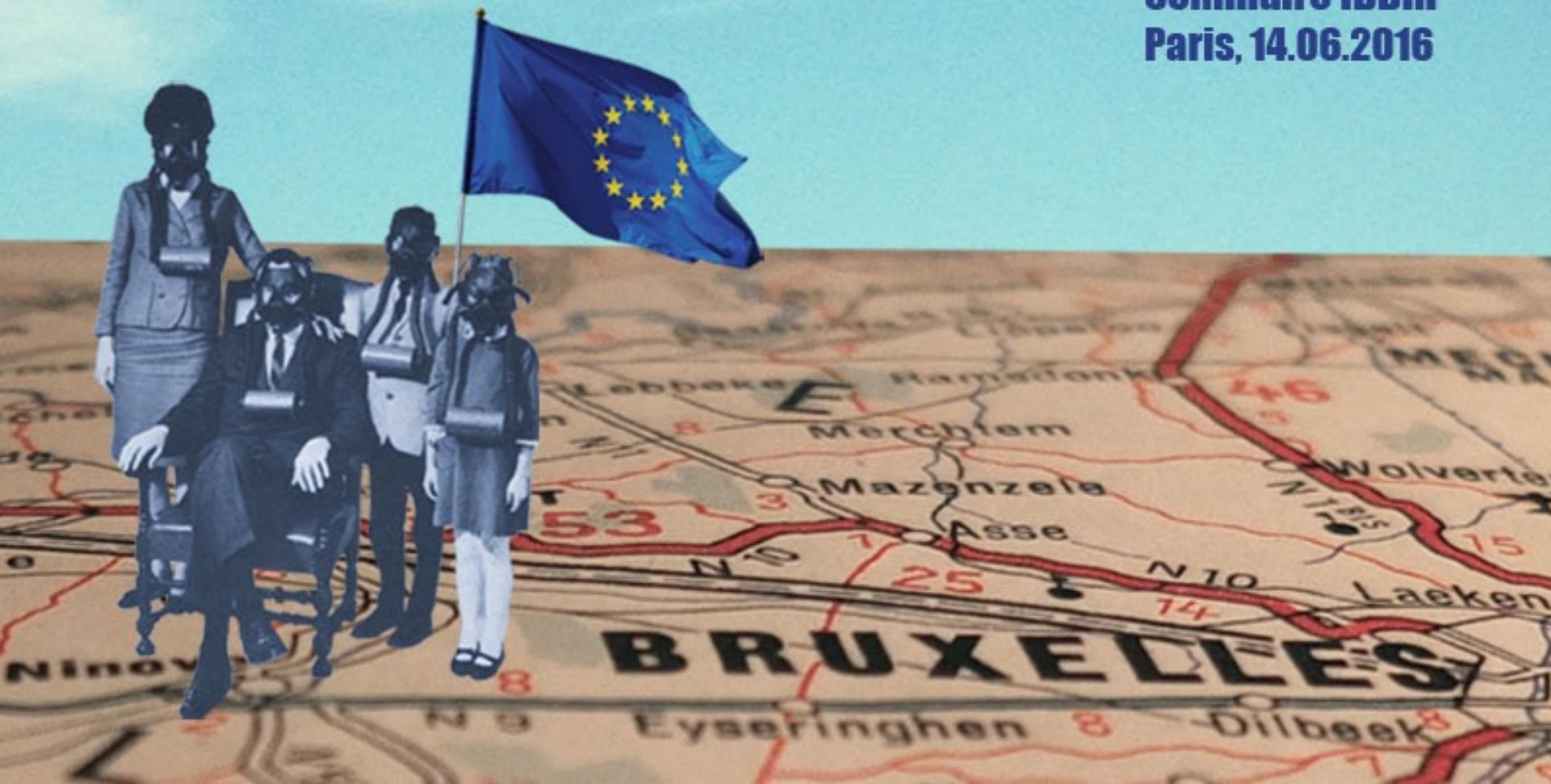


La vulnérabilité de la régulation : le cas emblématique des perturbateurs endocriniens

Séminaire IDDRI
Paris, 14.06.2016



PERTURBATEURS ENDOCRINIENS ?

- .Apparition dans la littérature scientifique en 1992.
- .Substances exogènes, synthétiques ou naturelles, capables de perturber le fonctionnement hormonal.
- .Action à faible dose, en fonction des fenêtres d'exposition. Courbes dose-réponse non monotones.
- .Paracelse (1493-1541) meurt de nouveau.

