cardioverter-defibrillators (ICDs) living in Florida.

BACKGROUND Increased frequencies of ICD therapies for ventricular arrhythmias were reported among patients in New York City after the attack on the WTC. Whether this in patients living geographically distant from New York is unknown.

METHODS This was an observational study consisting of 132 ICD patients w/ University of Florida and the Veterans Affairs Medical Center in Gai routine ICD follow-up around the time of the WTC attack. The occ tachyarrhythmias triggering ICD therapy in the 30 days before and constituted the primary end point.

RESULTS In the 30 days following the WTC attack, a total of 14 patients (11%) had ventricular tachyarrhythmias, compared with 5 (3.8%) in the preceding 30 days (p = 0.0389, 95% confidence interval [CI] 0.4 to 13.3). This represents a 2.8-fold risk increase. Patients with ventricular arrhythmias both before and after September 11 demonstrated a rate increase of 2.38 events per patient (p = 0.0231, 95% CI 1.03 to 13.97).

CONCLUSIONS The frequency of ventricular arrhythmias requiring ICD treatment increased by 68% among patients in Florida around the WTC attack. These findings suggest that stress-related arrhythmogenesis due to the WTC tragedy was not restricted to the geographic location of the attack. A major national tragedy may cause widespread increased risk of potentially life-threatening ventricular arrhythmias. (J Am Coll Cardiol 2004;44:1265-7) © 2004 by the American College of Cardiology Foundation

↑ **2.8 X Risk**

Les faits locaux à distance de Paris

Clin Res Cardiol

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LETTER TO THE EDITORS

We are CHARLIE: emotional stress from “Charlie Hebdo attack” extensively relayed by media increases the risk of cardiac events

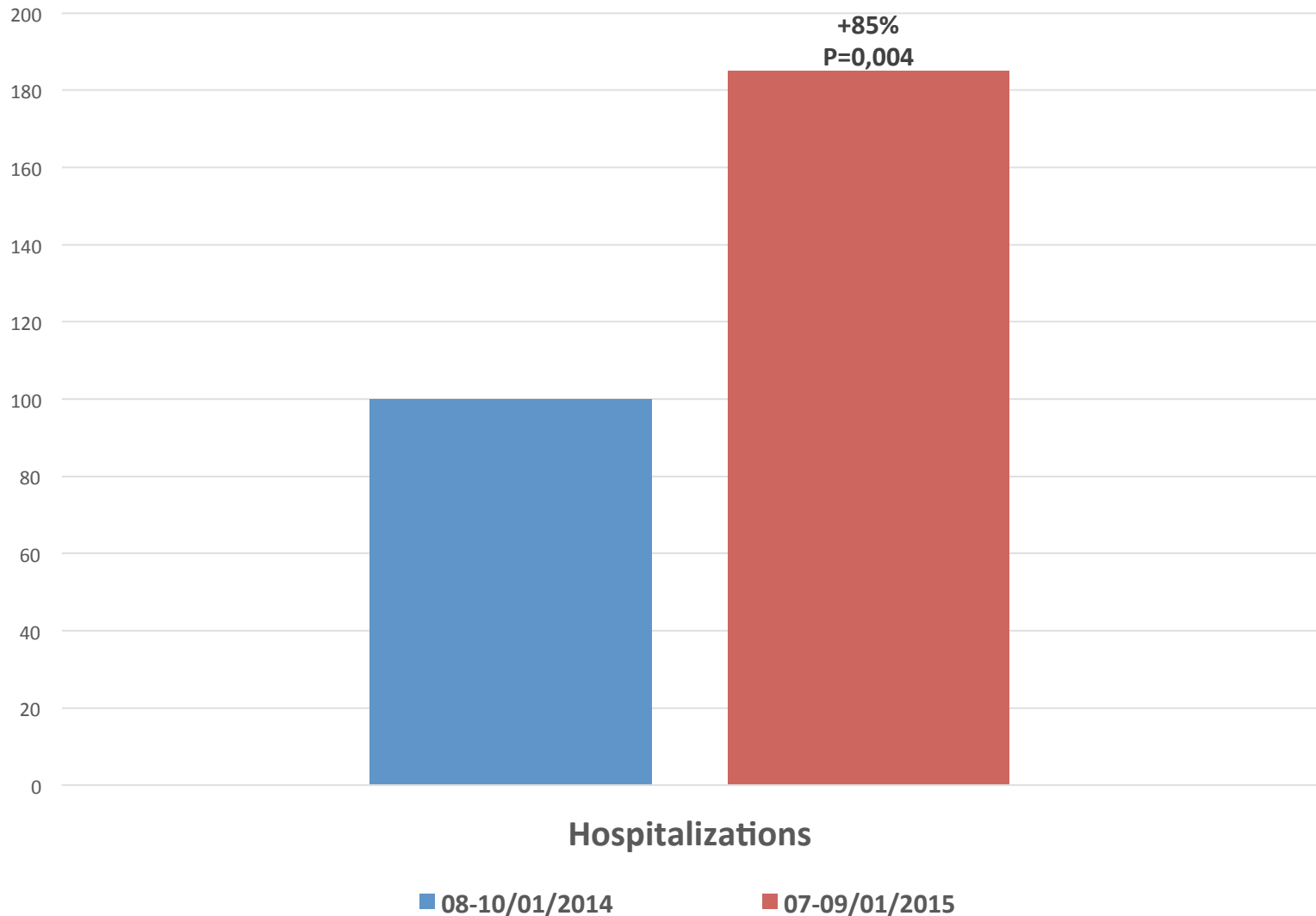
Francesco Della Rosa¹ · Jérôme Van Rothem¹ · Bruno Dongay¹ · Atul Pathak¹



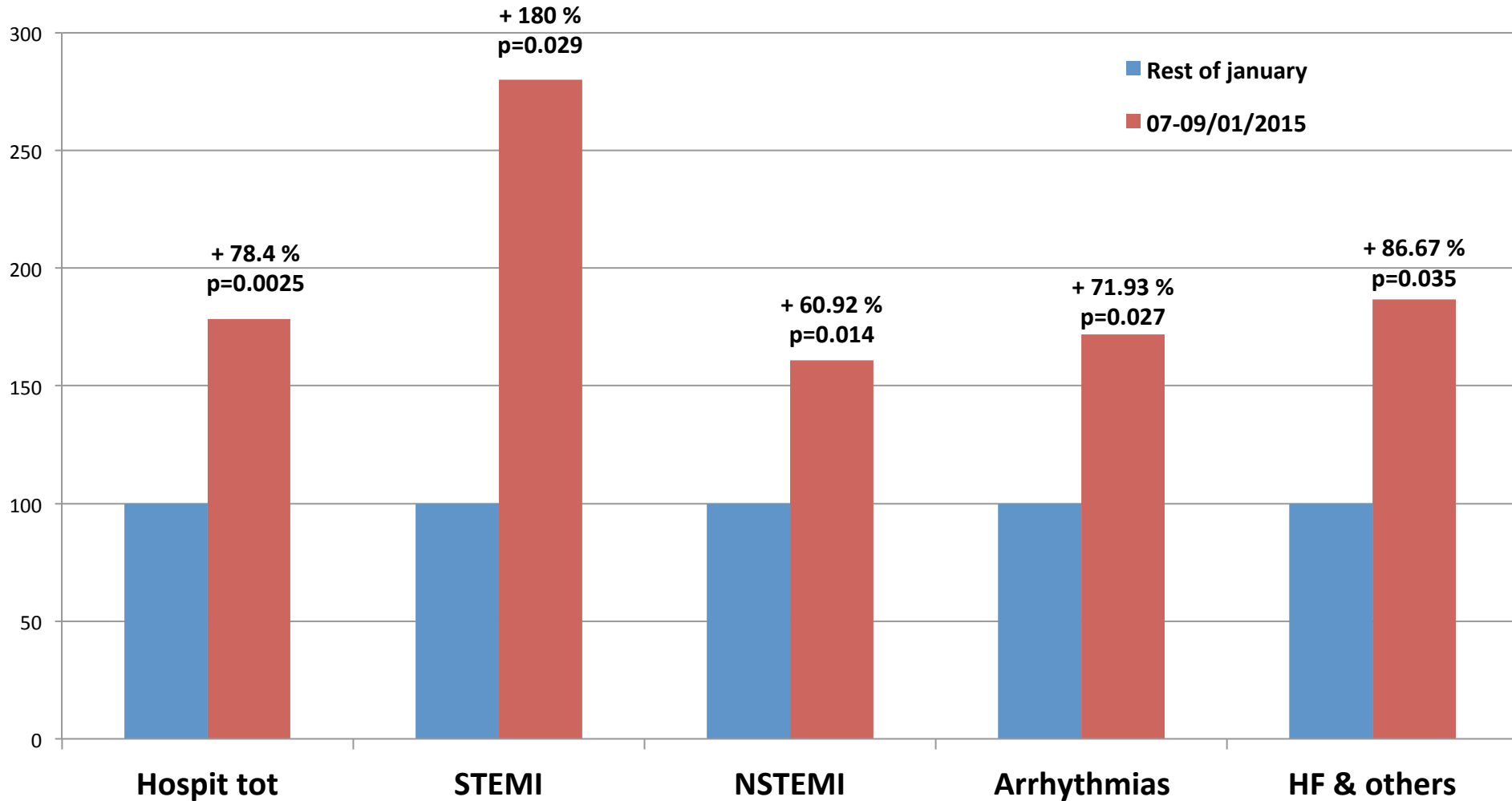
Demorgaphy

- In January 2015 a total of 346 patients were referred to our Chest Pain Unit.
 - 184 subjects were discharged, (we excluded cardiovascular etiologies for their chest pain)
 - 162 patients where hospitalized
 - 63,2% male
 - 71,8 years old

