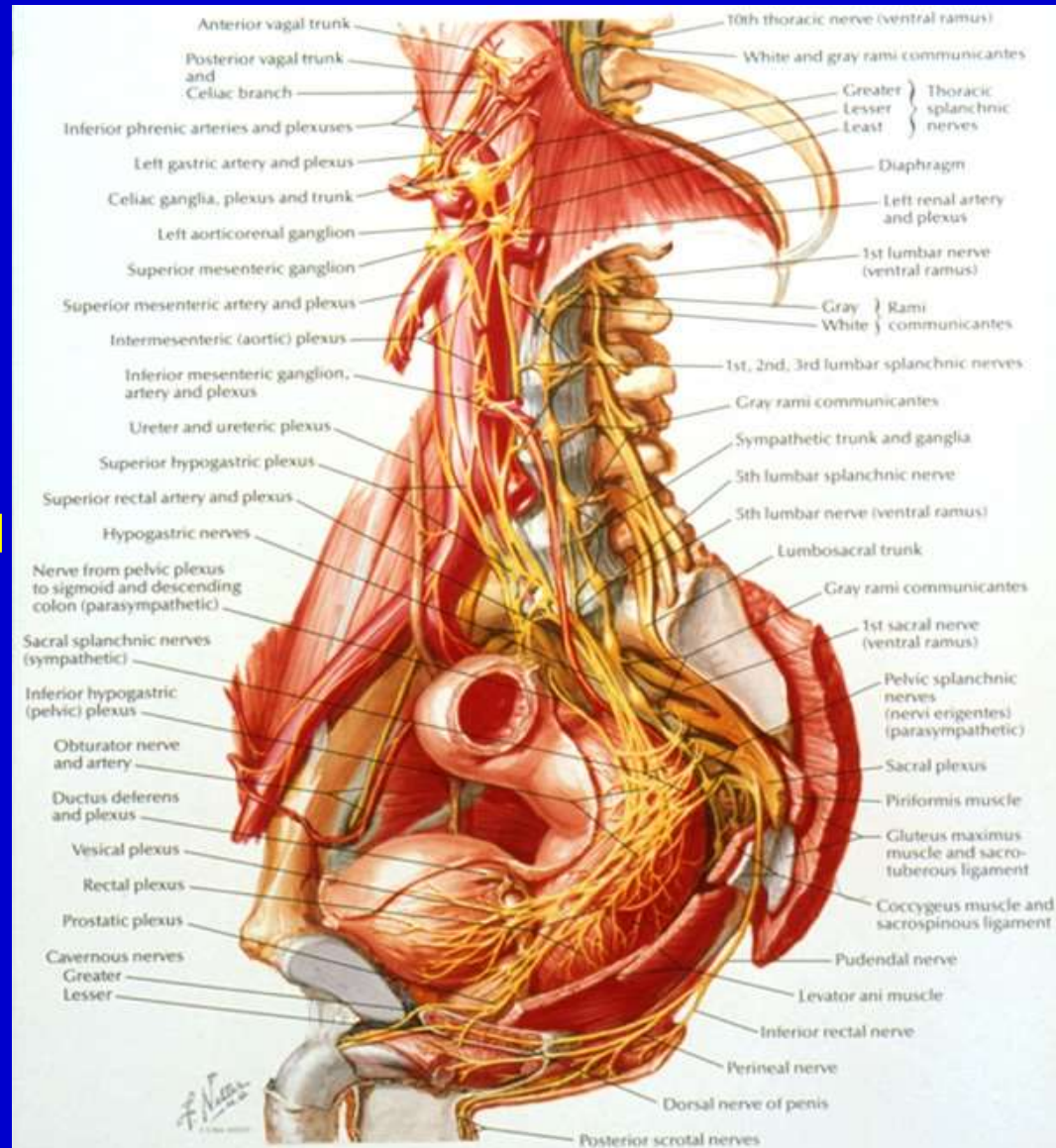


DYSFONCTIONS SEXUELLES LIEES A DES TRAUMATISMES LOCAUX-REGIONAUX

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AMEDOC LILLE LE 22 MARS 2013

INTRODUCTION

- Traumatismes du bassin
 - Lésions du contenant
 - Lésions du contenu
- Lésions médullaires