ÉLÉMENTS DE CONSENSUS

- . Effets sur les animaux de laboratoire avérés.
- . Exposition généralisée des humains et de la faune.
- . Augmentation rapide de l' incidence des maladies et troubles liés au système hormonal chez les humains.
- . Effets de l' exposition aux PE plausiblement sous-estimée.



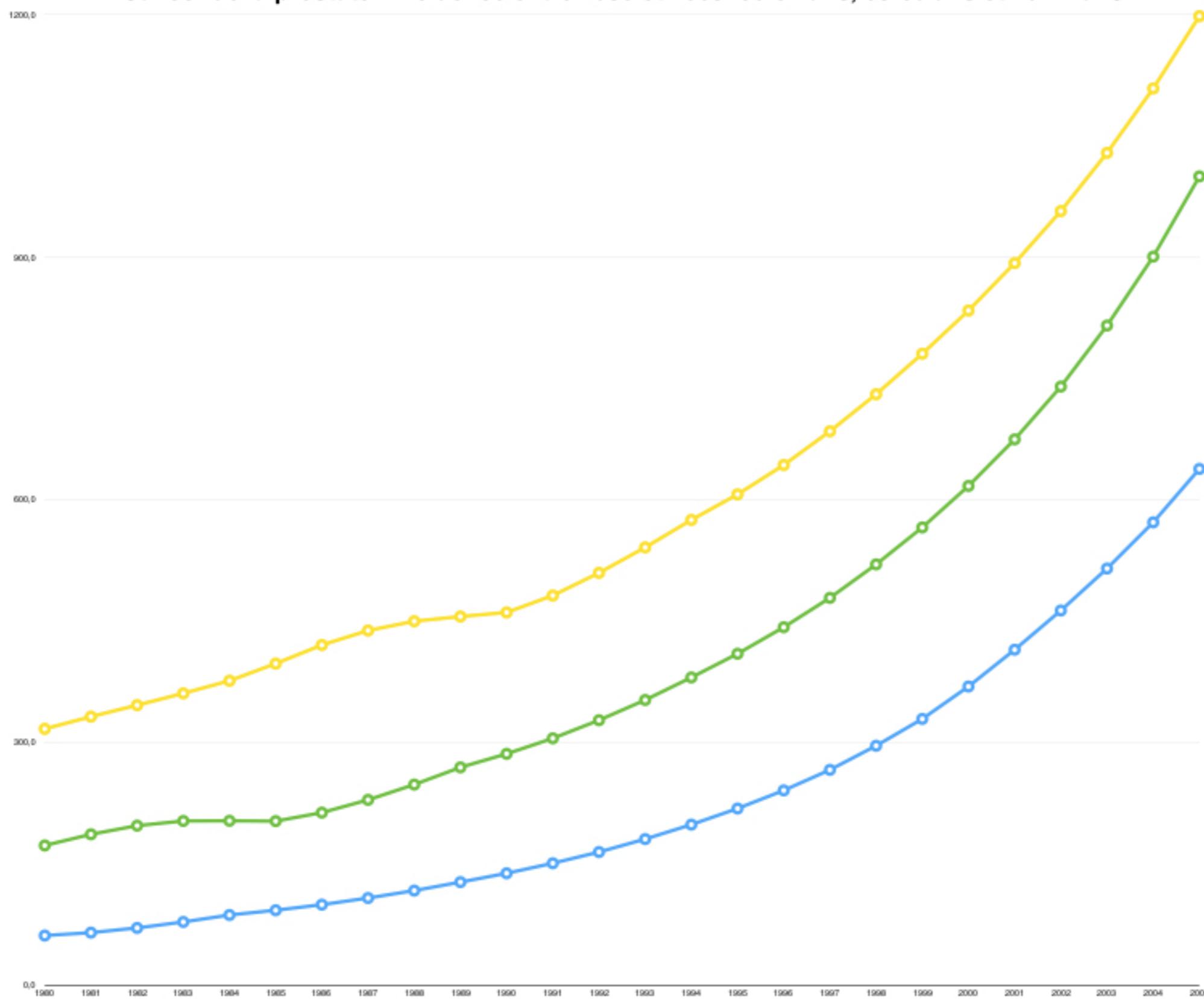
Quelques chiffres

Prévalence des troubles du spectre autistique aux Etats-Unis (8 ans)

