



FORUM EUROPÉEN CŒUR, EXERCICE & PRÉVENTION

Bénéfices en prévention primordiale et primaire de l'activité physique sur les pathologies chroniques

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Salarié des entreprises suivantes :

- Maison Sport-Santé MON STADE, 75013 Paris
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Absence de conflit d'intérêt en rapport avec la présentation



Club des
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Prévention primordiale

Prévenir l'apparition des **facteurs de risque** et agir sur eux avant qu'ils ne deviennent un problème de santé

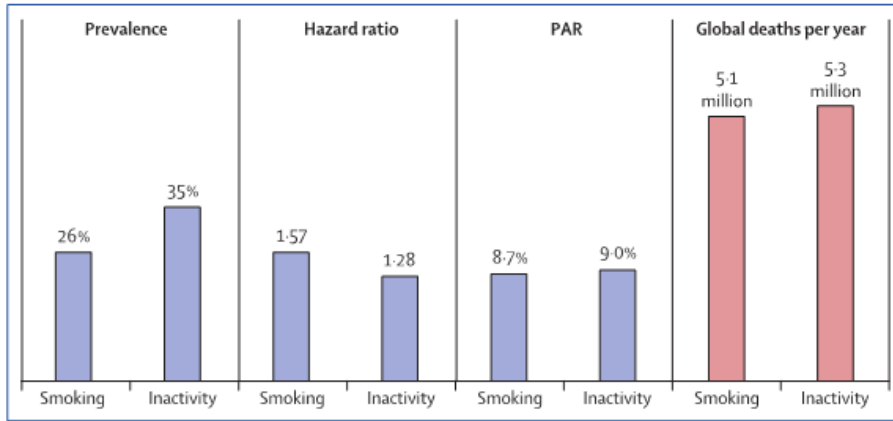
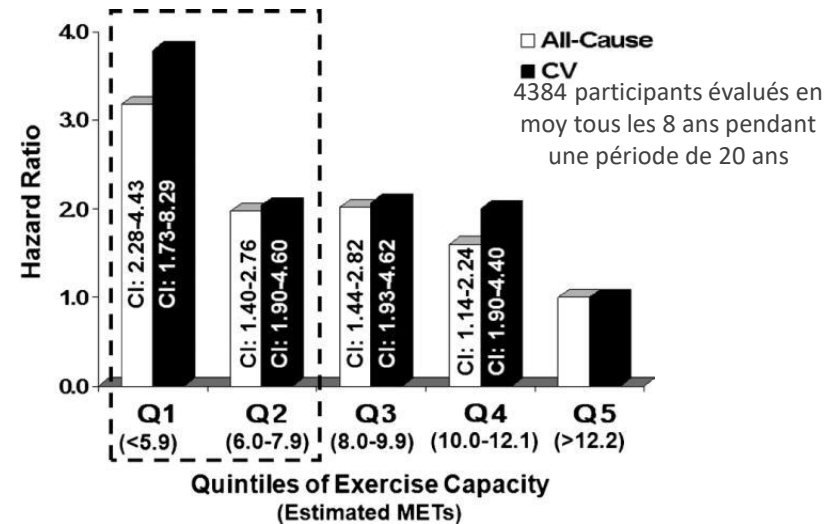


Figure: Comparison of global burden between smoking and physical inactivity

Wen CP, Wu X. *Stressing harms of physical inactivity to promote exercise*. Lancet 2012;380:192-3

Prévention primaire

Réduire l'incidence des **maladies** chez des individus qui ne les ont pas encore développés



Mandic S, et al. *Characterizing differences in mortality at the low end of the fitness spectrum*. Med Sci Sports Exerc 2009;41:1573-9



Prévention primordiale : le diabète de type 2

L'AP réduit le risque de diabète de 30%

Méta-analyse de 10 études prospectives

301 221 participants

- AP régulière intensité modérée vs. sédentaires :

RR Dt2 = **0.69** (95% CI 0.58-0.83)

- Marcheurs actifs >= 2,5 h/sem vs. non-marcheurs :

RR Dt2 = **0.70** (0.58-0.84)

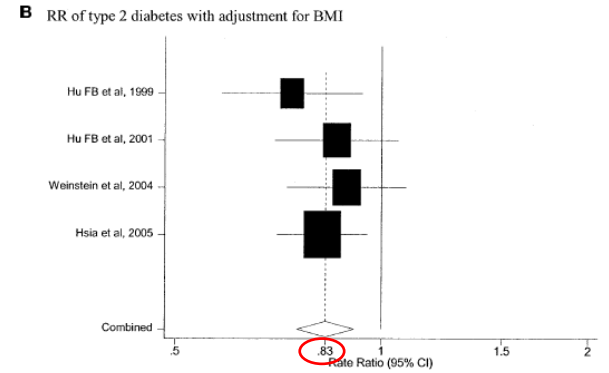
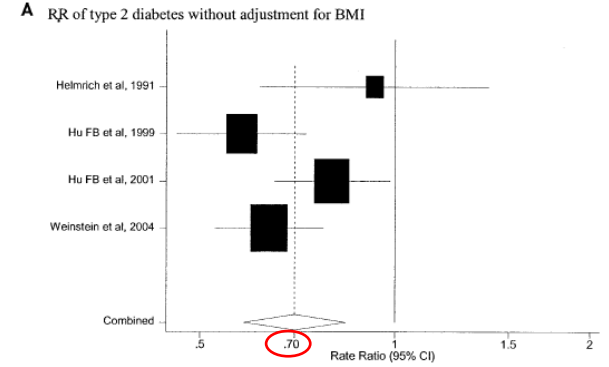
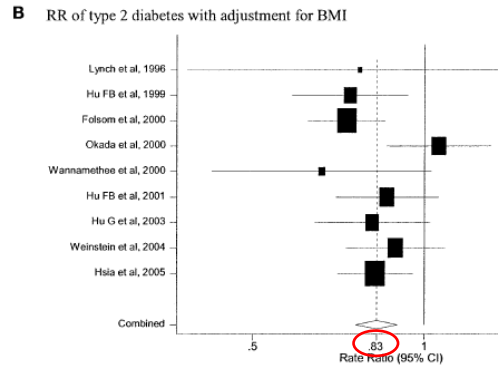
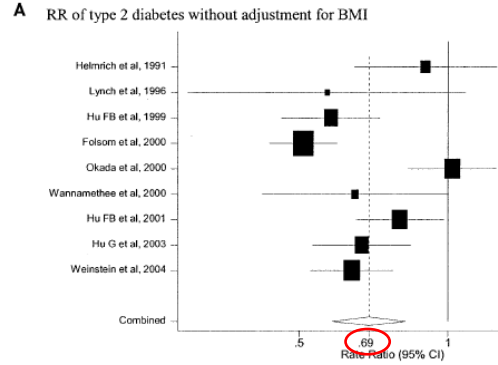


Figure 1—RRs for total physical activity of moderate intensity and incidence of type 2 diabetes for individual cohort studies and all studies combined without adjustment for BMI (A) and with adjustment for BMI (B). RR comparing the highest with the lowest reported level of walking are shown in Table 1. Filled bars and open diamonds indicate 95% CIs. The size of the squares corresponds to the weight of the study in the meta-analysis.

Figure 2—RRs for walking and incidence of type 2 diabetes for individual cohort studies and all studies combined without adjustment for BMI (A) and with adjustment for BMI (B). RR comparing the highest with the lowest reported level of walking are shown in Table 1. Filled bars and open diamonds indicate 95% CIs. The size of the squares corresponds to the weight of the study in the meta-analysis.