CHEZ L'HOMME

- Traumatisme du bassin

Sans lésion urologique

- sacrée
- pubienne

Avec lésion urologique

- rupture de l'urètre postérieur

Table 1. Sexual dysfunction in male patients with pelvic fracture

References	No. Pts—Mean Age (range)	Time From PFX	Method of Assessment	Incidence of SDF (%)	Measure/Definition of Sexual Dysfunction
Dhabuwala et al ²⁵	26—34 (7—62)	Min 21 mos	Interview on erection, vaginal penetration, ejaculation	60	Impotence
Majeed ²³	21—39 (17—64)	Not available	Not available	30	Impotence
Corriere et al ²⁶	50—34 (15—61)	Min 18 mos	Interview, radiographic, endoscopic, urodynamic studies	32	Impotence
Mark et al ²⁷	92—35 (Not available)	Min 9—15 mos	Interview on potency	62	Impotence
Asci et al ³²	38—38.5 (12—94)	Range 14—78 mos	Questionnaire, Duplex ultrasonography	18	Impotence
Malavaud et al ¹⁴	46—Not available	Mean 26.9 mos	IIEF score (in French)	29.7	Erectile dysfunction, IIEF score 25 or less
Shenfeld et al ²⁸	25—28.6 (Not available)	Range 3—6 mos (20 pts)	RigiScan Plus, penile rigidity, Duplex ultrasonography	72	Erectile dysfunction, RigiScan less than 3, tumescence periods of 70% or greater rigidity
Ramirez et al ¹⁷	32—39.4 (Not available)	Mean 28.8 mos	Questionnaire (verbal)	19	Impotence
Metze et al ¹⁹	77—35 (17—75)	Min 9 mos mean 29	Interview, questionnaire, IIEF & questions on characteristics, visual analog scale	19	Erectile dysfunction
Anger et al ²⁹	32—Not available	Mean 4.9 yrs (range 0.5—14) after pelvic fracture urethral distraction defect repair	Questionnaire (verbal), ejaculatory function, history of fertility	18.8	Ejaculatory profile
Ozumba et al ¹⁰	51—43 (17—85)	Min 2 yrs, mean 38 mos (range 24—210)	BSFI questionnaire on sex drive, ejaculation, erection, sexual dysfunction, overall satisfaction	34	BSFI score
Bellabarba et al ¹⁵	7—Not available	Min 20 mos (mean 31)	Not available	14	Erectile dysfunction

BILAN

- Age - prévalence
- Interrogatoire :
 - évaluation du trouble sexuel: IEEF
 - appréciation du handicap : moteur
 continences
- Bilan clinique
- Para-clinique
 - hormonal
 - P.E.N. / bilan neurophysiologique
 - test I.I.C. (part vasculaire)

EVOLUTION

- Spontanément favorable 1 à 2 ans
- Sinon traitement
 - per-os : Viagra
 - locaux : gel Muse, vacuum, I.I.C.
 - prothèses
 - revascularisation artérielle

Avec prise en charge psychologique du patient,
du couple

TABLE 5. *Adjusted RR of dysfunction in patients with VS without pelvic fracture* L WRIGHT 2006

Confounder	Sexual Dysfunction		Excretory Dysfunction	
	RR	95% CI	RR	95% CI
Men:				
SI fracture	4.0	2.4–6.8	4.3	1.4–13.5
Symphyseal fracture	0.8	0.3–1.8	2.4	0.7–7.9
Open pelvic fracture	2.1	1.1–3.9	3.4	1.3–9.1
Closed pelvic fracture	3.1	1.2–7.6	2.7	0.6–13.3
Women:				
SI fracture	0.3	0.1–1.5	0.7	0.1–5.0
Symphyseal fracture	4.8	2.0–11.2	12.5	1.9–80.2
Open pelvic fracture	0.8	0.3–2.3	Not applicable	
Closed pelvic fracture	1.2	0.3–4.8	Not applicable	

Open book pelvic fractures were not included due to inadequate patient number with adjustments in men vs women for shock, education and income vs ISS, age and insurance status in sexual dysfunction, and for shock, head injury, education, income and insurance status vs ISS, age, education and income in excretory dysfunction, respectively.