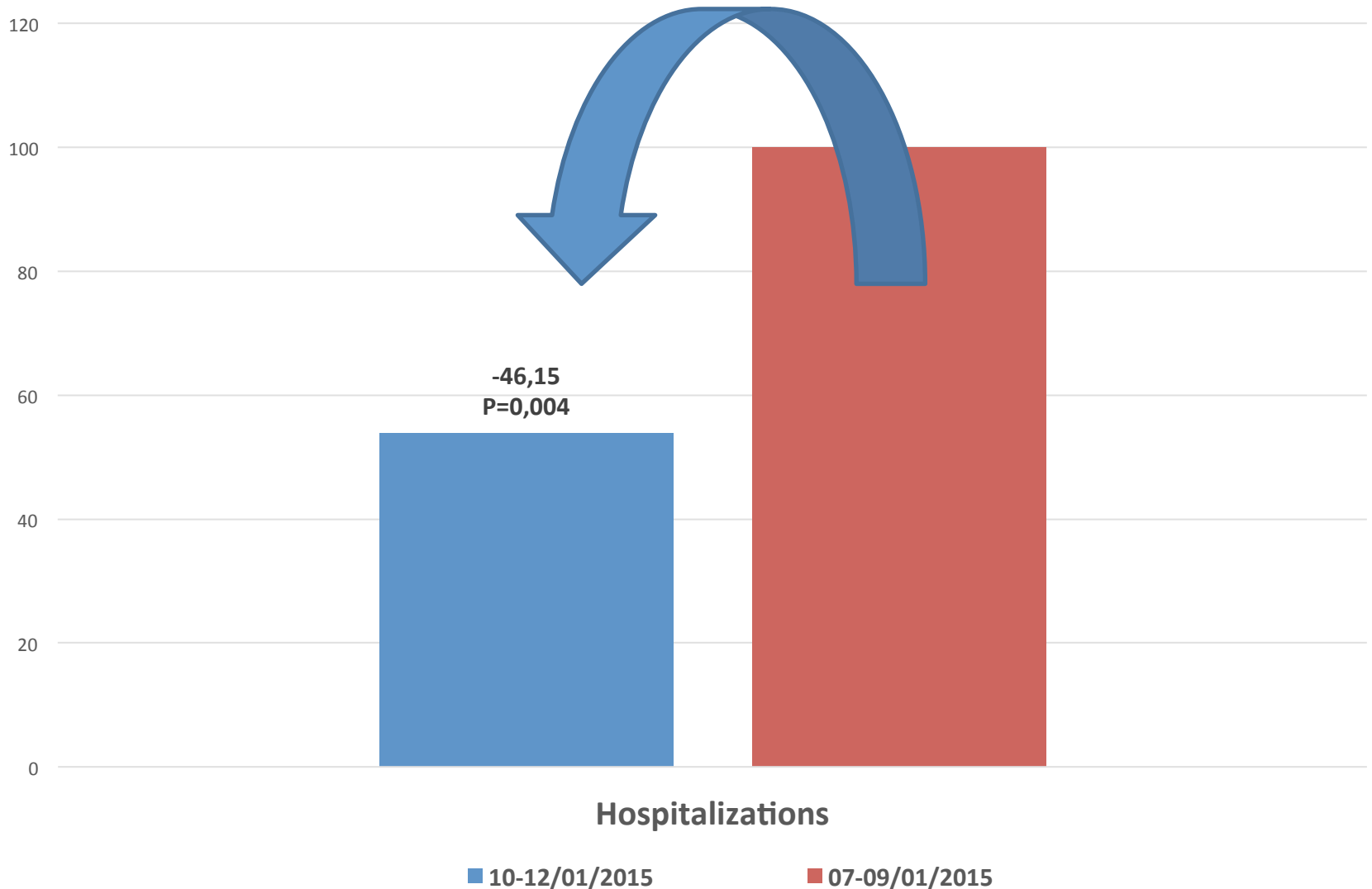
% increase of hospitalizations same week days january 2014 vs 2015



% increase of events (07-09/01 - rest of january)



% decrease of hospitalizations january 2015 3 following days



Summary

- We observed a higher number of hospitalization for cardiovascular events
- Related to terror attacks:
 - Causality based on interviews
 - Decrease of events after and lower rate before
- Before / After
- Underpowered
- FAST MI and Data from November

- The huge media coverage of the events that can have focused patients attention resulting in patients medical contact only for more serious problems

santé

Attentats de janvier 2015 : problèmes cardiaques en hausse de 75 %

l'essentiel

La clinique Pasteur a étudié à Toulouse l'impact sur les maladies cardiaques du stress induit par les attentats de janvier 2015 à Paris. Les 7, 8 et 9 janvier, le Centre de la douleur thoracique de la clinique a hospitalisé 75 % de patients en plus.

Un an après les attentats terroristes de janvier 2015 à Paris, les impacts collatéraux sont-ils tous connus ? Y a-t-il eu des conséquences sur la population, même à des centaines de kilomètres de là ? Le professeur Atul Pathak, cardiologue à la clinique Pasteur de Toulouse répond par l'affirmative. Sous son impulsion, l'équipe de cardiologie s'est intéressée au stress émotionnel, conséquence de trois jours d'horreur médiatisés et surmédiatisés, en étudiant le registre des admissions au Centre de la douleur thoracique (CDT), unité dédiée aux douleurs de poitrine et ouverte 7 jours sur 7, 24 heures sur 24. L'analyse a permis de comparer les trois jours d'attentats (7, 8 et 9 janvier 2015) aux mêmes jours de 2014 et au mois de février qui a suivi.

Plus d'infarctus

Pour le mois de janvier 2015, 346 patients ont été admis au CDT contre 200 dans un mois « classique ». La moitié d'entre eux ont été hospitalisés pour des causes cardiovasculaires sérieuses : infarctus du myocarde (+180 %), arythmies cardiaques (+70 %) et insuffisance cardiaque (+86 %). Générale-



L'émotion avait été grande à Toulouse au moment des attentats de Paris en janvier 2015/DDM, Xavier de Fenoyl

ment, l'hospitalisation après une admission au CDT ne concerne que 10 % à 20 % des patients et après les trois jours d'attentats, l'activité du CDT a diminué de moitié.

Pour Merah, l'activité en cardiologie avait baissé

« Nous sommes loin mais les événements étaient sur tous les écrans. Nous avons regardé si l'incidence avait été la même lors des attentats de Merah à Toulouse : l'activité avait baissé au CDT. Nous pensons qu'il y a pourtant eu des cas d'alertes cardiaques mais que les gens ont eu peur de sortir de chez eux, c'est l'effet de la proximité », explique le Pr Atul Pa-

thak, initiateur de cette étude pilote au niveau national prochainement publiée dans la revue Clinical Research in Cardiology.

« Le stress est un facteur de ris-



« Le stress est un facteur de risque mal dépisté »,
Pr Atul Pathak,
clinique Pasteur

que dans les maladies cardiovasculaires, on le sait, la littérature scientifique l'a montré pour les tremblements de terre, les attentats de septembre 2001, la guerre ou, dans un

autre registre, la Coupe du monde de football 2006 en Allemagne. La leçon de notre étude, c'est qu'il y a un lien entre les émotions et les organes, que le stress est un facteur de risque mal dépisté, contrairement au tabac ou au cholestérol. Il faudrait peut-être aboutir à une stratégie, proposer de la relaxation aux personnes exposées et à risques », complète le Pr Pathak. Son équipe a également regardé les incidences en termes d'âge. Il semble que les moins de 40 ans aient été anormalement nombreux. Pour cette génération, il s'agissait du premier événement stressant sur le territoire national.

Emmanuelle Rey

repères

346

PATIENTS > janvier 2015. Au cours du mois de janvier 2015, 346 patients ont été admis au Centre de la douleur thoracique de la clinique Pasteur de Toulouse. La moitié ont été hospitalisés.

« Pendant l'affaire Merah, il y a eu une baisse d'activité en cardiologie, comme si les patients avaient peur de sortir de chez eux »

Pr Atul Pathak, cardiologue clinique Pasteur de Toulouse

ATTENTATS DE NOVEMBRE À L'ÉTUDE

Dans la foulée de l'étude sur l'impact des attentats de janvier 2015 sur les maladies cardiovasculaires, le Pr Pathak va étudier la période des attentats de novembre 2015. Le cardiologue espère avoir accès aux statistiques d'autres centres français pour un projet d'étude national. Les admissions au centre de douleur thoracique de Toulouse, un an après les attentats de janvier 2015, seront également regardées à la loupe.

société

Les anti-fourrure manifestent



Les anti-fourrure militent chaque année./archives. Charmeux

Les militants anti-fourrure se mobilisent aujourd'hui à 14 heures, place du Capitole, pour la journée sans fourrure

Une action symbolique alors que les ventes de prêt-à-porter vont battre leur plein en ce premier samedi des soldes d'hiver. « Cette journée d'action a pour objectif d'envoyer un message fort contre le commerce de la fourrure auprès des personnes venues faire les soldes. Nous souhaitons que la souffrance des animaux, élevés puis tués pour leur fourrure dans des conditions abominables, ne soit plus dissimulée », explique leur porte-parole. Chaque année, plus de 140 millions d'animaux visons, renards, chiens viverrins, ratons laveurs, chinchillas... sont tués pour leur fourrure, sans compter des centaines de millions de lapins. L'association toulousaine créée en 2007, a pour but de lutter en faveur des droits des animaux, de combattre toutes les exploitations.