Jeon CY, Lokken RP, Hu FB, van Dam RM. Physical activity of moderate intensity and risk of type 2 diabetes: a systematic review. Diabetes Care. 2007;30(3):744-52



Prévention primordiale : le diabète de type 2

L'AP réduit le risque de diabète de 15 à 39%

Revue de 81 études

Analyse selon le type d'AP

Intensité élevée vs. faible :

- Toute AP : RR Dt2 = **0.65** (95% CI 0.59-0.71)
- Vigoureuse : RR Dt2 = **0.61** (95% CI 0.51-0.74)
- Modérée : RR Dt2 = **0.68** (95% CI 0.52-0.90)
- Loisir : RR Dt2 = **0.74** (95% CI 0.70-0.79)
- Marche : RR Dt2 = **0.85** (95% CI 0.79-0.91)

➤ Effet dose-réponse ?

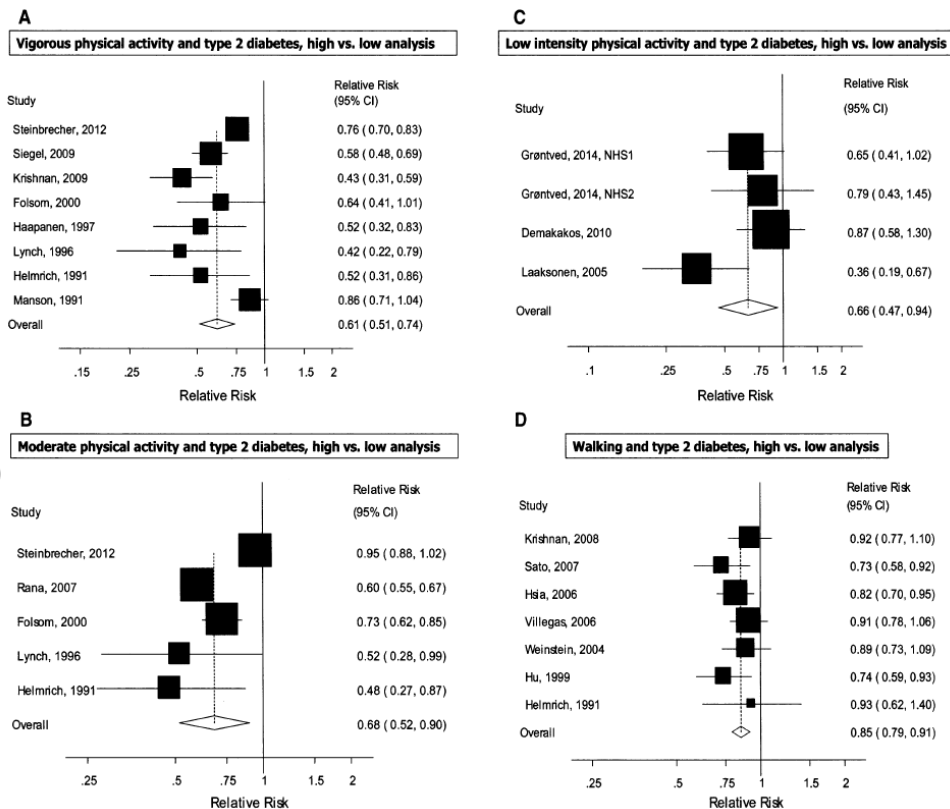


Fig. 5 Vigorous physical activity, moderate physical activity, low intensity physical activity, and walking and type 2 diabetes, high versus low analyses

Aune D, et al. Physical activity and the risk of type 2 diabetes: a systematic review and dose-response meta-analysis. Eur J Epidemiol. 2015;30(7):529-42



Prévention primordiale : le diabète de type 2

L'AP réduit le risque de diabète avec un effet dose-réponse

Étude prospective

59 325 participants scorés / risque polygénique de Dt2

Port d'un accéléromètre

Suivi médian 6,8 ans

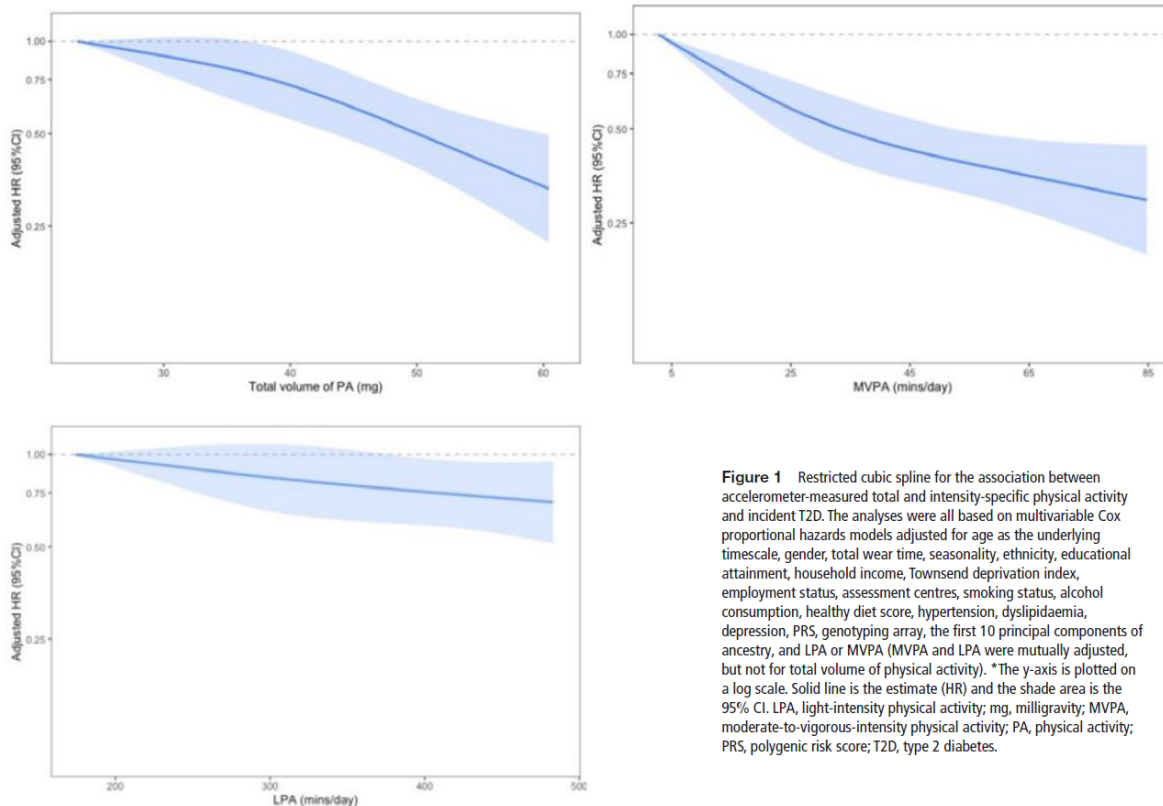


Figure 1 Restricted cubic spline for the association between accelerometer-measured total and intensity-specific physical activity and incident T2D. The analyses were all based on multivariable Cox proportional hazards models adjusted for age as the underlying timescale, gender, total wear time, seasonality, ethnicity, educational attainment, household income, Townsend deprivation index, employment status, assessment centres, smoking status, alcohol consumption, healthy diet score, hypertension, dyslipidaemia, depression, PRS, genotyping array, the first 10 principal components of ancestry, and LPA or MVPA (MVPA and LPA were mutually adjusted, but not for total volume of physical activity). *The y-axis is plotted on a log scale. Solid line is the estimate (HR) and the shade area is the 95% CI. LPA, light-intensity physical activity; mg, milligravity; MVPA, moderate-to-vigorous-intensity physical activity; PA, physical activity; PRS, polygenic risk score; T2D, type 2 diabetes.