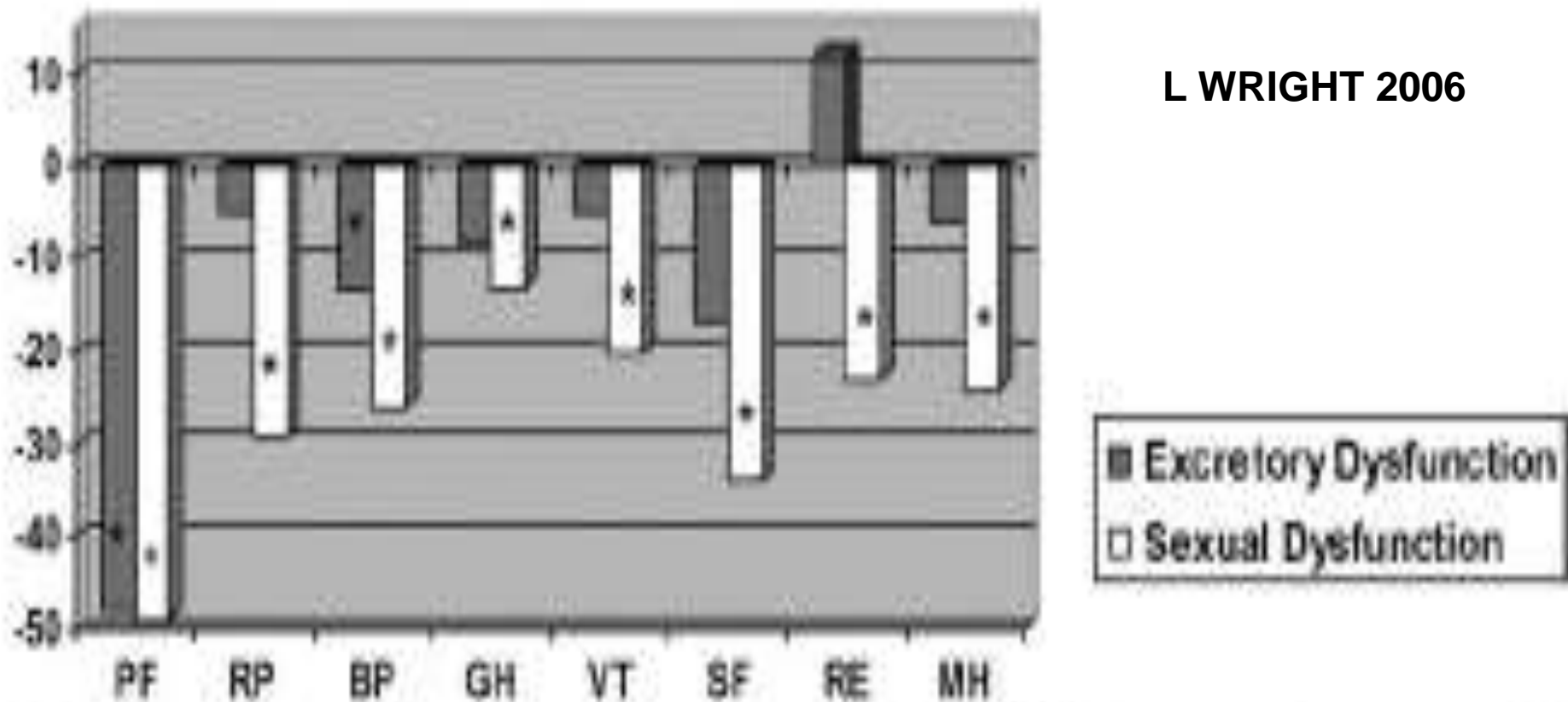


FIG. 1. Adjusted mean difference in SF-36™ scores in men with pelvic fractures with vs without sexual or excretory dysfunction. *PF*, physical functioning. *RP*, role physical. *BP*, bodily pain. *GH*, general health. *VT*, vitality. *SF*, social functioning. *RE*, role emotional. *MH*, mental health. Asterisk indicates $p < 0.05$.