En savoir plus : www.journeesansfourrure.com

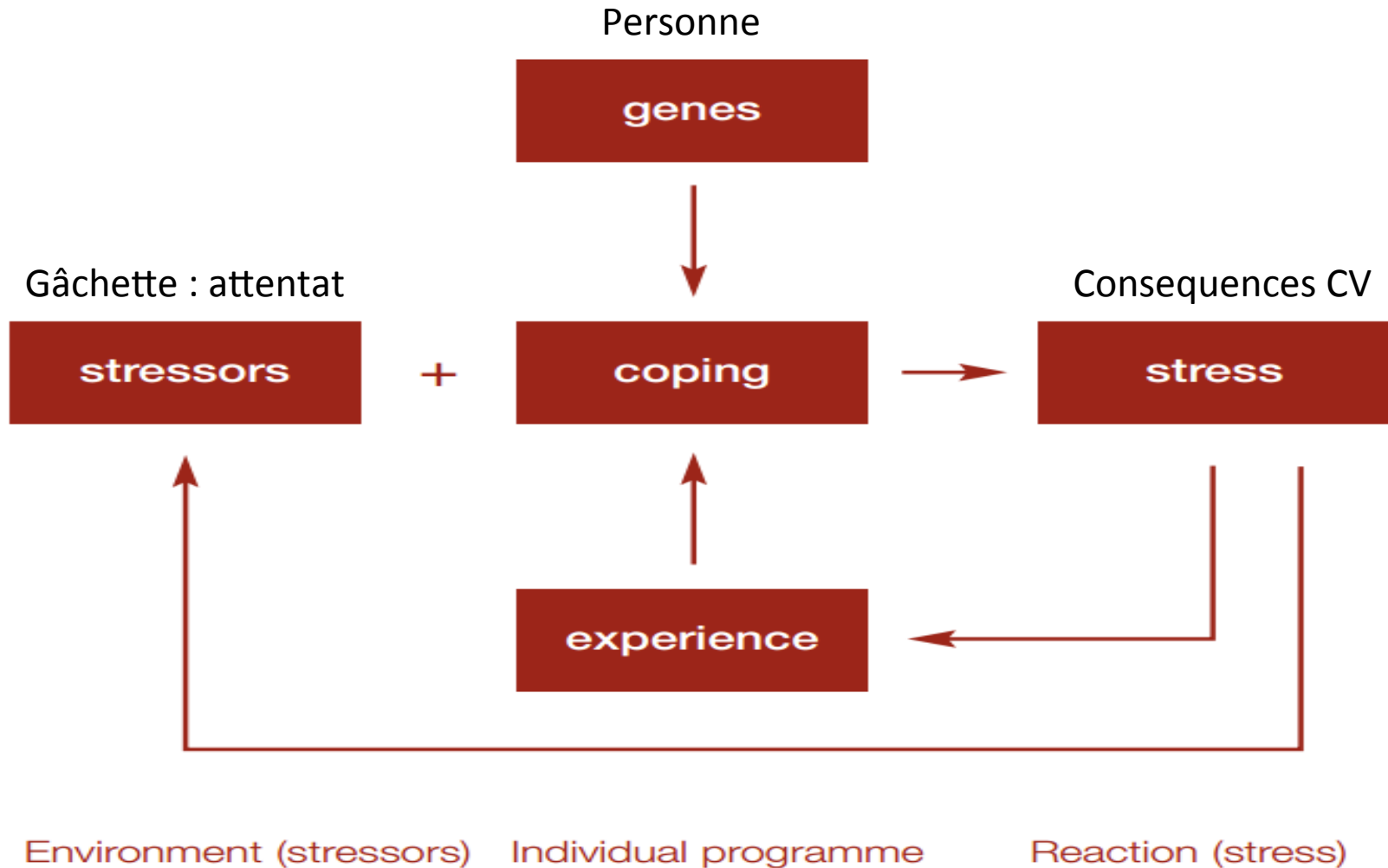
Effet indésirable de notre travail...

Chiffres clés

Type de média	Nombre de retombées	%
Web	71	68 %
Presse	21	20 %
Tv&Radio	12	12 %
Total	104	100 %

Pourquoi ce lien ?

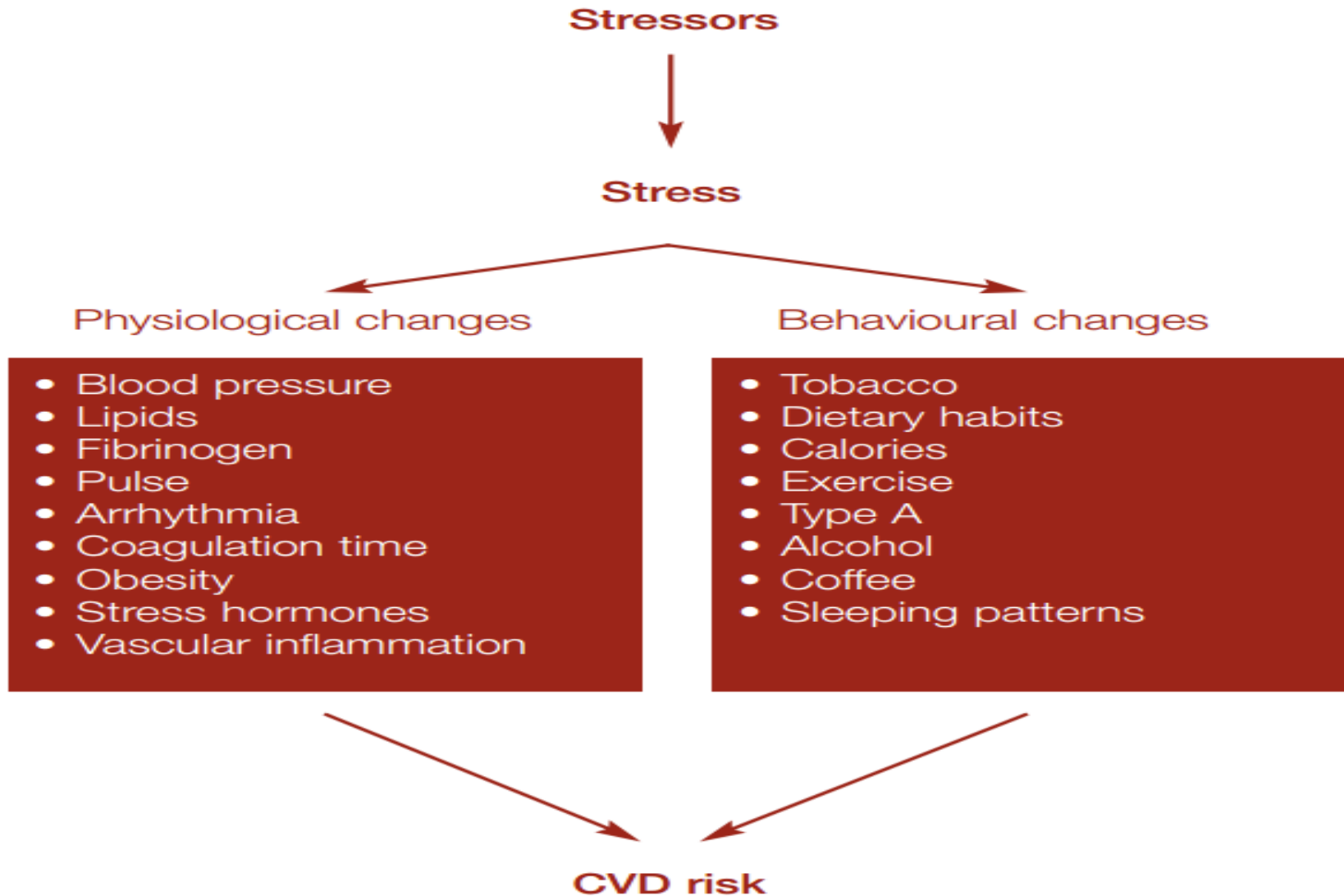
Basic underlying concepts of stress



Comment cela fonctionne ?

Sur le biologique

Stress and CVD



Biological mechanisms

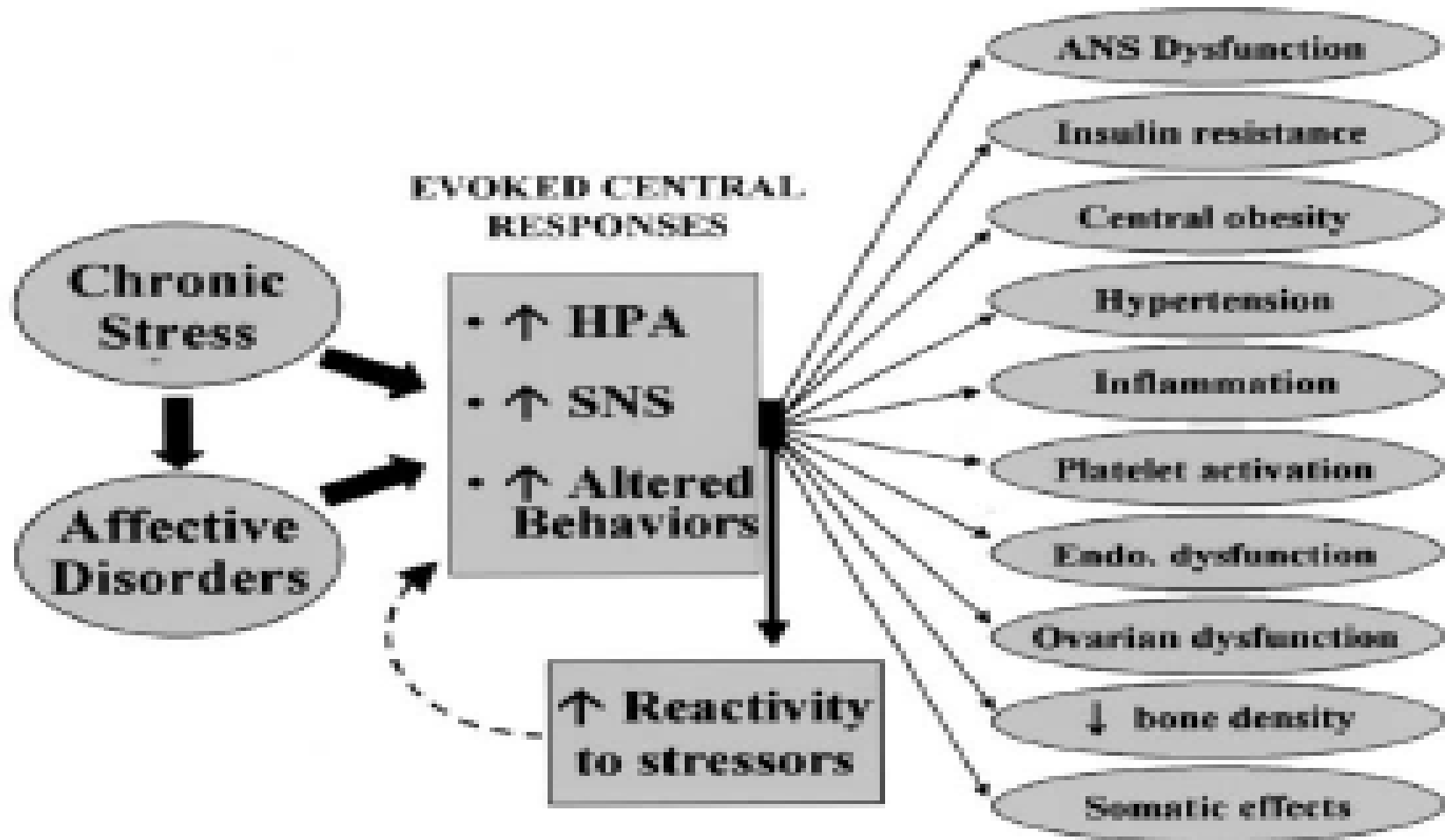
- Cortisol
- Blood Pressure
- Regenerative mechanisms
- Heart Rate Variability
- Immunity