Luo M, Yu C, Del Pozo Cruz B, *et al.* *Accelerometer-measured intensity-specific physical activity, genetic risk and incident type 2 diabetes: a prospective cohort study.* British Journal of Sports Medicine. 2023;57:1257-64



Prévention primordiale : le diabète de type 2

L'AP réduit le risque de diabète de 28 à 67%



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& Diabetes
Metabolism

Diabetes & Metabolism 39 (2013) 205–216

Main characteristics of studies on the prevention of type 2 diabetes with physical activity.

Study	Number of subjects (age)	BMI (kg/m ²)	Inclusion criteria	Mean study duration (years)	Type of physical activity	Incidence of diabetes at the end of the study (RR reduction of DT2 in E vs. CT group)	Long-term cumulative incidence of T2D (group I vs. CT)
Pan et al. 1997 (Da Quing [China]) [11]	577 MW (45 ± 9 years)	26	IGT	6	Endurance	CT: 67.7 % E: 46 % (RR: -51 %)	At 20 years -43 %
Tuomilehto et al. 2001 (FDPS [Finland]) [12]	522 MW (40–64 years)	31	IGT	3.2	Endurance + resistance	CT: 23 % E: 11 % (RR: -58 %)	At 7 years -43 %
Knowler et al. 2002 (DPPS [USA]) [13]	3224 MW (34 ± 6 years)	34	IGT	2.8	Endurance	CT: 19.8 % E: 14.3 % (RR: -58 %)	At 10 years -34 %
Kosaka et al. 2005 (Japan) [15]	458 M (40–50 years)	24	IGT	4	Endurance	CT: 9.3 % E: 3 % (RR: -67.4 %)	
Ramachandran et al. 2006 (IDPP [India]) [14]	269 MW (46 ± 6 years)	26	IGT	3	Endurance	CT: 55 % E: 39.5 % (RR: -28.2 %)	

It should be noted that in all these studies (except for the study by DaQuing), the results are based on the combined efforts of physical activity and diet (usually balanced diet without weight loss). M: men, W: women, IGT: impaired glucose tolerance, CT: control group (advice only), E: exercise group, I: intervention group (overall lifestyle changes: diet + physical activity), RR: relative risk; FDPS: Finnish Diabetes Prevention Study, DPPS: Diabetes Prevention Program Study, IDPP: Indian Diabetes Prevention Program

M. Duclos et al. / Diabetes & Metabolism 39 (2013) 205–216

Duclos M, et al. Diab Metab 2013;39:205-16



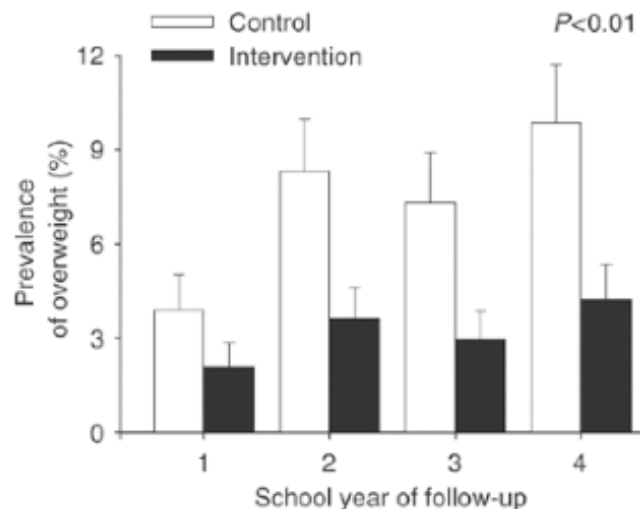
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Prévention primordiale : l'obésité

Facteur de risque majeur pour de nombreuses maladies chroniques.

Plusieurs études ont montré que la pratique régulière d'AP était efficace pour prévenir et traiter l'obésité chez les enfants et les adultes.

Intervention randomisée dans 8 écoles 4/4
Promotion + encouragements de l'AP vs. 0
954 élèves de 12 ans, suivis 4 ans



Simon, C, et al. Successful overweight prevention in adolescents by increasing physical activity: a 4-year randomized controlled intervention. *Int J Obes.* 2008;32:1489-98

Wyszyńska J, et al. Physical Activity in the Prevention of Childhood Obesity: The Position of the European Childhood Obesity Group and the European Academy of Pediatrics. *Front Pediatr.* 2020;8:535705



Prévention primordiale : l'obésité

L'AP réduit l'incidence de l'obésité de 42 à 37%

Revue systématique, 2 études sur l'incidence de l'obésité

5191 participants, suivi 10 ans

Table 1 Overview of longitudinal studies on the association between PA and the outcome of obesity (BMI ≥ 30 kg/m²)

Author	Country	Characteristics	Follow-up time	Predictor variable: Physical activity	Outcome of interest	Main results
Bell et al. (2014) [25]	UK, Whitehall II study	N = 3670, 73% male, 55.5 \pm 6.0 years	10 years; Baseline 1997–1999 Follow-up: 2002–2004, 2007–2009	Self-reported, duration of MVPA (h/wk) -Low: 0–1.5 -Intermediate: 1.56–4.25 -High: 4.27–20.56	Incident obesity	OR [95% CI]: low level PA as reference ^a : -High level PA 0.64 [0.44, 0.93] after 5 years -High level PA 0.63 [0.45, 0.88] after 10 years
Montgomerie et al. (2014) [26]	Australia	N = 1521, 50.6% male, age 44.6 \pm 16.22 years	2898.9 \pm 402.29 days Baseline: 1999–2003, follow-up: 2004–2006, 2008–2010	Self-reported, score: frequency x time per session x intensity -Inactive: < 100 sedentary, 100–1600 low -Active: 1600–3200 moderate, > 3200 high	Incident obesity	RR [95% CI]: Association between physical inactivity & incident obesity ^b : -1.42 [1.03, 1.95] $p = 0.030$

Cleven L, Krell-Roesch J, Nigg CR, Woll A. *The association between physical activity with incident obesity, coronary heart disease, diabetes and hypertension in adults: a systematic review of longitudinal studies published after 2012.* BMC Public Health. 2020;20(1):726



Prévention primordiale : l'HTA

L'AP prévient le passage au stade d'HTA

Étude randomisée : 44 jeunes femmes (25 ans) à risque familial d'HTA, 3 groupes : contrôle ; MICE ; HIIE x 3 / sem ; + 15 femmes appariées sans atcd fam d'HTA (gpe témoin).

Basal = MAPA glycémie cholestérol identiques entre les groupes / insulinémie, résistance à l'insuline, VOP carotido-fémorale plus élevées chez les femmes aux atcd familiaux d'HTA.

Après 16 sem = MAPA non différentes / insulinémie, résistance à l'insuline et VOP ont ↓ dans les groupes MICE et HIE, jusqu'à rejoindre les valeurs du gpe témoin pour l'**HIIE**.