ATTEINTE DE L'EJACULATION

- Sténose de l'urètre : 3 % à 25 %
 - éjaculation baveuse
 - diminution du volume de l'éjaculat
 - douleurs
- Azoospermie par obstruction des voies génitales profondes

BILAN

- Spermogramme, bilan hormonal

TRAITEMENT

- Traitement de la sténose car souvent associée à des troubles urinaires
- Azoospermie : prélèvement chirurgical du sperme avec FIV (4 tentatives : 1 / 2 enfant)

TRAUMATISME DES O.G.E.

- Mécanisme
 - Compression, avulsion
 - plaie par arme blanche / à feu
- Localisation
 - verge
 - scrotum
 - urèthre
 - corps caverneux
 - testicule, 1 ou 2

BILAN

- Age / Délai
- Clinique - Exploration
 - Échographie testiculaire, verge
 - Cavernographie
 - Bilan hormonal (FSH, testostérone)
 - Spermogramme

TABLE 1. Semen analysis data summary

	Controls	Salvage Group	Orchiectomy Group
No. subjects	10	3	7
Injury grade (No. pts.):			
2		3	0
3		0	5
4		0	2
Mean \pm SD semen analysis:			
Vol. (ml.)	2.7 \pm 1.2	3.7 \pm 1.0	1.8 \pm 1.3
Density ($\times 10^6$ /ml.)	132.6 \pm 43.8	64.3 \pm 57.8	81.5 \pm 41.6*
Motility (%)	68.5 \pm 13.1	48.3 \pm 2.8	57.1 \pm 12.5
Forward progression	2.5 \pm 0.1	2.0 \pm 0.0	2.5 \pm 0.5
Morphology (%)	Not determined	60.0 \pm 10.0	66.1 \pm 11.2

* Significantly less ($p < 0.05$) than controls.

TABLE 2. Gonadotropin-releasing hormone stimulation test data

	Controls	Salvage Group	Orchiectomy Group
No. subjects	10	3	7
FSH (ng/ml.):			
Before stimulation	123.1 \pm 71.6	276.0 \pm 169.7	586.2 \pm 294.1*
After stimulation	233.5 \pm 164.3	431.3 \pm 274.3	1,131.0 \pm 352.4
LH (ng/ml.):			
Before stimulation	25.7 \pm 14.4	38.6 \pm 2.08	94.1 \pm 135.3*
After stimulation	233.1 \pm 101.1	218.6 \pm 72.3	625.5 \pm 309.3*
Testosterone (ng/ml.):			
Before stimulation	498.7 \pm 218.7	731.2 \pm 101.8	523.7 \pm 147.1
After stimulation	474.6 \pm 203.5	742.3 \pm 173.7	557.0 \pm 140.3

* Significantly higher ($p < 0.01$) than controls.

TRAITEMENT - EVOLUTION

- Si traitement conservateur le plus souvent pas de séquelle
- Mais problèmes :
 - testicule unique
 - greffes cutanées

TRAUMATISME PERINEAL

- Rare (coup de pied ...)
 - Fistule artério-veineuse
 - Priapisme artériel
 - > traitement : embolisation
 - Compression nerveuse
 - Dysérection
- Souvent récupération spontanée

CHEZ LA FEMME

- Traumatisme du bassin
 - dyspareunie superficielle / profonde
 - dysménorrhée
 - dystocie lors de l'accouchement : césarienne

Table 2. Sexual dysfunction in female patients with pelvic fracture

References	No. Pts—Mean Age (range)	Time From PFX	Method of Assessment	Incidence of SDF (%)	Measure/Definition of Sexual Dysfunction
McCarthy et al ¹¹	123—31.5 including nonpelvic fracture control group (Not available)	Mean 4.3 yrs	SF-36®, extra questions on urinary bowel function, sexual function + pregnancy history	39	Less sexual pleasure
Copeland et al ¹³	123—Not available	Mean 4.1 yrs (range 18 mos–7.1 yrs)	Questionnaire developed by orthopedics-gynecologists-epidemiologists, comparison of status before + after injury	31	New onset dyspareunia
Kiely and Williams ³¹	11—Not available	52 mos (range 20–84)	Questionnaire general, extra questions on sexual function	45.5	Fracture directly affected sexual life
Baessler et al ¹⁶	24—30 (Not available)	Mean 29 mos (range 12–60)	Golombok Rust Inventory of sexual satisfaction, comparison of status before + after injury	41	Sexual relations off-putting/difficult, unpleasant cramps during intercourse
Black et al ¹⁸	13—Not available	Not available	FSFI	61.5	FSFI score less than 26.55
Bellabarba et al ¹⁵	3—Not available	Mean 31 mos (min 20)	Not available	66.6	Dyspareunia
Cannada and Barr ²²	71—33.8 (19–55)	Mean 6 yrs (range 1–9)	Questionnaire developed by authors, SF-12®, obstetrician report	49	Dyspareunia, interest in intercourse, frequency of orgasm, afraid to get pregnant