Stress and Immunology

- Stress can decrease your white blood cell count which will lead to poor health.
- Immunological system includes the following white blood cell groups which identify and destroy foreign substances:
 - Phagocytes-destroyers
 - Lymphocytes
 - T cells
 - B cells



Proposed Mechanisms Relating Chronic Stress to Atherosclerosis



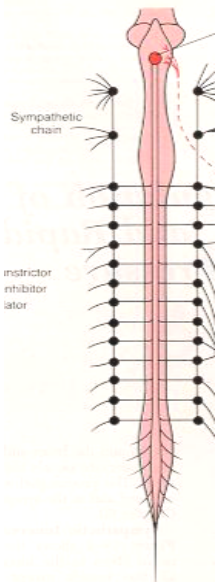
Exploration du SNS

Techniques d'évaluation du SNS

Mesures directes

Mesures indirectes

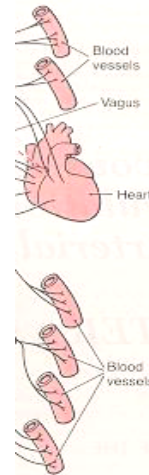
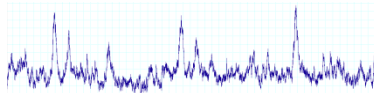
Efferences sympathiques



**Scintigraphie myocardique
MIBG**

Noradrenaline spillover

Microneurographie

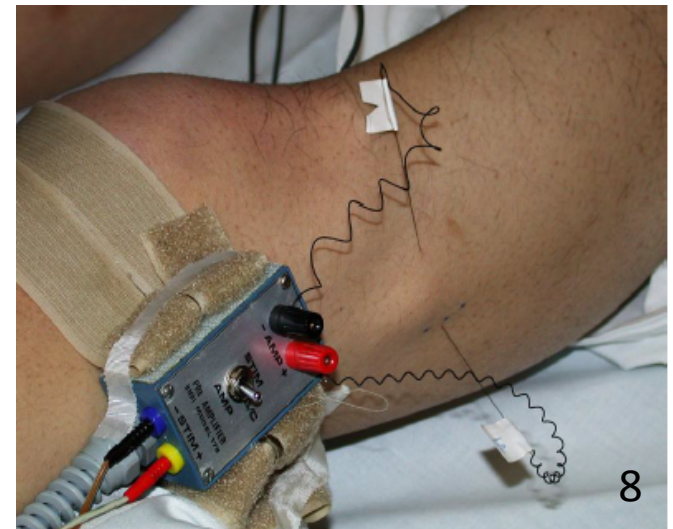
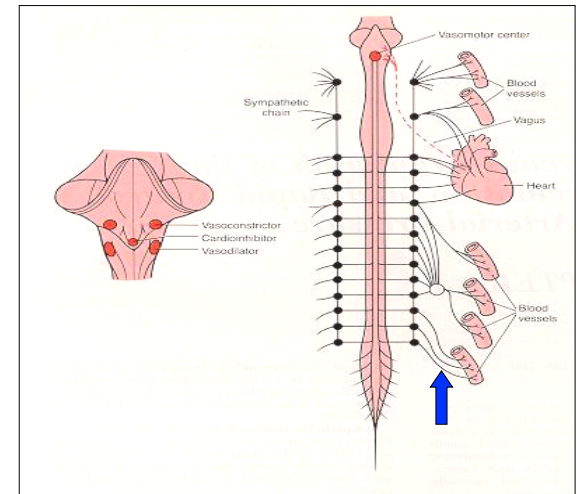
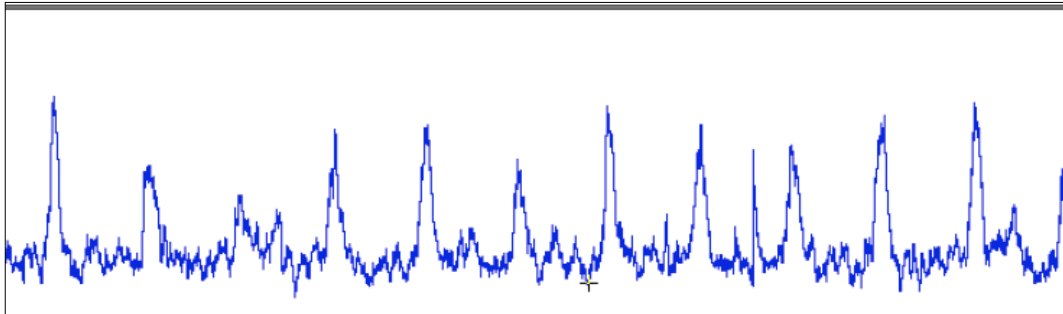


Variabilité sinusale

**Catècholamines
plasmatiques**

Microneurographie

- Evaluation directe et dynamique de l'activité du SNS post-ganglionnaire musculaire (**MSNA**: Muscle Sympathetic Nerve Activity)
- **Microelectrode** insérée sélectivement dans les faisceaux sympathiques qui cheminent autour du nerf péronier
- Activités enregistrées sous forme de train de décharge (burst)
- Activité exprimée en bursts :
 - bursts/min
 - bursts/100 bc



Insuffisance cardiaque : Objectif du travail de Thèse

- Mécanismes responsable Hyperactivation sympathique:
- Modelés d'insuffisance cardiaque
 - Aigue réversible: cardiomyopathie de stress de Tako Tsubo

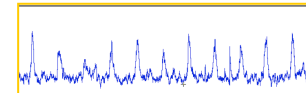
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Direct Evidences for Sympathetic Hyperactivity and Baroreflex Impairment in Tako Tsubo Cardiopathy

Angelica Vaccaro^{1,6}, Fabien Despas^{1,2,3}, Clement Delmas^{1,4}, Olivier Lairez^{1,2,4}, Elisabeth Lambert⁵, Gavin Lambert⁵, Marc Labrunee^{1,2,4}, Thibaut Guiraud^{1,2}, Murray Esler⁵, Michel Galinier^{1,2,4}, Jean Michel Senard^{1,2,3,4}, Atul Pathak^{1,2,3,4,5,6*}

ACTIVITÉ du SNS



VARIABLES	Patients TTC (n= 13)	Patients temoins (n=13)	p
Pression systolique, mmHg	121.9 (107.6–138.2)	108.1 (96.1–121.1)	0.1627
Pression diastolique, mmHg	58.3 (52.8–64.3)	53.3 (41.8–60.5)	0.133
Pression moyenne, mmHg	78.4 (72.6–83.7)	72.4 (64.1–79.9)	0.107
Frequence cardiaque, battements/min	67.0 (64.2–71.6)	73.2 (63.2–82.2)	0.468
Saturation Oxygène, %	95.5 (91.2–96.7)	95.6 (93.6–96.4)	0.709
MSNA, bursts/100 bc	91.9 (89.5–98.8)	73.0 (68.9–82.2)	0.0012
MSNA, bursts/min	63.3 (61.3–66.0)	55.7 (51.0–61.7)	0.0089

Transcatheter Aortic Valve Implantation Reduces Sympathetic Activity and Normalizes Arterial Spontaneous Baroreflex in Patients With Aortic Stenosis

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Marc Labrunee, MD,*†† Bertrand Marcheix, MD, PHD,*†† Elisabeth Lambert, PHD,||
Murray Esler, MD, PHD,|| Didier Carrie, MD, PHD,*†† Jean-Michel Senard, MD, PHD,††§
Michel Galinier, MD, PHD,*† Atul Pathak, MD, PHD*††||

- **Modelés d'insuffisance cardiaque**
 - Aigue réversible: cardiomyopathie de stress de Tako Tsubo
 - Sténose aortique
- **Modulation de l'activité sympathique:**
 - TAVI

Résultats 2: Effets de TAVI sur le SNS et le baroréflexe

Mesures	Patients SA Avant TAVI (n= 14)	Patients SA Apres TAVI (n= 14)	p
PAS, mmHg	111.7 ± 4.7	125.3 ± 5.1	< 0.05
PAD, mmHg	53.2 ± 2.5	64.3 ± 3.5	< 0.05
PAM, mmHg	74.0 ± 2.8	84.5 ± 3.2	< 0.05
FC, bpm	71.3 ± 3.0	76.7 ± 4.4	0.2166
Saturation en oxygen, %	93.9 ± 0.6	93.6 ± 0.7	0.7354
MSNA, bursts/min	61.0 ± 1.7	54.1 ± 1.0	<0.0001*
Gain du baroréflexe artériel spontané, %burst/mmHg	2.13 ± 0.14	3.49 ± 0.33	<0.0001*

* p < 0.05 vs patients t emoins;

Comment cela fonctionne ?

Au delà de la biologie

Review Stress Response

- Life- stressor
- Perceive as a threat
- ALARM—Hippocampus (leads to an emotion)
- SEAT OF EMOTIONS- Limbic System (...physical response)
- RETICULAR ACTIVATING SYSTEM— (mind-body link)
- SUPERVISOR- Hypothalamus (endocrine and autonomic)
 - Endocrine—Hormones (cortisol and vasopressin)
 - Autonomic- Sympathetic =ON, Parasympathetic =OFF



“ For every affection of the mind that is attended with either pain or pleasure, hope or fear, is the cause of an agitation whose influence extends to the heart, and there induces change from the natural constitution, in the temperature, the pulse and the rest”

- Dr William Harvey, 1962

Relation stress and CHD

Environment	Individual programme	Mental reactions
Low social class	Sisyphus syndrome	Stress
Bad work environment	Type A behaviour	Chronic fatigue syndrome
Lack of social support	Hostility	Burnout
Family load and conflict	Overcommitment	Vital exhaustion
Traumatic experiences*		Depression
Stressful life events		

Chez qui?