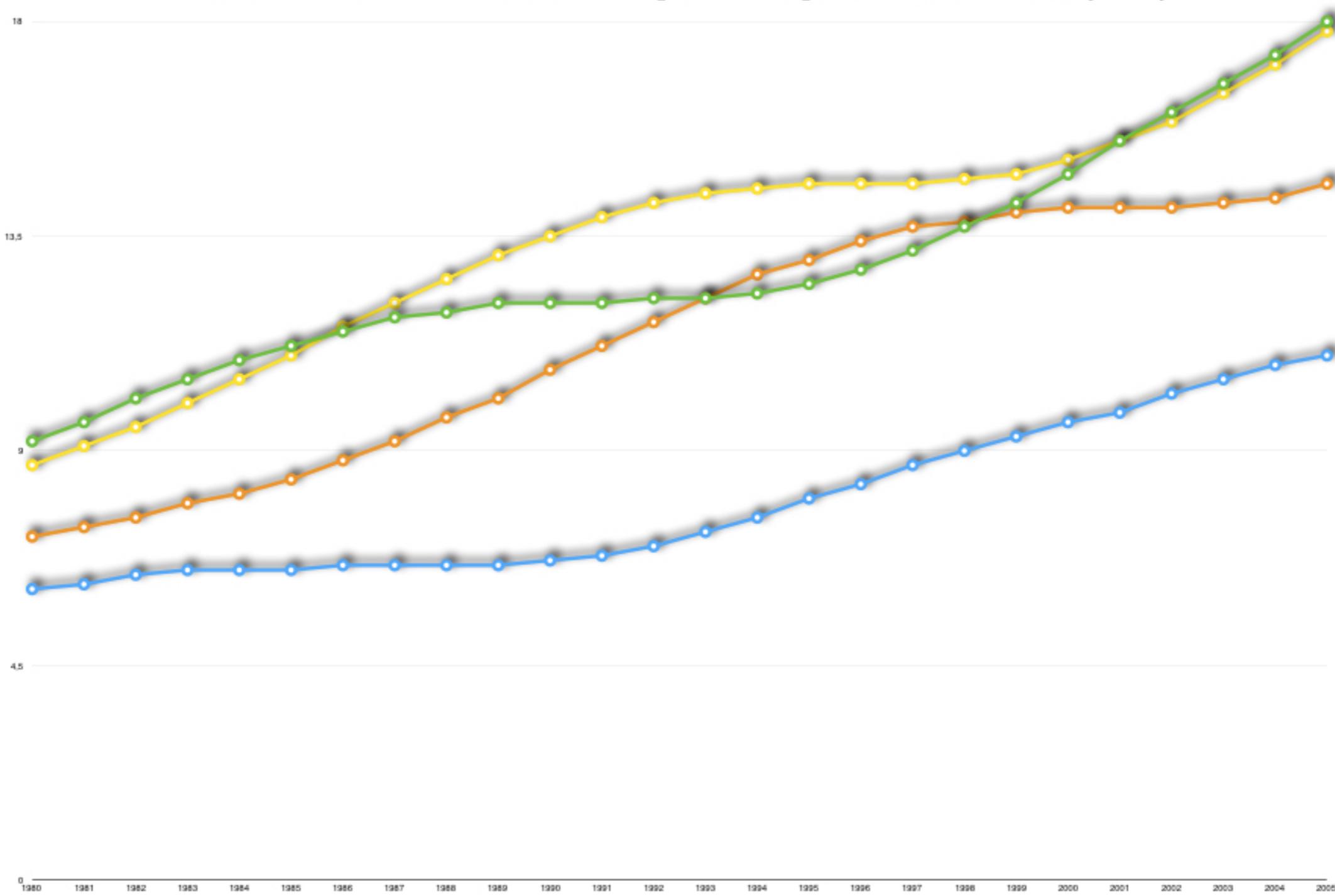


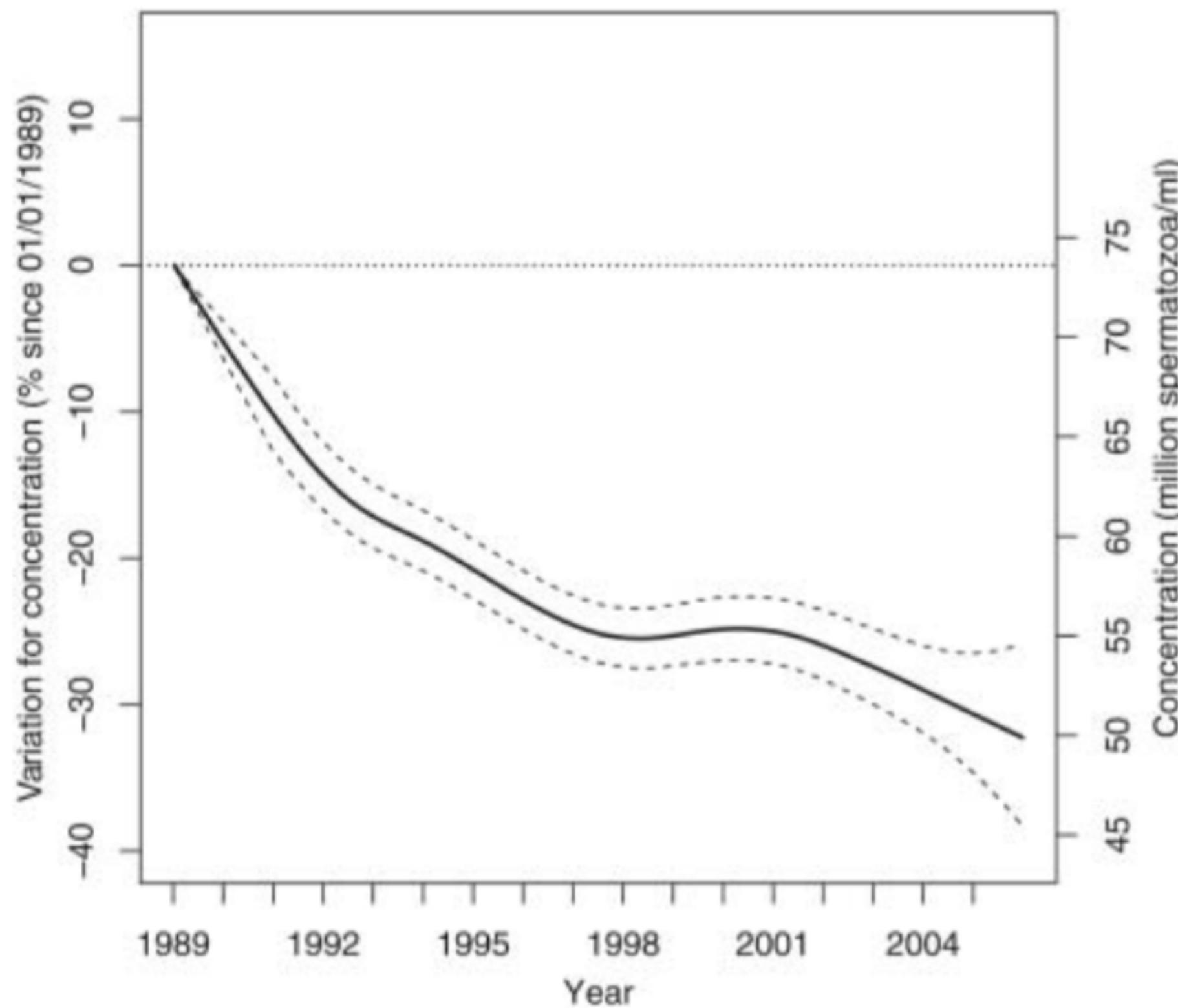
- . Données acquises dans un réseau de surveillance
- . Même méthodologie depuis 2005
- . Sexe-ratio stable (une fille pour cinq garçons)
- . Un enfant sur six est atteint d'un trouble du développement

Cancer de la prostate - incidence entre 1980 et 2005. 60-64 ans, 65-69 ans et 70-74 ans