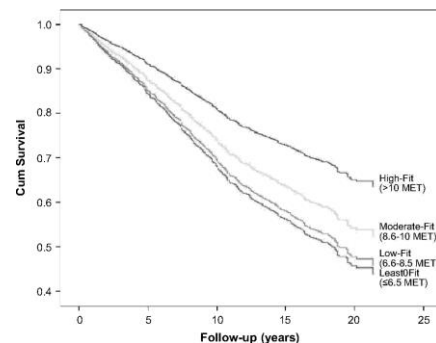
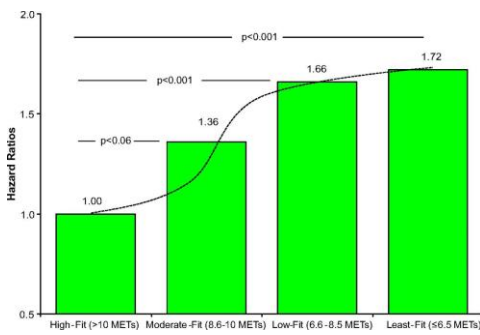
Ciolac EG, et al. *Effects of high-intensity aerobic interval training vs. moderate exercise on hemodynamic, metabolic and neuro-humoral abnormalities of young normotensive women at high familial risk for hypertension*. Hypertens Res. 2010;33(8):836-43

Cohorte :

2303 hommes pré-hypertendus

Suivi médian 7,8 ans

Une meilleure capacité évaluée par les METs ou **VO2max** semble être un élément protecteur de la transition vers l'HTA.



Faselis C, et al. *Exercise capacity and progression from prehypertension to hypertension*. Hypertension. 2012;60(2): 333-8



Prévention primordiale : l'HTA

La réduction de l'incidence de l'HTA peut être de 4% à 37%

Revue systématique, 6 études sur l'incidence de l'HTA

- n = 78 590, suivi 20 ans, HR **0.87** (0.78-0.97)
- n = 1 009, suivi 4,7 ans, **ns**
- n = 1 541, suivi 11,8 ans, **ns**
- n = 11 285, suivi 12 ans, OR MPA **0.78** (0.68-0.90) ; MVPA **0.63** (0.54-0.74)
- n = 21 892, suivi 11 ans, RR >4/sem **0.87** (0.78-0.98)
- n = 43 893, suivi 6,2 ans, HR CàP **0.96** (0.94-0.97)
HR marche **0.93** (0.90-0.96)

Cleven L, Krell-Roesch J, Nigg CR, Woll A. *The association between physical activity with incident obesity, coronary heart disease, diabetes and hypertension in adults: a systematic review of longitudinal studies published after 2012.* BMC Public Health. 2020;20(1):726



Prévention primordiale : la santé mentale

L'AP a des effets positifs sur la santé mentale en réduisant le stress, l'anxiété et la dépression, ainsi qu'en améliorant la qualité du sommeil et la perception de la qualité de vie : l'AP prévient le risque de dépression de 17%

Méta-analyse de 49 études prospectives (N = 266 939, 53% de femmes)

Haut niveau d'AP vs. Bas niveau d'AP;

OR Incidence des dépressions = 0.83 (95% CI : 0.79-0.88)

- Jeunes = 0.90 (95% CI : 0.83-0.98)
- Adultes = 0.78 (95% CI : 0.70-0.87)
- Personnes âgées = 0.79 (95% CI : 0.72-0.86)



Prévention primaire : Contrôle des Facteurs de Risque

Obésité

- Associée aux mesures diététiques, l'AP diminue la masse corporelle en excès et maintient la perte de poids obtenue (*Wing, MSSE 1999;31:S547-52*)
- À défaut de faire perdre du poids, l'AP modifie la répartition de la masse grasseuse, diminue la graisse viscérale abdominale (*Schwartz, Metabolism 1991;40:545-51*) Facteur prédictif de nombreuses maladies chroniques (*Pedersen, 2015;25-S3:1-72*)

HTA

	Exercise	SBP	DBP
Office BP (mm Hg)	Aerobic (1)	-8,3 (-10,7 ; -6,0)	-5,2 (-6,8 ; -3,4)
	Isometric resistance (2)	-6,2 (-7,8 ; -4,7)	-2,8 (-3,9 ; -1,7)
	Dynamic resistance (3)	-1,0 (-3,4 ; +1,4)	-2,2 (-3,9 ; -0,5)
	QI gong, Tai Chi, Yoga (4)	-7,1 (-10,8 ; -3,4)	-4,0 (-6,1 ; -1,9)
ABPM (mm Hg)	Aerobic (5)	-4,1 (-5,2 ; -2,9)	-2,8 (-3,6 ; -2,0)

(1) **Cornelissen VA, Smart NA.** Exercise training for blood pressure: a systematic review and meta-analysis. J Am Heart Assoc. 2013;2(1):e004473

(2) **Smart NA, et al.** Effects of isometric resistance training on resting blood pressure: individual participant data meta-analysis. J Hypertens. 2019;37(10):1927-38

(3) **Rossi AM, et al.** The evolution of a CHEP recommendation: The Impact of Resistance Training on Resting Blood Pressure in Adults as an Example. Can J Cardiol. 2013;29(5):622-7

(4) **Yang H, Wu X, Wang M.** The effect of three different meditation exercises on hypertension: A network meta-analysis. Evid Based Complement Alternat Med. 2017;2017:9784271

(5) **Sosner P, et al.** The ambulatory hypotensive effect of aerobic training: a reappraisal through a meta-analysis of selected moderators. Scand J Med Sci Sports. 2017;27(3):327-41



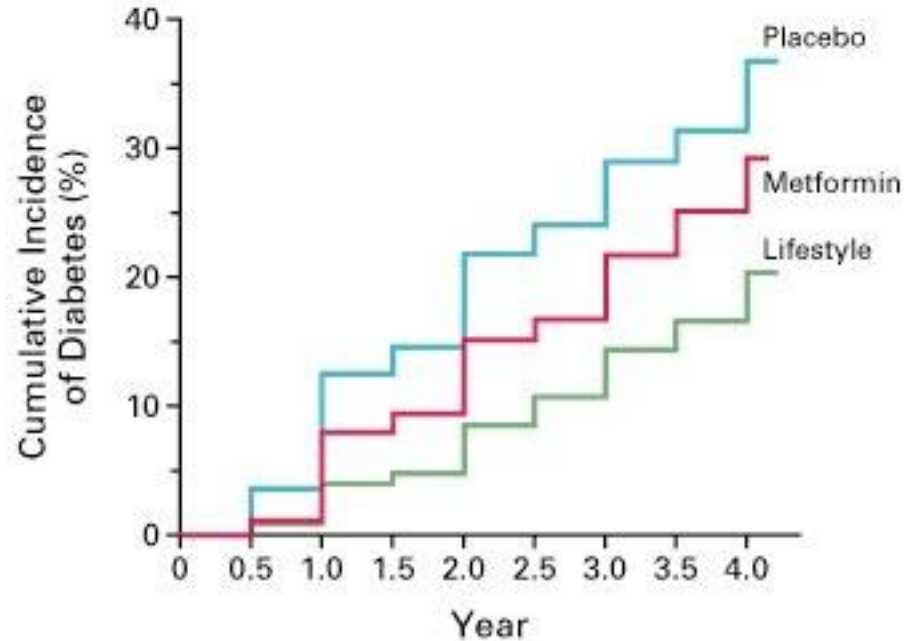
Prévention primaire : Contrôle des Facteurs de Risque

Diabète de type 2

L'AP fait mieux que la Metformine

Arrêt du tabac

Dyslipidémies

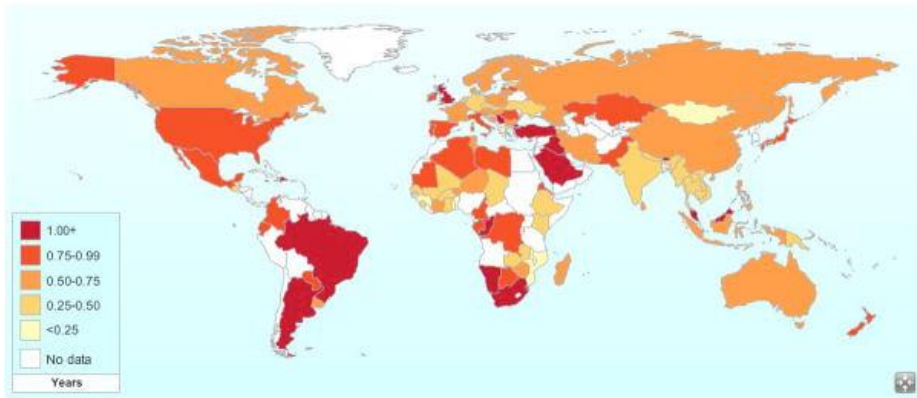


Knowler WC, et al.; Diabetes Prevention Program Research Group. *Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin.* N Engl J Med. 2002;346(6):393-403