Hypertension: Personality Traits

- Upset by criticism
- Upset by imperfection
- Pent up anger, bitterness
- Low self-confidence

Coronary Heart Disease

- Stress and a Type A behavior linked to CHD
 - Aggressive
 - Competitive
 - Time urgent
 - Multitasking
- L'urgentiste et le cardiologue interventionnel !

INTERHEART Study: Psychosocial Index and Risk of Acute MI

Risk Factor	Gender	Cont %	Case %	OR (99%CI)	PAR (99%CI)
Curr Smok	female	9.3	20.1	2.86 (2.36,3.48)	15.8 (12.9, 19.3)
	male	33.0	53.1	3.05 (2.78,3.33)	44.0 (40.9, 47.2)
Diabetes	female	7.9	25.5	4.26 (3.51,5.18)	19.1 (16.8, 21.7)
	male	7.4	18.2	2.67 (2.36,3.02)	10.1 (8.9, 11.4)
Hypertension	female	28.3	53.0	2.95 (2.57,3.39)	35.8 (32.1, 39.6)
	male	19.7	34.8	2.32 (2.12,2.53)	19.5 (17.7, 21.5)
Abd Obesity	female	33.3	45.6	2.26 (1.90,2.66)	35.9 (28.9, 43.6)
	male	33.3	46.5	2.24 (2.03,2.47)	32.1 (28.0, 36.5)
PS Index	female	-	-	3.49 (2.41,5.04)	40.0 (28.6, 52.6)
	male	-	-	2.58 (2.11,3.14)	25.3 (18.2, 34.0)
Fruits/Veg	female	50.3	39.4	0.58 (0.48,0.71)	17.8 (12.9, 24.1)
	male	39.6	34.7	0.74 (0.66,0.83)	10.3 (8.9, 15.2)
Exercise	female	16.5	9.3	0.46 (0.39,0.59)	37.3 (26.1, 50.0)
	male	20.3	15.8	0.77 (0.69,0.85)	22.9 (16.9, 30.2)
Alcohol	female	11.2	6.3	0.41 (0.32,0.53)	48.9 (34.3, 60.0)
	male	29.1	29.8	0.88 (0.81,0.96)	10.5 (6.1, 17.5)
ApoB/ApoA-1 Ratio	female	14.1	27.0	4.42 (3.43,5.70)	52.1 (44.0, 60.2)
	male	21.9	35.5	3.76 (3.23,4.38)	53.8 (48.3, 59.2)

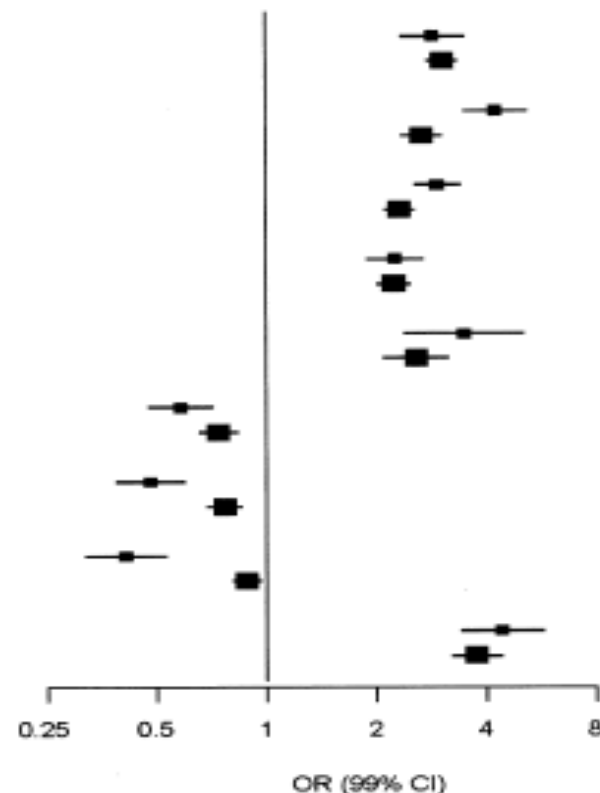


Figure 5. Risk of acute myocardial infarction for men and women for each of nine coronary artery disease (CAD) risk factors evaluated in the international INTERHEART case-control study. Results are adjusted for age, gender, and geographic location. The prevalence of each CAD risk factor is presented for controls and cases in the third and fourth columns; prevalence rates are not calculated for the psychosocial (PS) index as it is derived from a statistical model. Reprinted with permission from Yusuf et al. *Lancet* 2004;364:937-52 (43). Abd = abdominal; CI = confidence interval; Curr = current; OR = odds ratio; PAR = population-attributable risk; Smok = smoking; Veg = vegetables.

Psychosocial index based on individual items of depression, locus of control, work or home stress, financial stress, and adverse life events. Yusuf, *Lancet* 2004

Comment minimiser le risque?

En prevention primaire, avant
attentat...

Stress reduction show reversion or lower progression of atherosclerosis

- ❑ Regression of coronary atherosclerosis in women who were free of stress showed through the use of serial quantitative angiography;
- ❑ Decrease of carotid intima media thickness in African Americans with hypertension submitted to stress reduction through Transcendental Meditation ;
- ❑ Decrease in carotid intima media thickness in older persons with multiple factors for coronary heart disease submitted to the Maharishi Vedic Medicine treatment -- which also includes stress reduction through Transcendental Meditation program;
- ❑ Yoga intervention retards progression and increases regression of coronary atherosclerosis in patients with severe coronary artery disease .
- ❑ Slow breathing increases baroreflex sensitivity and reduce sympathetic nervous system with beneficial effects to coronary myocardial disease.

Soyez optimiste !

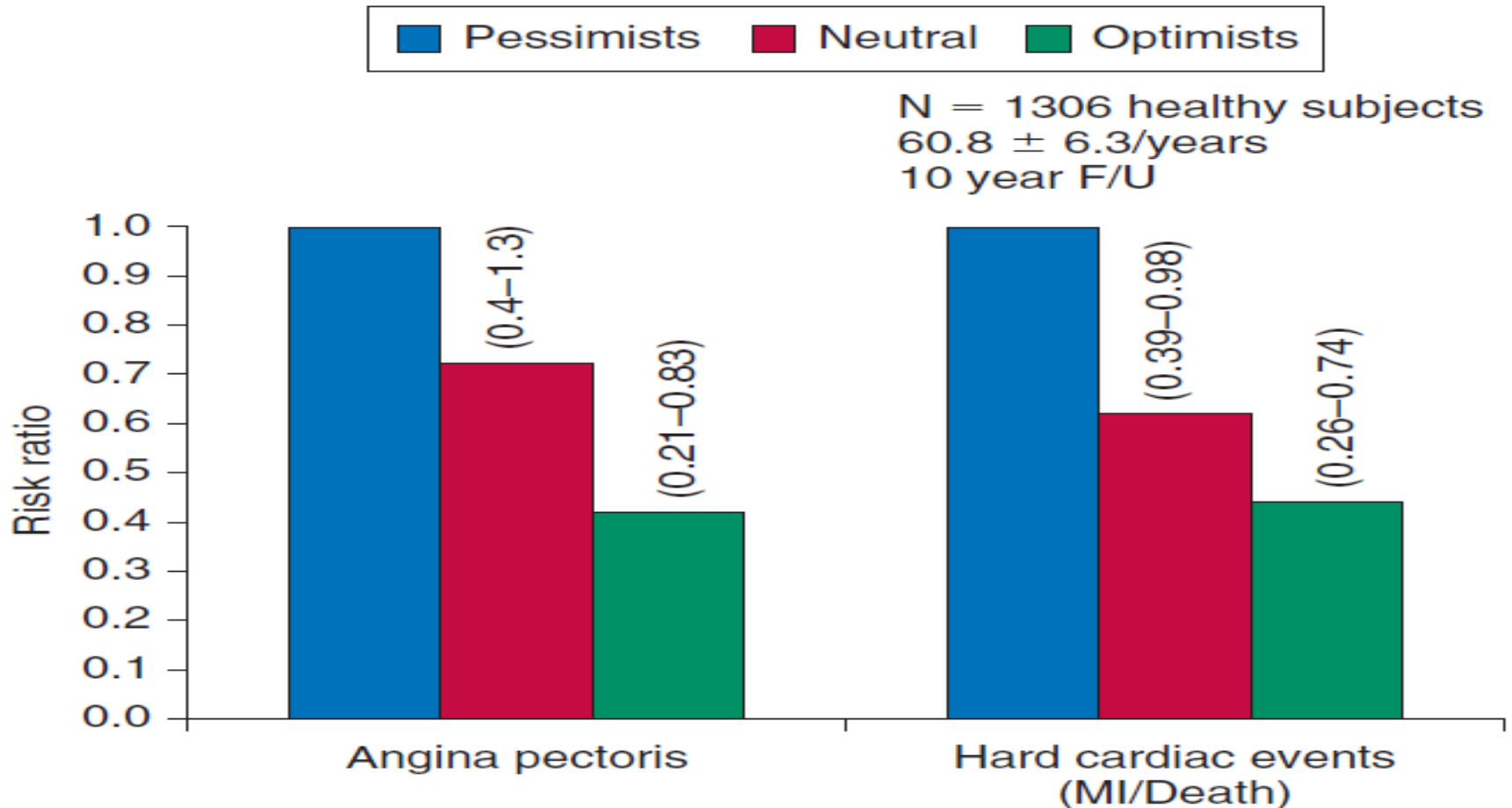


FIGURE 34-2 Occurrence of incident angina and hard cardiac events among 1306 healthy subjects in the Normative Aging Study, followed up for 10 years.³⁷ A gradient relationship was noted for outcomes for subjects classified as having a pessimistic, neutral, or optimistic explanatory speaking style.

Kubzansky LD, Sparrow D, Vokonas P, et al: Is the glass half empty or half full? A prospective study of optimism and coronary heart disease in the normative aging study. *Psychosom Med* 63:910, 2001.

Rigolez !