BILAN

- Age / Délai
- L'interrogatoire est essentiel, malheureusement peu d'examens objectifs :
 - Rosen 1993
 - 40 % inhibition sexuelle
 - 16 % manque de plaisir
 - 11 % dyspareunie
 - 13 % manque de lubrification
- Evaluation à travers le (la) partenaire ?
Moyen d'éviter les rapports ?

TABLE 5. *Adjusted RR of dysfunction in patients with VS without pelvic fracture* L WRIGHT 2006

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SI fracture	0.3	0.1–1.5	0.7	0.1–5.0
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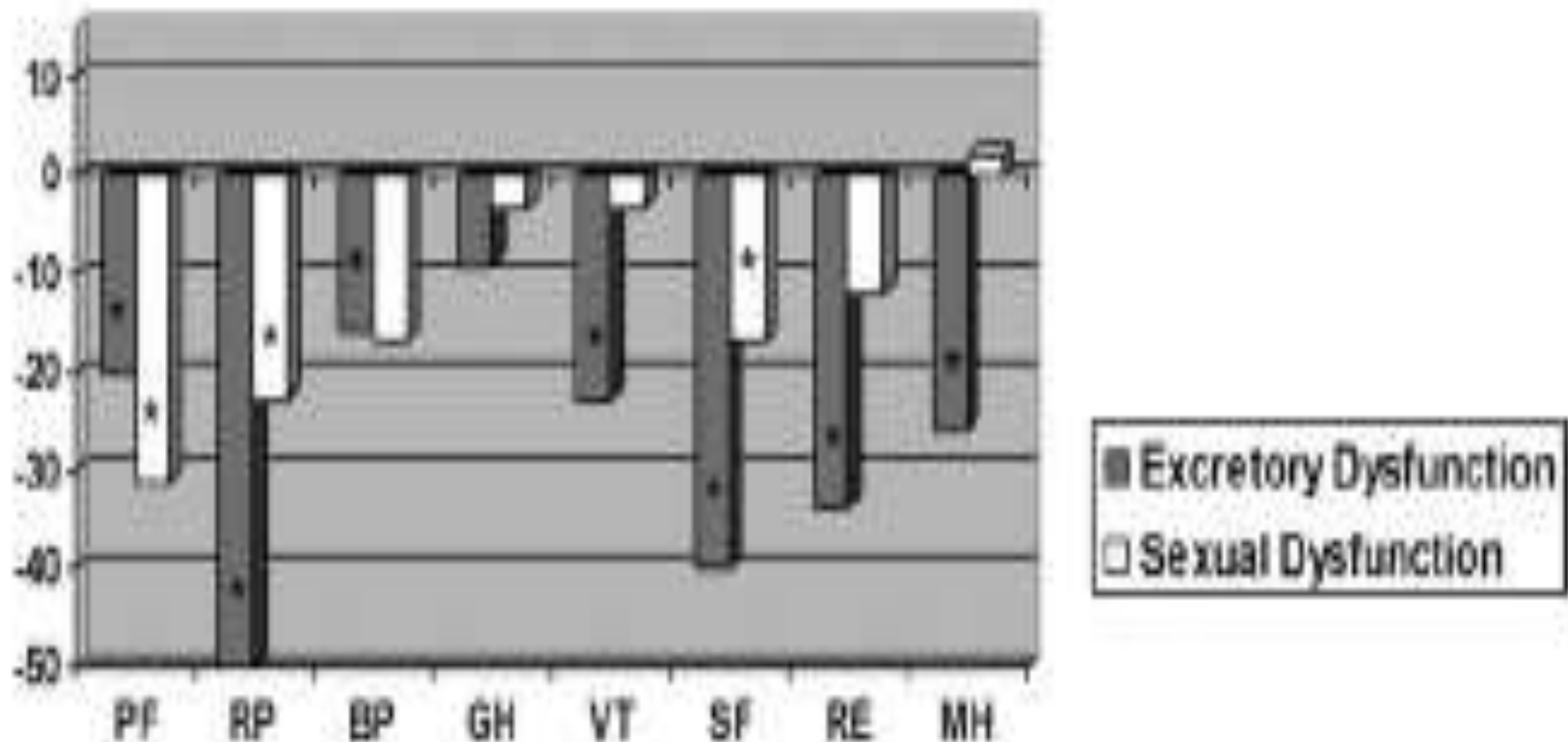