Prévention primaire : Mortalité

Worldwide, we estimate that physical inactivity causes 6% (ranging from 3.2% in southeast Asia to 7.8% in the eastern Mediterranean region) of the burden of disease from coronary heart disease, 7% (3.9-9.6) of type 2 diabetes, 10% (5.6-14.1) of breast cancer, and 10% (5.7-13.8) of colon cancer. Inactivity causes 9% (range 5.1-12.5) of premature mortality, or more than 5.3 million of the 57 million deaths that occurred worldwide in 2008. If inactivity were not eliminated, but decreased instead by 10% or 25%, more than 533 000 and more than 1.3 million deaths, respectively, could be averted every year. **We estimated that elimination of physical inactivity would increase the life expectancy of the world's population by 0.68 (range 0.41-0.95) years.**

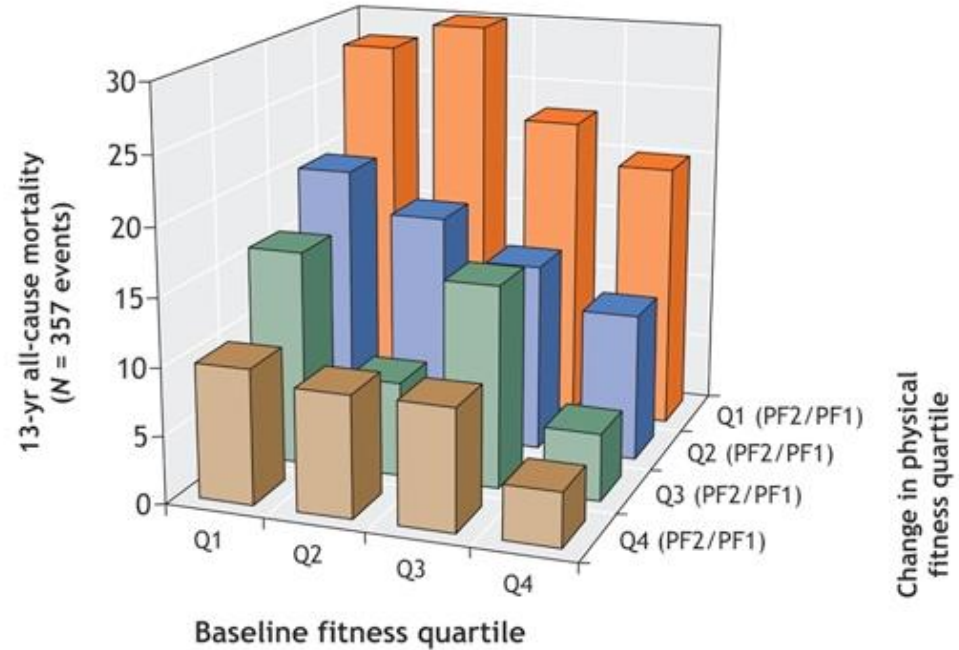
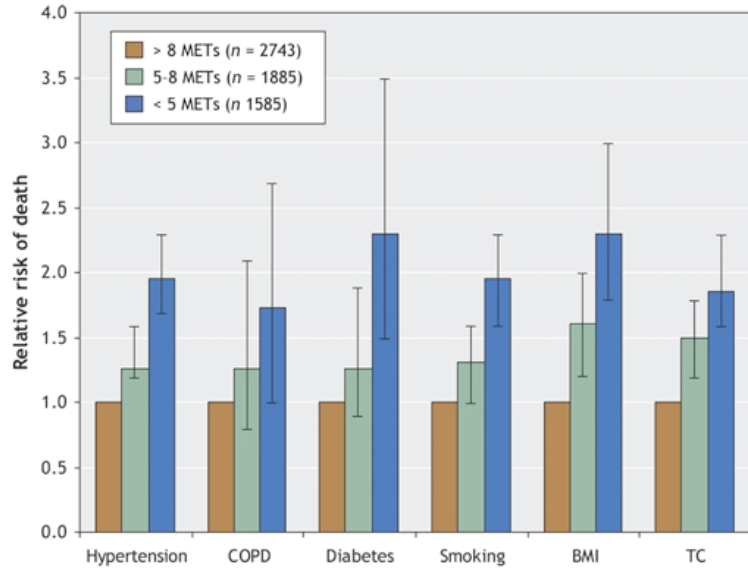


Map of the world showing estimated gains in life expectancy with elimination of physical inactivity

Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., Katzmarzyk, P. T., & Lancet Physical Activity Series Working Group. *Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy*. *Lancet*, 2012;380(9838):219-29



Prévention primaire : Mortalité



Warburton DE, Nicol CW, Bredin SS. *Health benefits of physical activity: the evidence*. Canadian Medical Association Journal, 2006;174(6):801-9



Prévention primaire : Mortalité

L'AP réduit le risque de mortalité de près de 19% (2,5 h/sem) à 24% (7h/ sem)

Méta-analyse de 22 études, 977 925 sujets

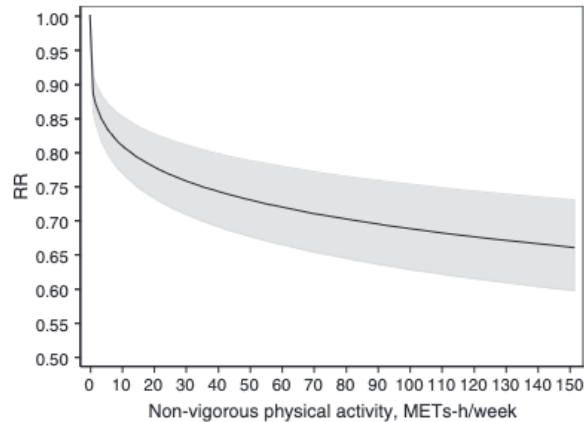


Figure 2 Association between MET-hours/week of non-vigorous physical activity and RR for all-cause mortality. In total, 29 estimates from 22 studies, 52 294 deaths, and 7 569 742 person years of follow-up, were taken. Data were fitted with a random-effect model including a power transformation of 0.25 for MET-hours/week. Shaded areas represent 95% CIs

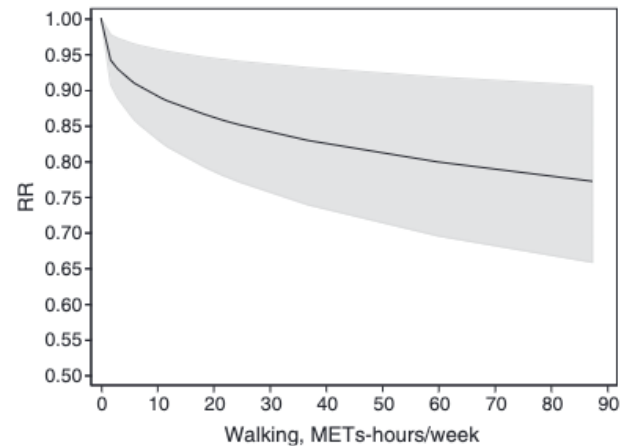


Figure 5 Association between MET-h/week of non-vigorous physical activity and adjusted RR for all-cause mortality in the studies of walking alone. In total, five estimates from five studies, 22 882 deaths and 1 581 769 person years of follow up, were taken. Shaded area represents 95% CIs. Data were fitted with a random-effects model including a power transformation of 0.375 for walking MET-hours/week