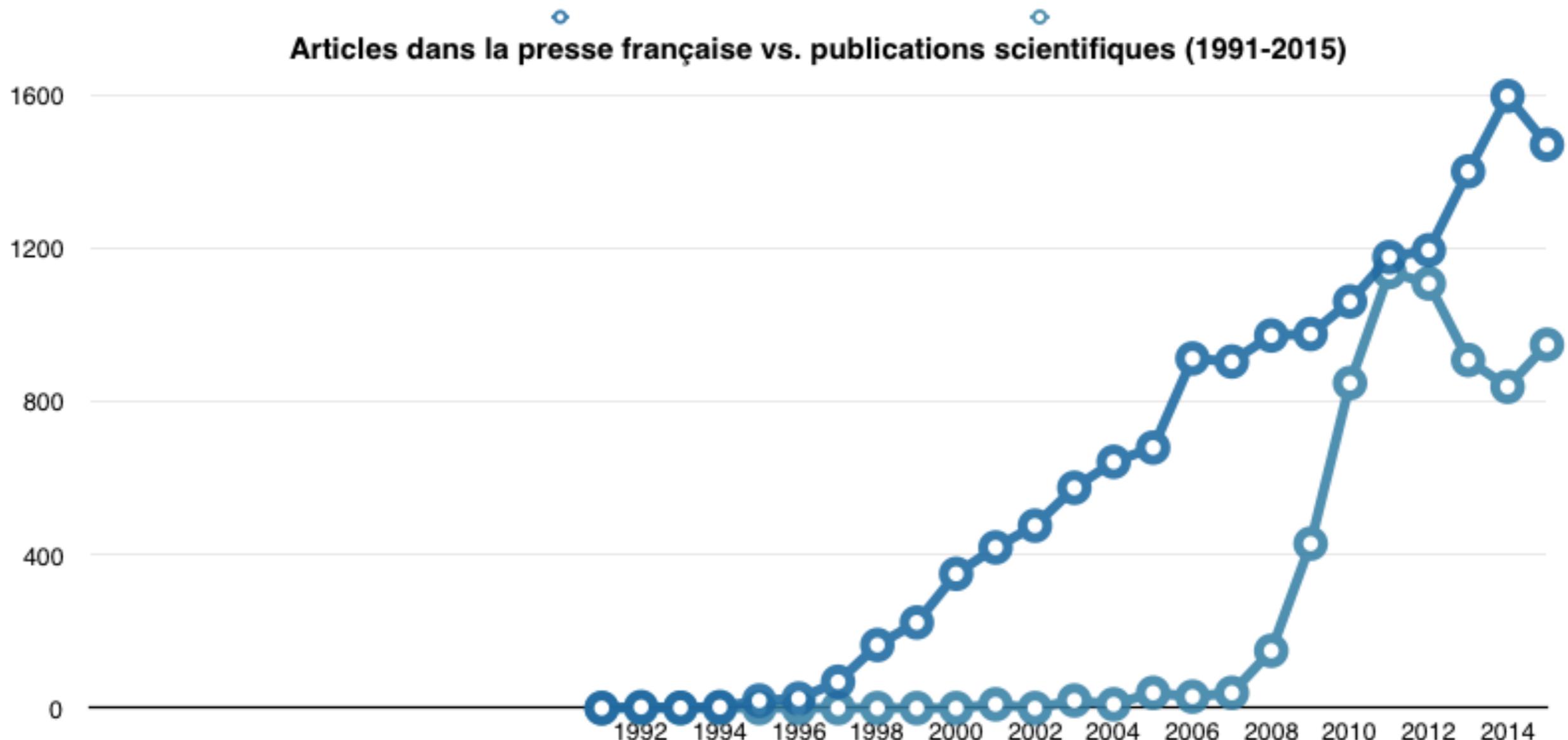


Incidence du cancer du testicule [20-40 ans] entre 1980 et 2005 (InVS)





UN RENDEZ-VOUS RATÉ AVEC LA PRESSE



RETARD À INFORMER, DONC À RÉGULER

- . Complexité et « anxiogénicité » du sujet.
- . Absence d'incarnation (à l'inverse des OGM ou des vaccins), difficulté d'attribution. Balkanisation donc dilution du risque.
- . Défaut de formation de la communauté des cliniciens et des personnels soignants.
- . Pas de *perception* d'un consensus (cf. changement climatique). Compétition disciplinaire (cf. génétique et autisme). Confusion entre consensus scientifique et expertise.

BPA : UN EXEMPLE DE CONTROVERSE

~~. Quelle exposition de la population au BPA ?~~

- . Environ 25 études de biosurveillance suggèrent une concentration de BPA libre de l' ordre du $\mu\text{g/l}$ dans la population générale.
- . Contradictoire avec les modèles pharmacocinétiques. Les agences rejettent généralement ces mesures d'exposition.
- . Explications possibles ?
- . Effet de l'évaluation des risques substance par substance : granularité plus fine des problématiques, perte de la « big picture » normes avancées

LES CAUSALITÉS ALTERNATIVES

LE CAS D' ÉCOLE DU CANNABIS

News

[Home](#) > [News](#) > [News releases](#) > Sperm size and shape in young men affected by cannabis use

5 June 2014

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Sperm size and shape in young men affected by cannabis use

- World's largest study investigating how lifestyle affects sperm
- Cannabis users may be putting their fertility at risk

Young men who use cannabis may be putting their fertility at risk by inadvertently affecting the size and shape of their sperm according to research published today (Thursday 5 June 2014).