FIG. 2. Adjusted mean difference in SF-36™ scores in women with pelvic fractures with vs without sexual or excretory dysfunction. *PF*, physical functioning. *RP*, role physical. *BP*, bodily pain. *GH*, general health. *VT*, vitality. *SF*, social functioning. *RE*, role emotional. *MH*, mental health. Asterisk indicates $p < 0.05$.

TRAUMATISME DES O.G.E.

- Lacération vaginale : 3 % si fracture du bassin
- Traumatisme utérin, perforation
- Traumatisme ovarien
- 1 étude : 31 femmes
 - 19 causes coïtales
 - 12 traumatiques
- Pas de troubles sexuels sauf si fracture du bassin
- Pas de trouble de la fertilité, sinon bilan classique
- Pas de troubles obstétricaux

LES TRAUMATISMES MEDULLAIRES

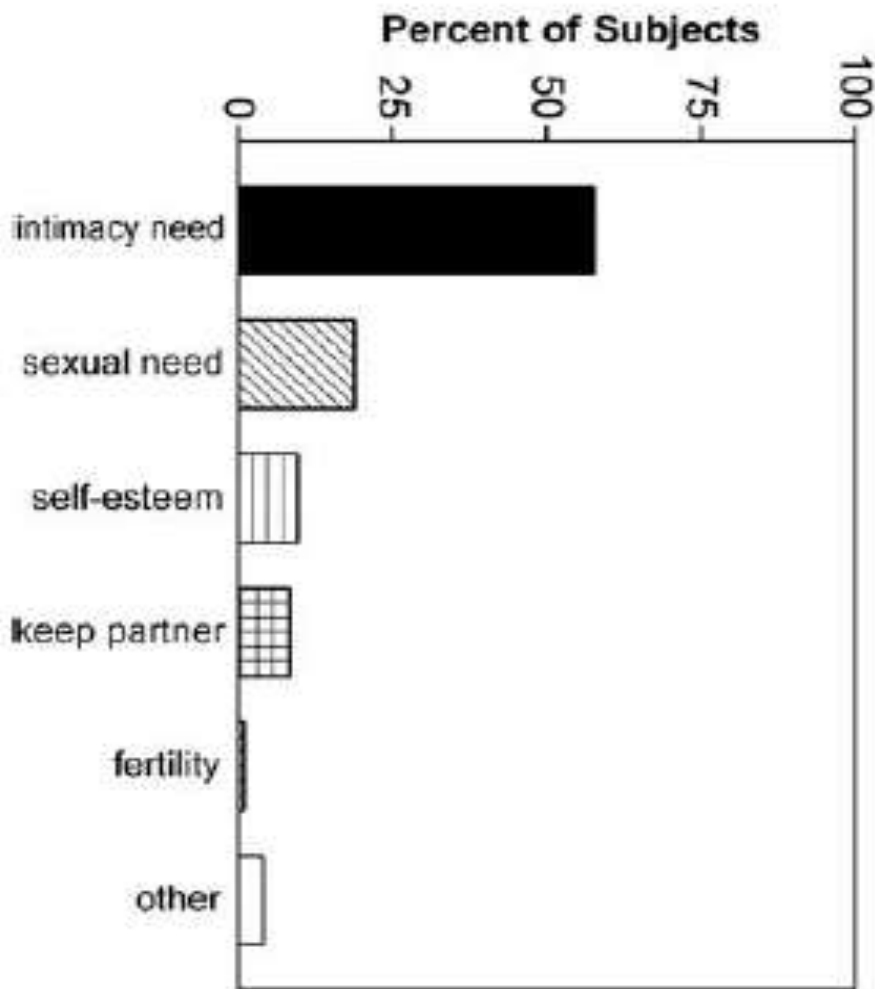


Figure 3 Primary reason for pursuing sexual activity

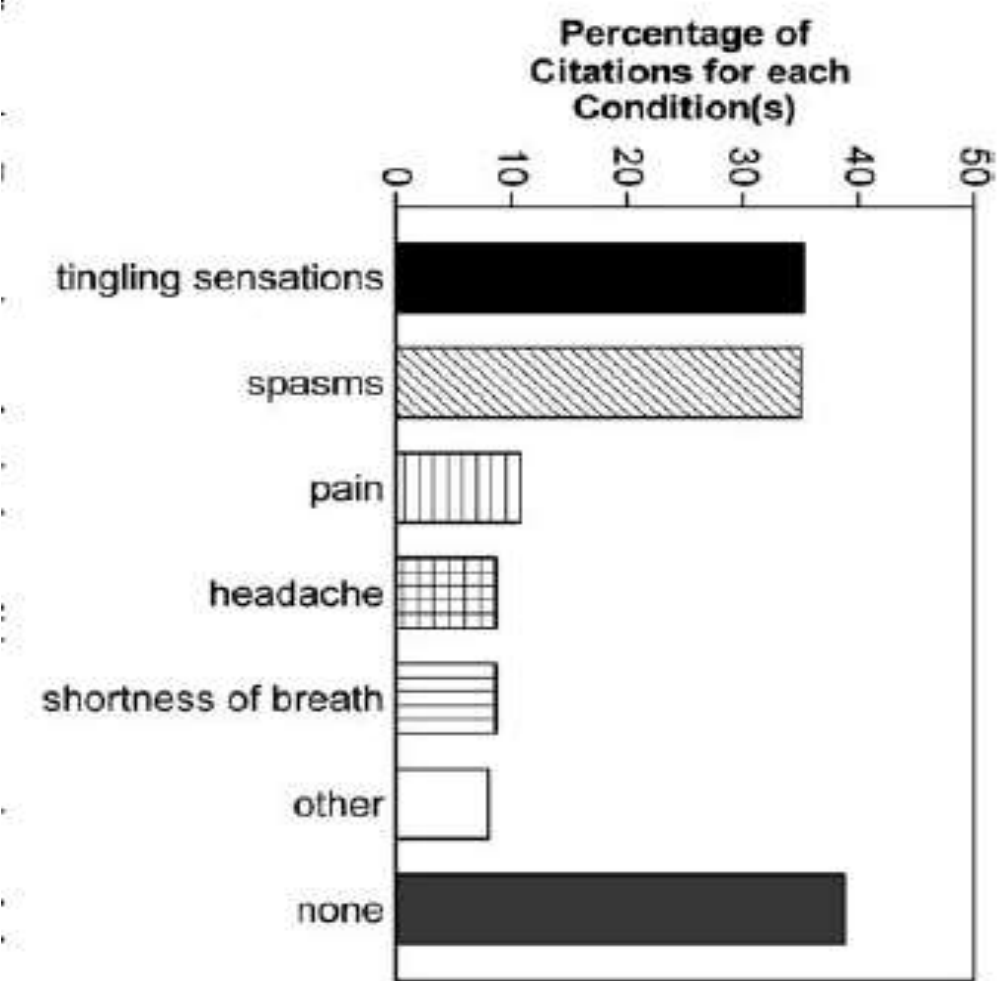


Figure 4 Concomitant physical conditions experienced during sexual activity (some subjects reported multiple conditions)

CHEZ L'HOMME

- Niveau de la lésion
- Complete ou incomplète
- Bilan des continences
- Degré d'autonomie