Woodcock J, Franco OH, Orsini N, Roberts I. Non-vigorous physical activity and all-cause mortality: systematic review and meta-analysis of cohort studies. *Int J Epidemiol.* 2011;40(1):121-38



Prévention primaire : Mortalité

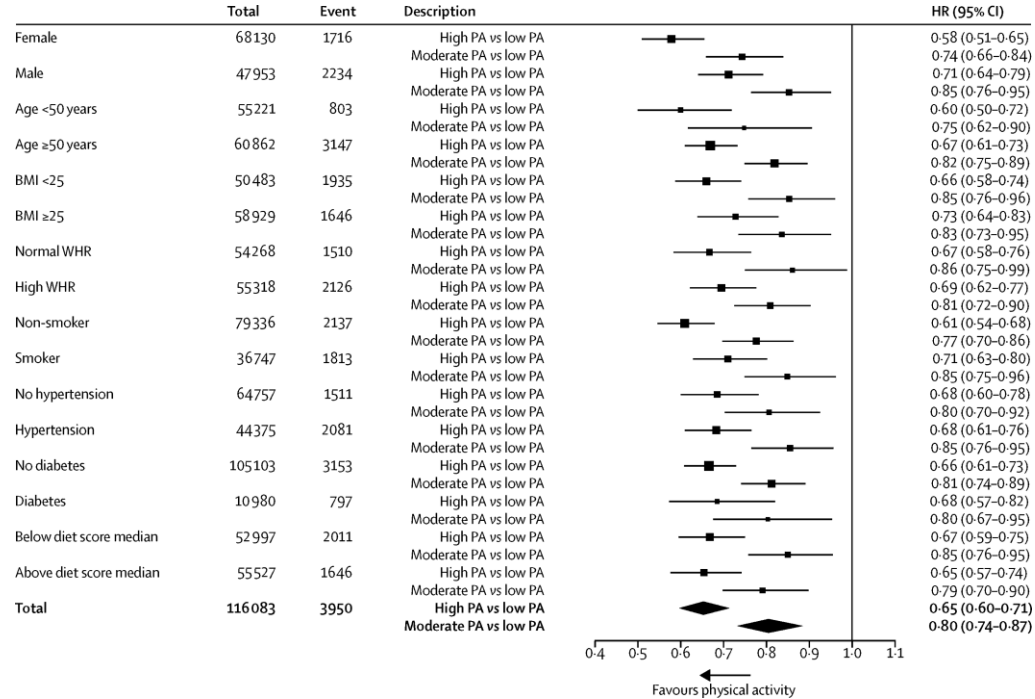
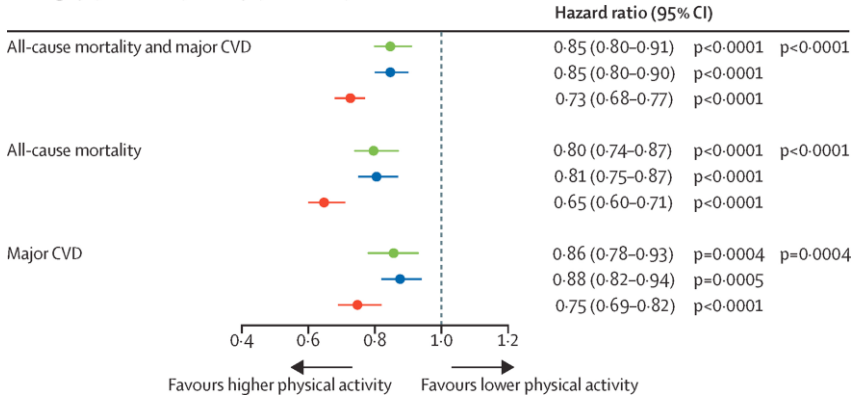
L'AP réduit le risque de mortalité de 20% (modérée) à 35% (vigoureuse)

Étude prospective

130 843 sujets sans MCV

Suivi 6,9 ans

- Moderate physical activity vs low physical activity
- High physical activity vs moderate physical activity
- High physical activity vs low physical activity



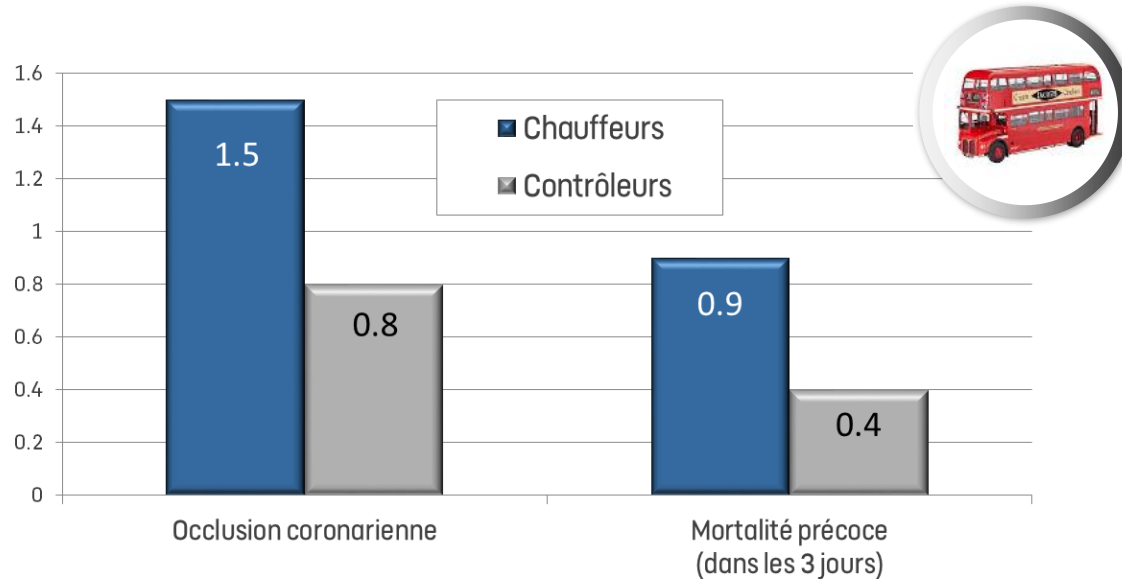
Lear SA, ... & Yusuf S. *The effect of physical activity on mortality and cardiovascular disease in 130,000 people from 17 high-income, middle-income, and low-income countries: the PURE study.* Lancet. 2017;390(10113):2643-54



Prévention primaire : Maladies coronariennes

1^{ère} étude de grande ampleur publiée en 1953

31 000 travailleurs des transports londoniens



Morris JN, Heady JA, Raffle PA, Roberts CG, Parks JW. *Coronary heart-disease and physical activity of work*. Lancet. 1953;262(6795):1053-7



Prévention primaire : Maladies coronariennes

La réduction de l'incidence de maladie coronarienne peut être de 3% à 66%

Revue systématique, 8 études

- n = 97 230, suivi 20 ans, HR groupe plus actifs **0.53** (0.41-0.70)
- n = 5 656, suivi 5 ans, RR AP vigoureuses **0.97** (0.94-1.00)
- n = 3 574, suivi 14 ans, HR AP selon reco **ns** 0.58 (0.30-1.12)
- n = 3 320, suivi 11 ans, HR MVPA **0.44** (0.29-0.65)
- n = 5 901, suivi 15 ans, HR groupe plus actifs **0.69** (0.57-0.84)
- n = 4 207, suivi 10 ans, HR MPA **0.53** (0.41-0.69)
- n = 502 635, suivi 6,1 ans, HR **0.95** (0.93-0.97)
- n = 47 921, suivi 6,2 ans, HR CàP **0.96** (0.91-1.00)