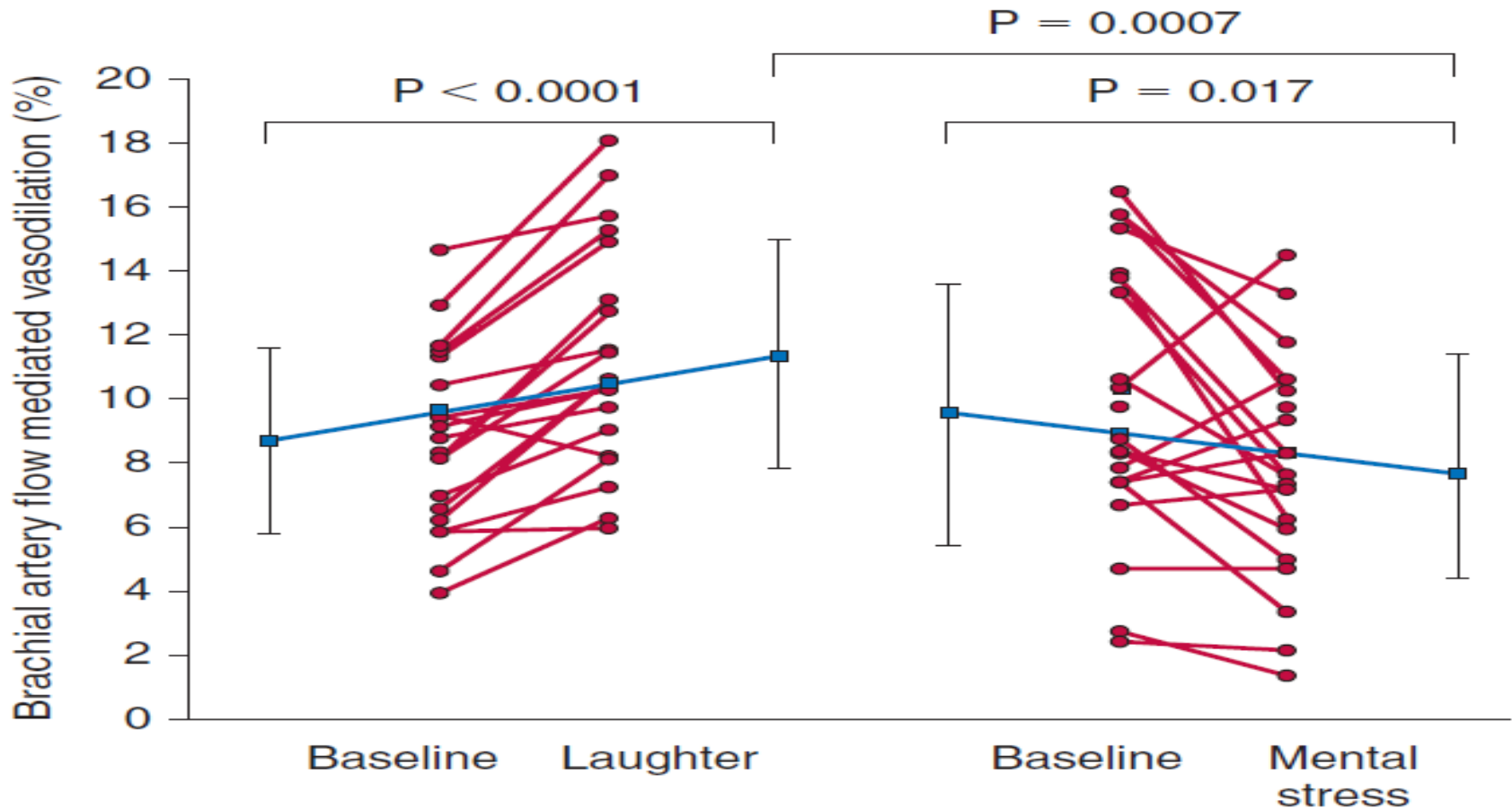


FIGURE 34-13 Assessment of brachial artery flow-mediated vasodilation in 20 healthy volunteers at baseline and during viewing of a cinematic film designed to induce laughter (**left**) and at baseline and during viewing of a film designed to induce mental stress (**right**). The mean flow-mediated dilation was increased by $22\% \pm 15\%$ in testing that was performed after inducing laughter and decreased by $35\% \pm 47\%$ after viewing of the mental stress film clips. (From Miller M, Mangano C, Park Y, et al: *Impact on cinematic viewing on endothelial function*. Heart 92:261, 2006.)

Mariez vous Avec la bonne personne !

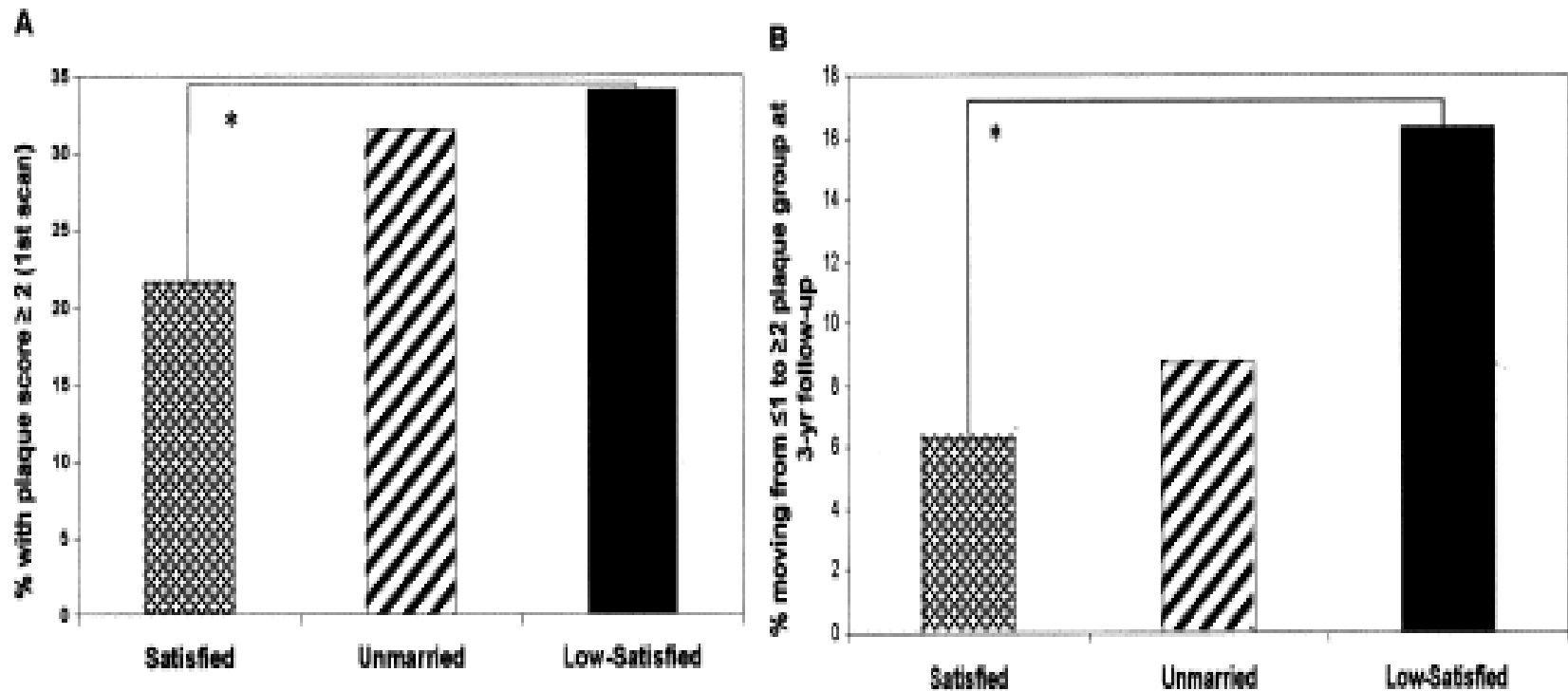


Figure 3. Postmenopausal females ($n = 390$) were divided into those in satisfying marriages (left of each panel), unmarried (middle of each panel), and in low-satisfying marriages (right of each panel). After 11 years of follow-up, the women in satisfied marriages had the lowest and the women in unsatisfying marriages had the highest percentage of significant plaque (left panel). Serial carotid ultrasonography was performed after three years in a subgroup of this patient population ($n = 206$) and revealed that women in low-satisfying marriages also had the greatest progression of plaque during follow-up (right panel). Reprinted with permission from Gallo et al. *Psychosom Med* 2003;65:952-62 (34). *Groups differ significantly at $p < 0.05$.

Ayez un but dans la vie....