In the world's largest study to investigate how common lifestyle factors influence the size and shape of sperm (referred to as sperm morphology), a research team from the Universities of Sheffield and Manchester also found that sperm size and shape was worse in samples ejaculated in the summer months but was better in men who had abstained from sexual activity for more than

LES CAUSALITÉS ALTERNATIVES

LE CAS D' ÉCOLE DU CANNABIS

CONDITIONS

Can Smoking Pot Lower Male Fertility? Marijuana Use May Lead To Abnormal Sperm Size And Shape For Young Men

Jun 4, 2014 07:15 PM **By** Lizette Borreli  @lizcelineb

Lifestyle › Health & Families › Health News

Cannabis doubles younger men's risk of infertility, study finds

Steve Connor | @SteveAConnor | Thursday 5 June 2014 |  0 comments

INFERTILITY

Marijuana use may affect the size and shape of men's sperm

Pot Use Might Be Linked to Abnormal Sperm

Drug could impair male fertility, study suggests

LES CAUSALITÉS ALTERNATIVES LE CAS D' ÉCOLE DU CANNABIS

human
reproduction

ORIGINAL ARTICLE *Andrology*

Modifiable and non-modifiable risk factors for poor sperm morphology

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H. Baillie¹, N.M. Cherry⁴, and Participating Centres of Chaps-UK[†]**

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Submitted on January 31, 2014; resubmitted on March 14, 2014; accepted on March 24, 2014

STUDY QUESTION: Are common lifestyle factors associated with poor sperm morphology?

SUMMARY ANSWER: Common lifestyle choices make little contribution to the risk of poor sperm morphology.

LES CAUSALITÉS ALTERNATIVES

LE CAS D' ÉCOLE DU CANNABIS

Table III Multivariable analysis of risk factors for normal sperm morphology <4%.

Risk factor	Value	All		Age (years)					
				18–30		31–40		>40	
		OR	95% CI ^a	OR	95% CI ^a	OR	95% CI ^a	OR	95% CI ^a
Season	Spring	1.0	—	1	—	1	—	1	—
	Summer	1.99	1.43–2.72	2.21	1.22–4.00	1.73	1.13–2.67	2.74	0.88–8.54
	Autumn	1.01	0.71–1.44	1.09	0.57–2.07	0.92	0.58–1.44	1.35	0.39–4.73
	Winter	0.74	0.49–1.13	0.64	0.28–1.43	0.68	0.40–1.18	1.31	0.39–4.42
Cannabis use	No	1	—	1	—	1	—	1	—
	Yes	1.45	0.97–2.17	1.94	1.05–3.60	1.35	0.63–1.29	0.97	0.20–4.76
Abstinence	≤3 days	1	—	1	—	1	—	1	—
	4–5 days	1.01	0.77–1.34	1.24	0.75–2.05	0.90	0.63–1.29	1.11	0.47–2.64
	≥6 days	0.64	0.43–0.95	0.77	0.38–1.64	0.54	0.32–0.92	0.81	0.28–2.32

^aAdjusted for clustering within centre and other risk factors shown.

LES CAUSALITÉS ALTERNATIVES LE CAS D' ÉCOLE DU CANNABIS

A.A.P. and N.C. are guarantors.

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Conflict of interest

None declared.

References

[EMSG19: Chemicals and Pregnancy Study-UK \(CHAPS-UK\): Multicentre Study of Occupational Exposure to Chemicals and Male Fertility](#)

LES CAUSALITÉS ALTERNATIVES

LE CAS D' ÉCOLE DU CANNABIS

Risk factor
BMI (kg/m ²)
Manual work
Boxer shorts (usually)
Alcohol in 3 months before
Cigarettes in 3 months before
Street drugs
Cannabis
Season
Abstinence

Risk factor
Age of subject (years)
Ethnic Group
Previous conception
Testes surgery
Pelvic imaging
Mumps
Fever in 3 months before
Age of partner (years)

Et la chimie ??