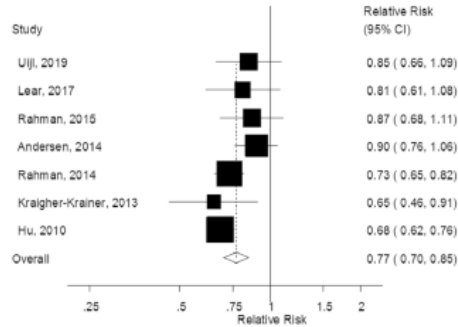
Cleven L, Krell-Roesch J, Nigg CR, Woll A. *The association between physical activity with incident obesity, coronary heart disease, diabetes and hypertension in adults: a systematic review of longitudinal studies published after 2012.* BMC Public Health. 2020;20(1):726



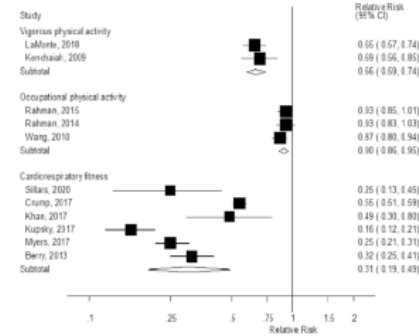
Prévention primaire : Insuffisance cardiaque

L'AP réduit le risque d'insuffisance cardiaque de 25%

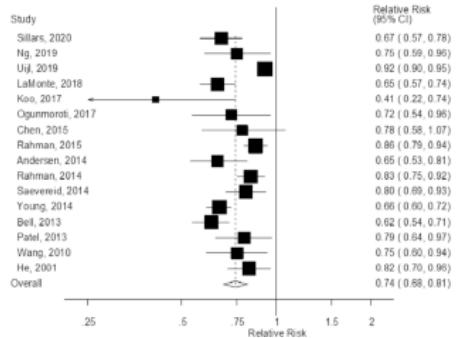
A Total physical activity and heart failure, high vs. low analysis



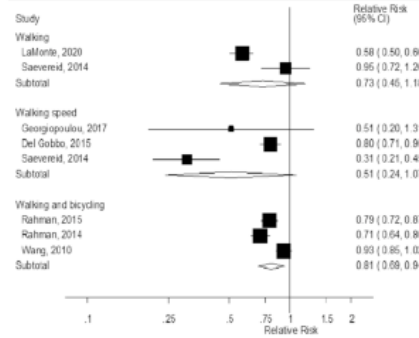
C Vigorous physical activity, occupational physical activity, cardiorespiratory fitness and heart failure, high vs. low analysis



B Leisure-time physical activity and heart failure, high vs. low analysis



D Walking, walking speed, and walking and bicycling and heart failure, high vs. low analysis



Aune D, Schlesinger S, Leitzmann MF *et al.* Physical activity and the risk of heart failure: a systematic review and dose-response meta-analysis of prospective studies. *Eur J Epidemiol.* 2021;36:367-81



Prévention primaire : Insuffisance cardiaque

La réduction de l'incidence de l'IC peut être de 63% à 66%

94.739 participants à la base de données UK Biobank
ne présentant ni infarctus ni IC

AP mesurée par un accéléromètre au poignet entre 2013 et 2015

Suivi médian de 6,1 ans, incidence de l'IC 98,5 / 100.000 personnes-années.

- AP d'intensité modérée 150 à 300 min / sem : HR **0.37** (95% CI, 0.34-0.41)
- AP d'intensité vigoureuse 75 à 150 min / sem : HR **0.34** (95% CI, 0.25-0.46)

Ho FK, et al. Association Between Device-Measured Physical Activity and Incident Heart Failure: A Prospective Cohort Study of 94 739 UK Biobank Participants. Circulation. 2022;146(12):883-91



Prévention primaire : AVC

La réduction de l'incidence de l'AVC peut être de 18% à 29%

Méta-analyse de 15 articles, 752 050 patients suivis 125,7 mois en moy

Incidence des AVC ischémiques

AP de loisir selon reco vs. 0 : RR = **0.71** (95% CI : 0.58-0.86)

AP de loisir selon reco vs. < reco : RR = **0.82** (95% CI : 0.75-0.88)

Indépendant de l'âge et du sexe

De Santis F, Romoli M, Foschi M, et al. *Risk of stroke with different levels of leisure-time physical activity: a systematic review and meta-analysis of prospective cohort studies.* Journal of Neurology, Neurosurgery & Psychiatry Published Online First: 05 March 2024



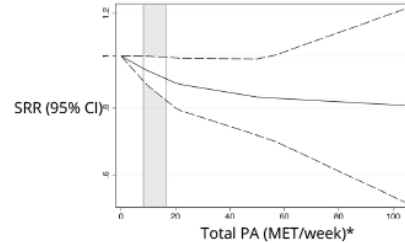
Prévention primaire : en cas de diabète

Prospective studies investigating the association between physical activity and incidence of / mortality from diabetes-related complications in individuals with diabetes ≥ 18 years.

Dose-response meta-analysis - SRR (95% CI)

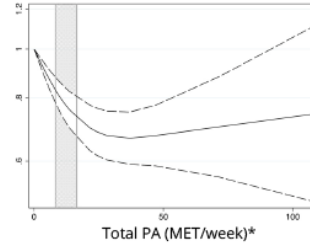
High vs. low physical activity - SRR (95% CI)

CVD Incidence



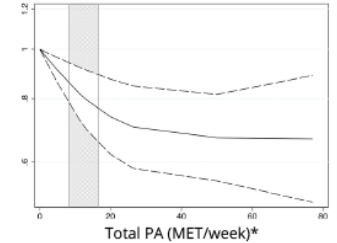
0.84 (0.77, 0.92; $I^2=0\%$)
7 Publications

CVD Mortality



0.62 (0.55, 0.69; $I^2=7\%$)
11 Publications

MVD Incidence



0.76 (0.67, 0.86; $I^2=0\%$)
8 Publications

*Shaded area represents 150 - 300 min of minimum recommended weekly PA (8.25 - 16.5 MET/week).

Physical activity and the risk of major diabetes-related complications in individuals with diabetes: A systematic review and meta-analysis of observational studies (Rietz et al. 2022)

Considering the limitations of the observational study design, there was moderate certainty of evidence (GRADE) that high vs. low levels of physical activity were inversely associated with cardiovascular disease incidence and mortality, as well as microvascular diseases. Even below recommended levels, physical activity was related to a lower risk of these complications.