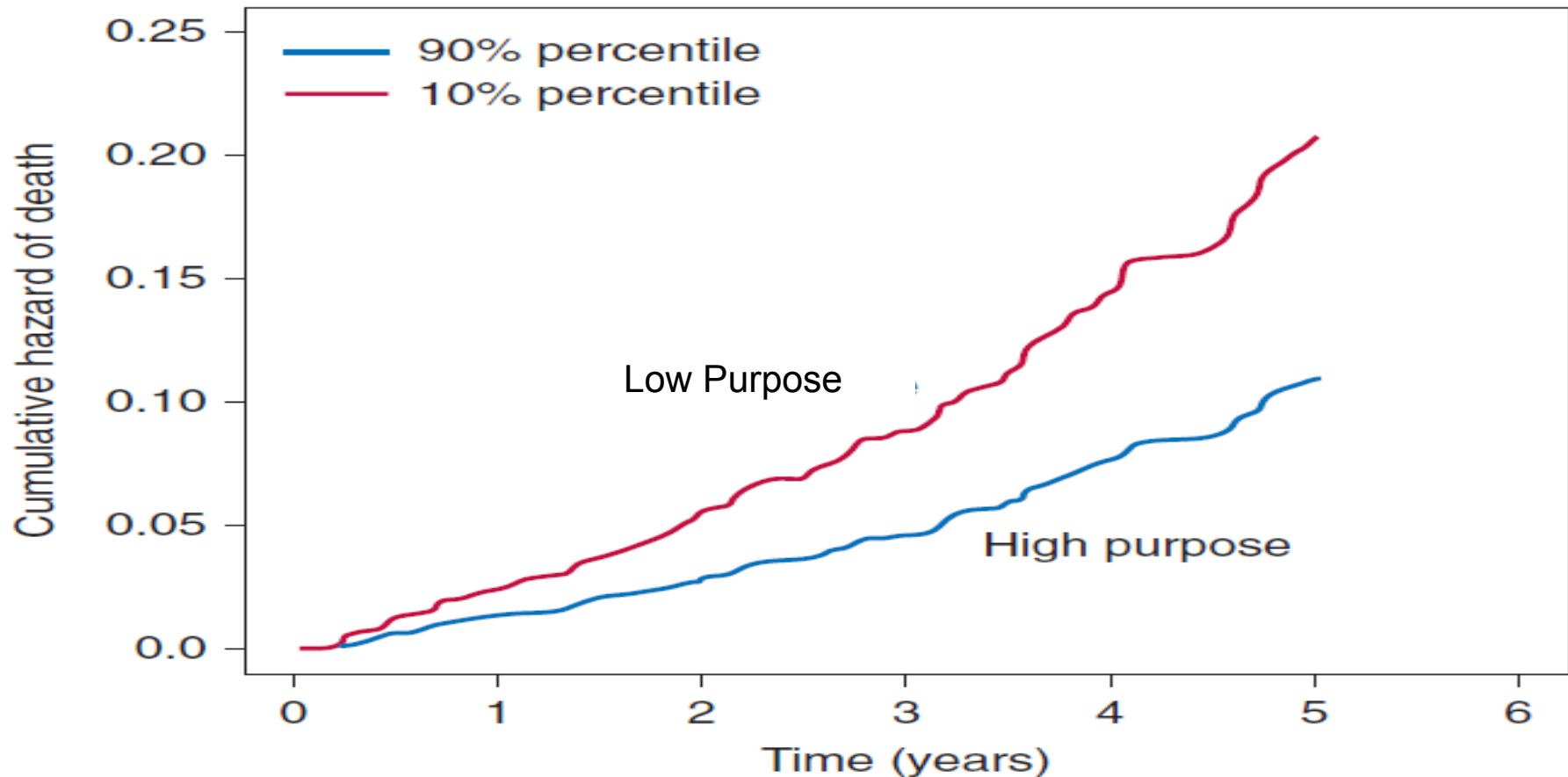


FIGURE 34-5 Cumulative hazard among 1238 older community-dwelling individuals observed for 5 years, according to the presence of a low versus high sense of purpose. The hazard rate for mortality in persons with high scores for purpose in life was about 57% of that for persons with low scores. (From Boyle PA, Barnes LL, Buchman AS, et al: Purpose in life is associated with mortality among community-dwelling older persons. *Psychosom Med* 71:575, 2009.)

Traitement

- Relaxation technique
- Sleep Hygiene
- Lifestyle
- Reduction of type A personality and management of hostility
 - Aggressive
 - Competitive
 - Time urgent
 - Multitasking
(arrêtez la cardiologie interventionnelle !)
- Social support
- Work environment

TABLE 34-2 Large-Scale Psychosocial Intervention Trials Among Patients with Known Coronary Artery Disease

Investigations	<i>No. of Patients</i>		Follow-up	Type of Intervention	Reduced Psychosocial Stress?	Reduced Cardiac Events?
	Control Group	Intervention Group				
Friedman et al, ¹⁴⁰ 1986	270	592	4.5 years	Type A behavior pattern modification/group counseling	Yes	Yes
Frasure-Smith and Prince, ¹⁴¹ 1985	229	232	5 years	Home-based nursing intervention	Yes	Yes
Jones and West, ¹⁴² 1996	1155	1159	1 year	Group stress management sessions	No	No
Frasure-Smith et al, ¹⁴³ 1997	684	692	1 year	Home-based nursing intervention	No	No*
ENRICHD investigators, ¹⁴⁵ 2003	1243	1238	2.4 years	Cognitive-behavior therapy for depression	Yes [†]	No*

*Secondary analysis with the intervention groups revealed decreased cardiac events among those patients with reduced stress.

[†]Substantial decreases in depression scores were noted in both the control and intervention groups.

Comment minimiser le risque?

En prevention secondaire, après
attentat...

Post Traumatic Stress Disorder (PTSD)

- Present if after exposure of an inciting traumatic event the subject report re-experiencing the event, hyperarousal, and avoidance of traumatic reminders and emotional numbing.
- A retrospective study of men who have served in the military shows a stepwise relation between symptoms of PTSD and nonfatal MI and cardiac death (Kubzansky, Gen Psychiat 2007).
- Study of 1059 women shows relation between PTSD and incident CHD (Kubzansky, Health Psychol 2009).
- Boscarino evaluated 4328 men who served in Vietnam war; PTSD associated with more than a two-fold increased risk of subsequent cardiac mortality, independent of depression symptoms (Psychosom Med 2008).
- Post Afghansistan

Depression and CHD

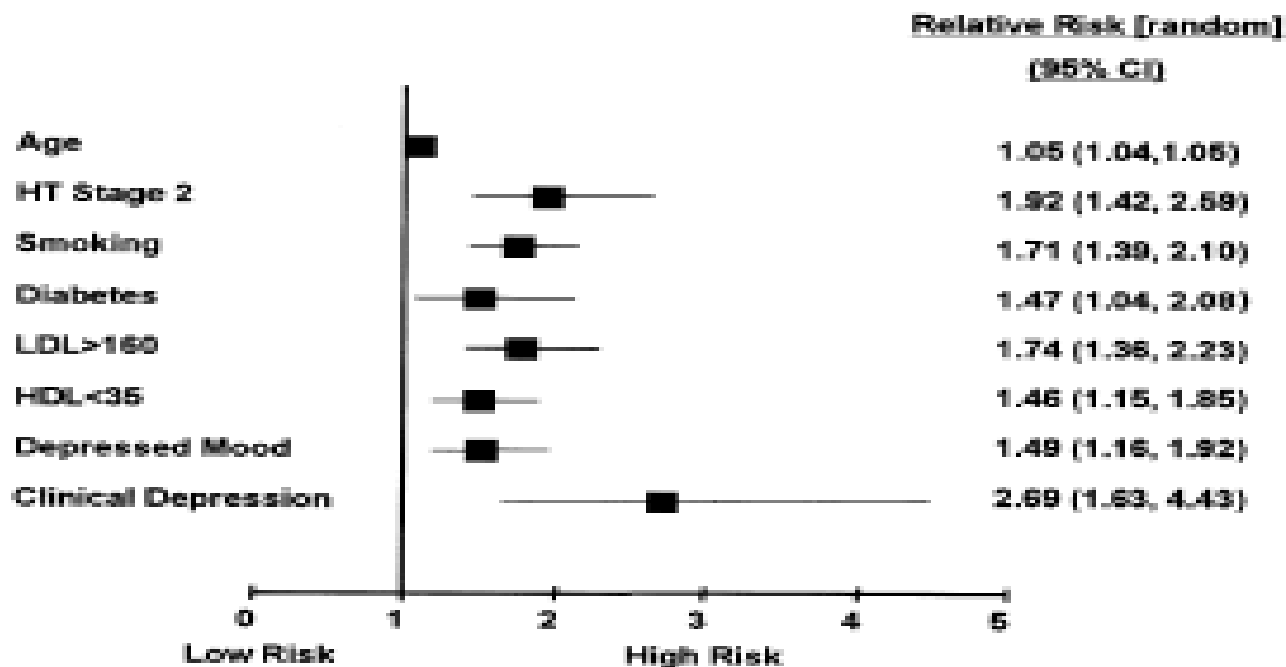


Figure 4. The risk ratios for traditional risk factors reported for men in the Framingham study (28). The risk ratios for depressive symptoms and clinical depression are from a recent meta-analysis by Rugulies et al. (3). The risk ratios for traditional risk factors are for death due to cardiac disease, myocardial infarction, coronary artery insufficiency, and development of angina. For depressive symptoms and clinical depression, the risk ratios are for death due to cardiac disease and myocardial infarction. CI = confidence interval; HT = hypertension; LDL = low-density lipoprotein; HDL = high-density lipoprotein.

Depressive Symptoms and Cardiac Free Survival in Post-MI Patients

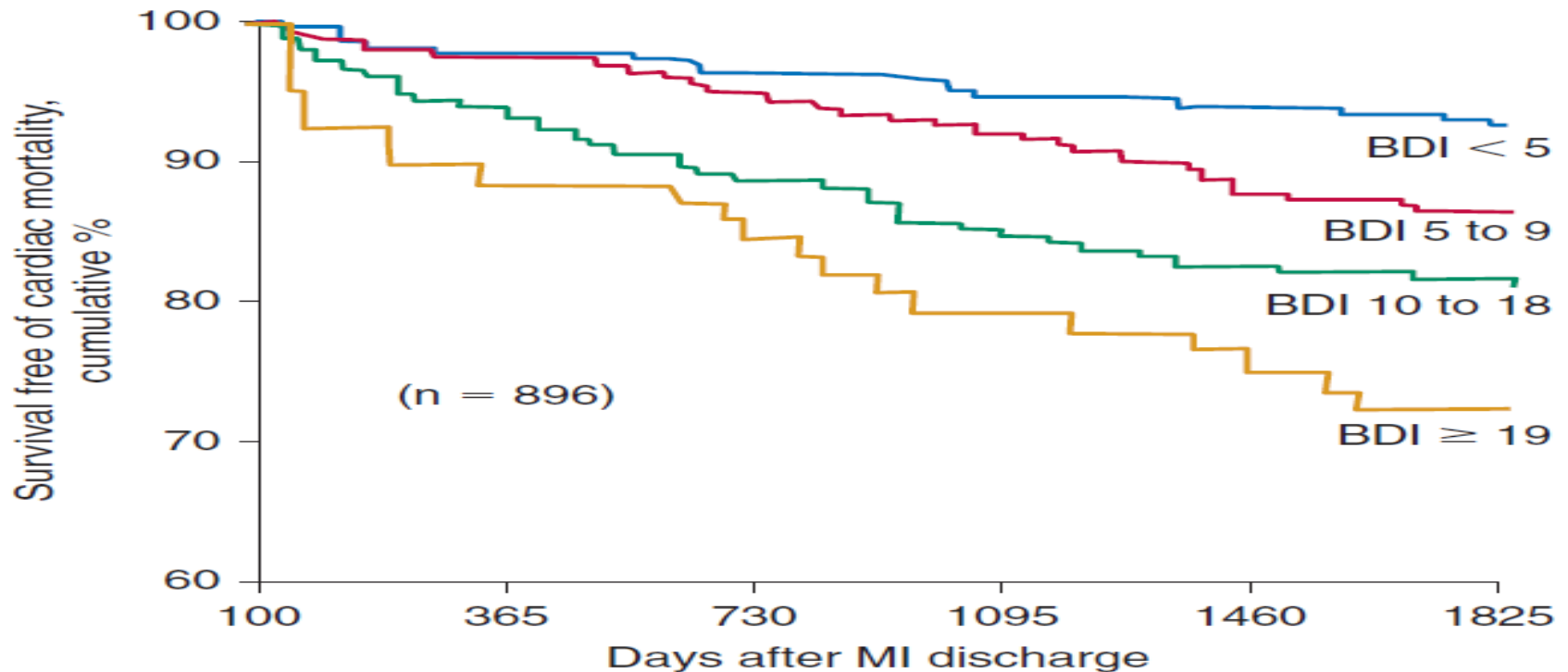
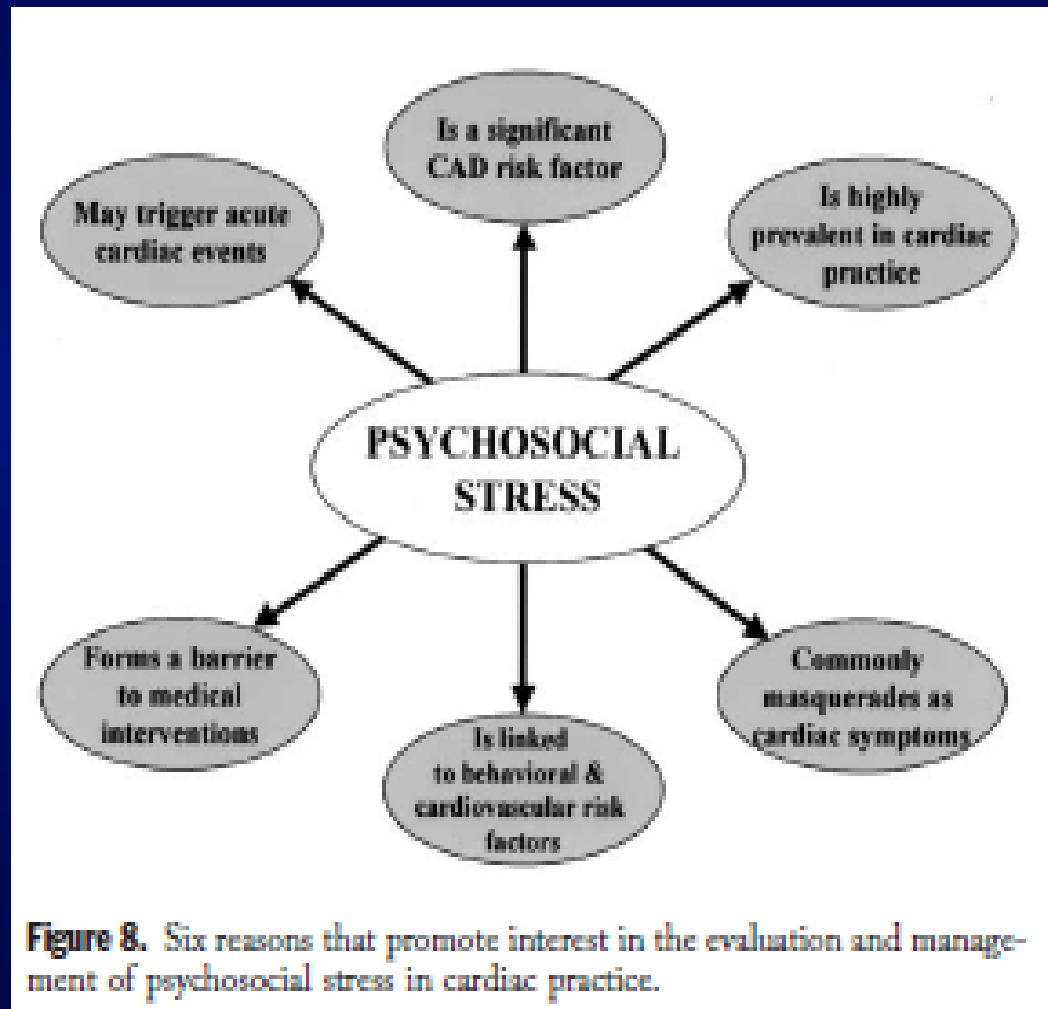


FIGURE 34-1 Grouping of post-myocardial infarction (MI) patients according to their Beck Depression Inventory (BDI) scores, ranging from those with no depressive symptoms (BDI < 5) to those with moderately severe depression (BDI ≥ 19). A gradient relationship was observed for frequency of death according to the magnitude of depressive symptoms. Notably, increased events occurred even among patients with mild depressive symptoms (BDI scores of 5 to 9).

Quel message pratique retenir ?

Six Reasons that Promote Interest in Evaluation and Management of Psychosocial Stress in Heart Disease



BOX 34-3 Suggested Open-Ended Questions to Screen for Psychosocial Risk Factors

How would you describe your energy level?

How have you been sleeping?

How has your mood been recently?

Do you feel anxious or unduly worried?

Are you under undue pressure at work or at home?

Do you have difficulty unwinding after work or at the end of the day?

Who do you turn to for support?

Modified from Rozanski A, Blumenthal JA, Davidson KW, et al: The epidemiology, pathophysiology, and management of psychosocial risk factors in cardiac practice: the emerging field of behavioral cardiology. *J Am Coll Cardiol* 45:637, 2005.

Rozanski et al., ACC Review on Psychosocial Factors and CHD, JACC 2005

Stepped Collaborative Approach for Managing Psychosocial Stress

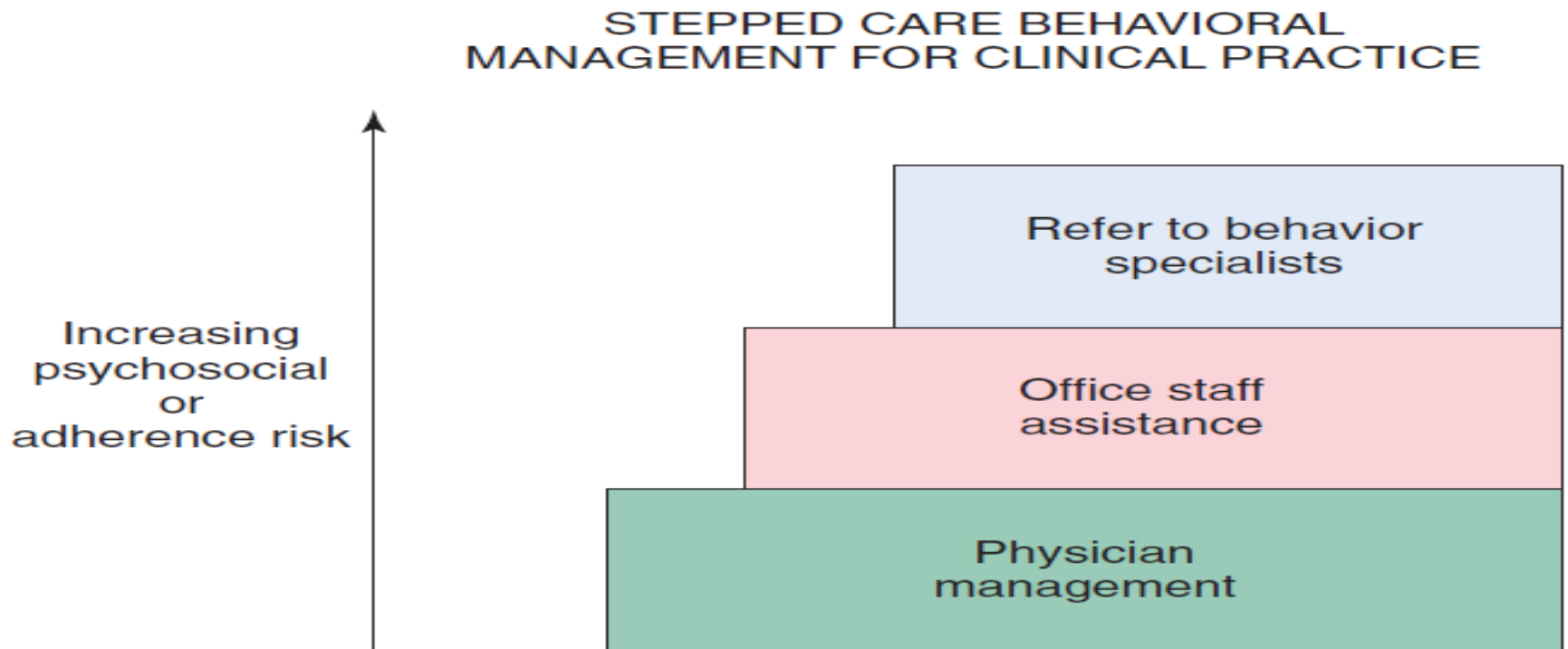


FIGURE 34-17 A potential model for stepped psychosocial interventions in clinical cardiac practice. Routine counseling and psychosocial interventions may be addressed at the physician level. Somewhat increased difficulty in adherence to medical regimens or psychosocial stress may benefit from adjunctive care, monitoring, or feedback from office staff (see text). Patients with significant psychosocial distress (e.g., depression) or poor adherence difficulty may benefit from additional referral to behavioral health specialists or programs.³

Conclusion

- Le stress (attentat) est un FDR de maladie CV
- Importance de la personnalité sous jacente
- Dépistage des personnalités possible
- Eviter les complications CV
 - Moyens non médicamenteux
 - Moyens médicamenteux
- Le concept de prévention des méfaits du stress doit être extrapolé à des situations plus large (travail: burn out, vie privée maritale)

Pour eviter le stress...
que les bleus gagnent!