Abbreviations: CVD - cardiovascular disease; MVD - microvascular disease; SRR - summary risk ratio; PA - physical activity; MET - metabolic equivalent of task

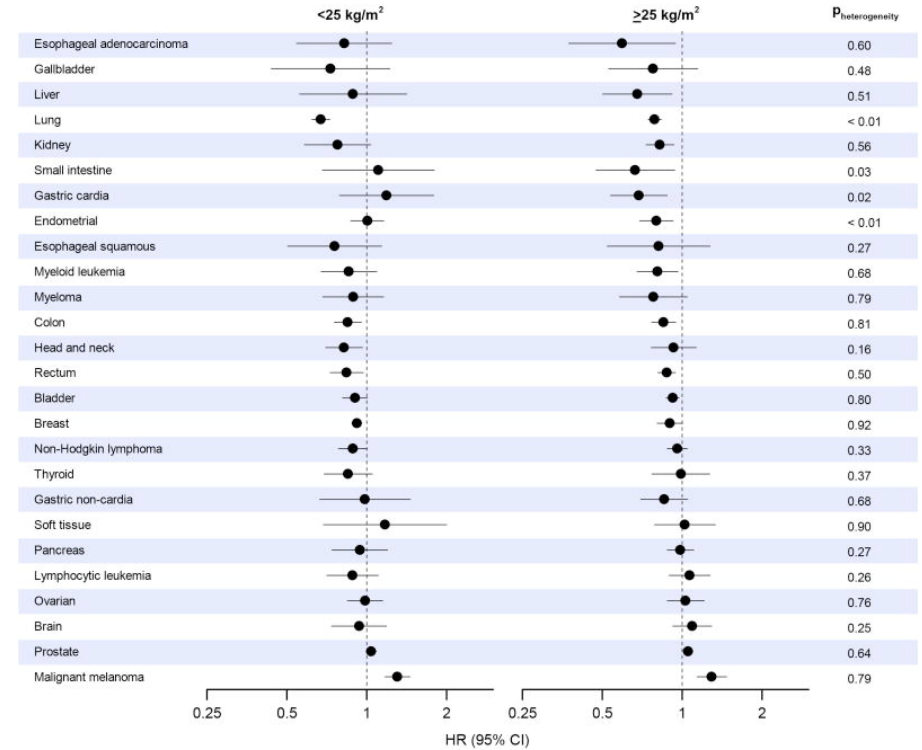
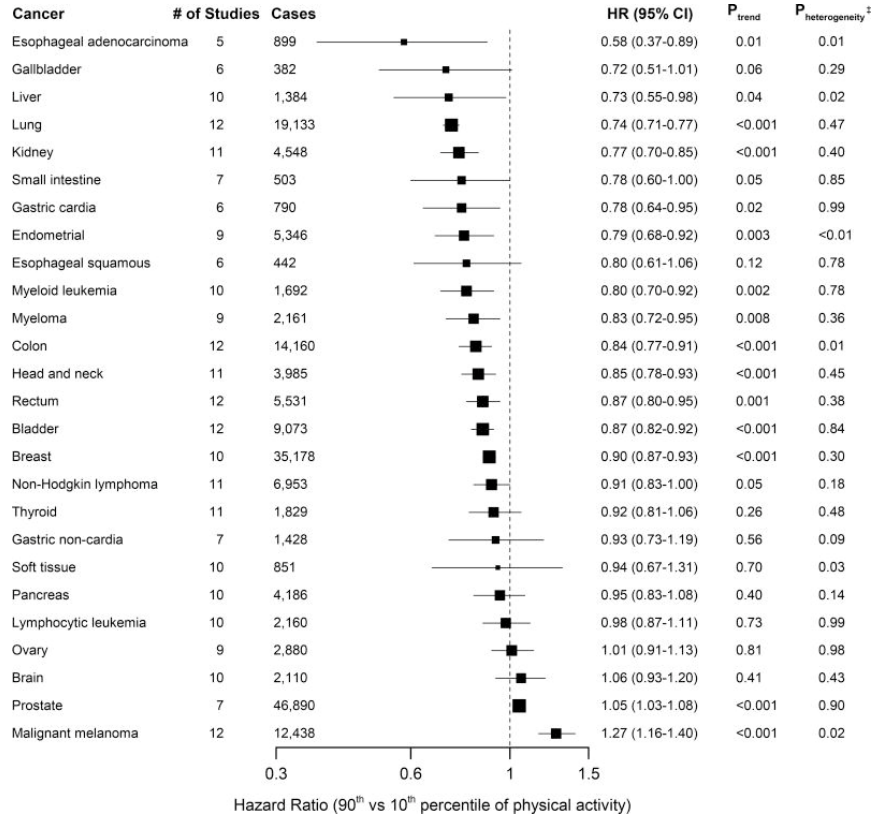
Marlene Rietz, Alexander Lehr, Eriselda Mino, Alexander Lang, Edyta Szczerba, Tim Schiemann, Christian Herder, Nina Saatmann, Wolfgang Geidl, Janett Barbaresko, Manuela Neuenschwander, Sabrina Schlesinger; Physical Activity and Risk of Major Diabetes-Related Complications in Individuals With Diabetes: A Systematic Review and Meta-Analysis of Observational Studies. Diabetes Care 1 December 2022; 45 (12): 3101–3111



FORUM EUROPÉEN CŒUR, EXERCICE & PRÉVENTION



Prévention primaire : Cancers



Moore SC, Lee IM, Weiderpass E, *et al.* Association of Leisure-Time Physical Activity With Risk of 26 Types of Cancer in 1.44 Million Adults. *JAMA Intern Med.* 2016;176(6):816-25



AP = Thérapeutique validée avec un haut niveau de preuves

	Niveaux de preuves			
	Grade A	Grade B	Grade C	Grade D
PATHOGENESE	Diabète type 1 et 2, Dyslipidémies, Obésité, HTA, Insuffisance coronarienne, Insuffisance cardiaque, AOMI, Ostéoporose	Epilepsie	Alzheimer, Arthrose, Cancers (sein, colon, prostate)	Asthme, BPCO, Mucoviscidose
SYMPTOMES DE LA MALADIE	Diabète type 1 et 2, Dyslipidémies, Obésité, HTA, Insuffisance coronarienne, Insuffisance cardiaque, AOMI, BPCO, Mucoviscidose, Dépression, Arthrose, Cancers	Asthme, Epilepsie, Parkinson, Alzheimer, Ostéoporose	AVC, Cancers non-solides (leucémies avec greffe), Schizophrénie	Infection VIH
CONDITION PHYSIQUE	Diabète type 1 et 2, Dyslipidémies, Obésité, HTA, Insuffisance coronarienne, Insuffisance cardiaque, AOMI, BPCO, Mucoviscidose, Asthme, Dépression, Alzheimer, Parkinson, Epilepsie, Arthrose, Ostéoporose, Lombalgie chronique, Rhumatisme (PR, SPA), Cancers (sein, colon, prostate, poumon), Infection VIH	Cervicalgie chronique, Cancers non-solides (leucémies sans greffe)	Cancers non solides (leucémies avec greffe)	
QUALITE DE VIE	Diabète type 2, Obésité, HTA, Insuffisance coronarienne, Insuffisance cardiaque, AOMI, BPCO, Mucoviscidose, Dépression, Parkinson, Arthrose, Cancers, Infection VIH	Diabète type 1, AVC, Rhumatisme (PR), Cancers (sein, prostate, colon), Asthme, Alzheimer	Cancers non-solides (leucémies avec ou sans greffe)	

Pedersen BK, Saltin B. Exercise as medicine - evidence for prescribing exercise as therapy in 26 different chronic diseases. Scand J Med Sci Sports. 2015 Suppl 3:1-72
 Expertise collective de l'Inserm. Activité physique. Prévention et traitement des maladies chroniques. Paris: EDP Sciences; 2019.



Conclusion

Prévention primordiale :

- ↓ Diabète de type 2 : -30-60%
- ↓ Obésité : -40% (Enfants++)
- ↓ HTA : -4-37% (Atcd fam++)
- ↓ Dépression = -18%

Prévention primaire

- ↓ Mortalité : -30-35%
- ↓ M coronarienne : -25%
- ↓ IC : -25-66%
- ↓ AVC : -20-30%
- ↓ Cancers
- ↑ Fonction rénale
- ↑ Paramètres hépatiques

Merci de votre
attention



Club des
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