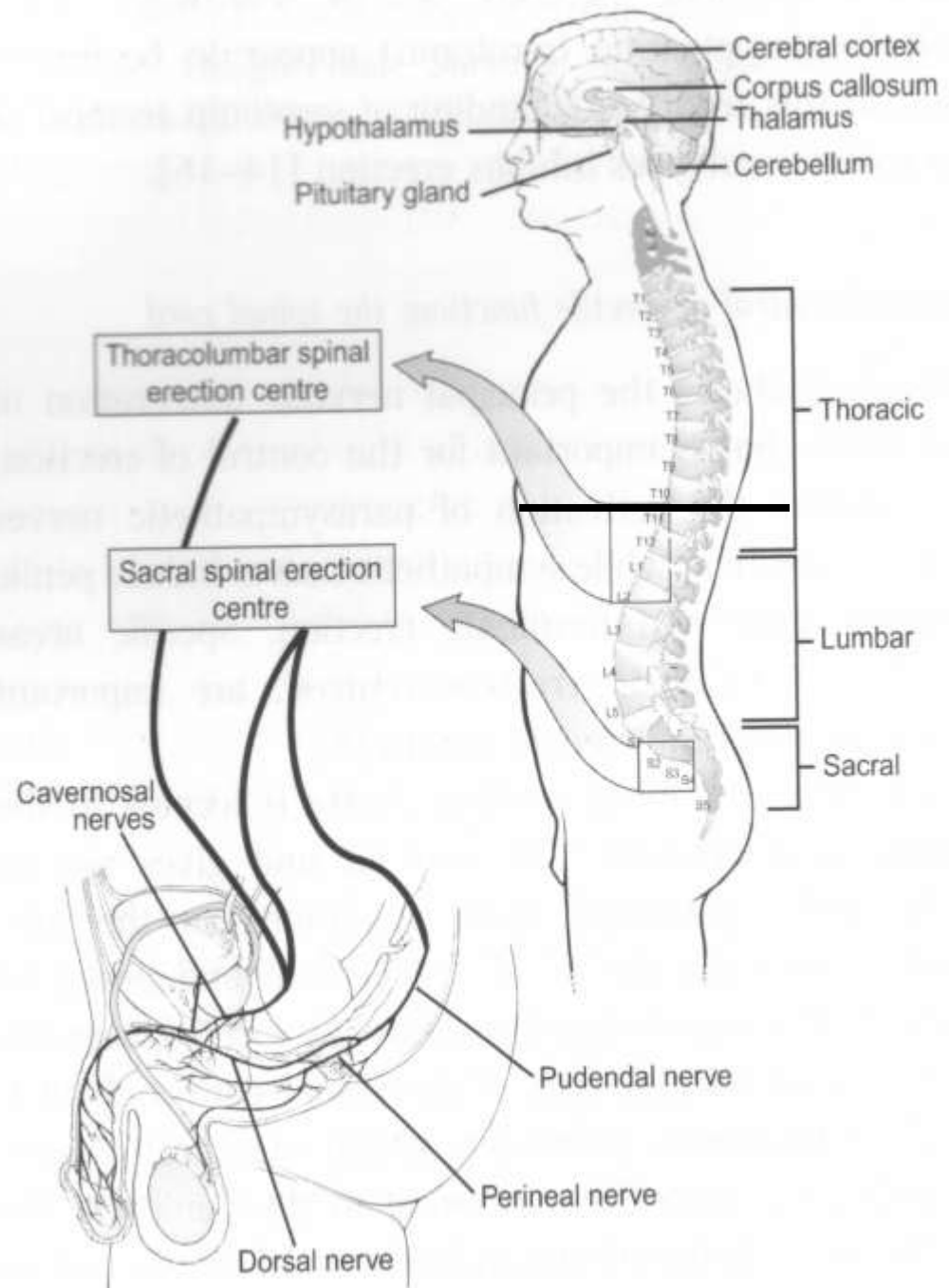
Lésions au-dessus de D10

• Lésion haute :

-Érections réflexes + centre sacré sous-lésionnel, déclenchées par stimuli sous-lésionnels, détumescence rapide avec coûts possibles

-Érection psychogène O

-Éjaculation réflexe + avec des manifestations végétatives, éjaculation par vibromassage du frein



Lésion entre D10 et L2

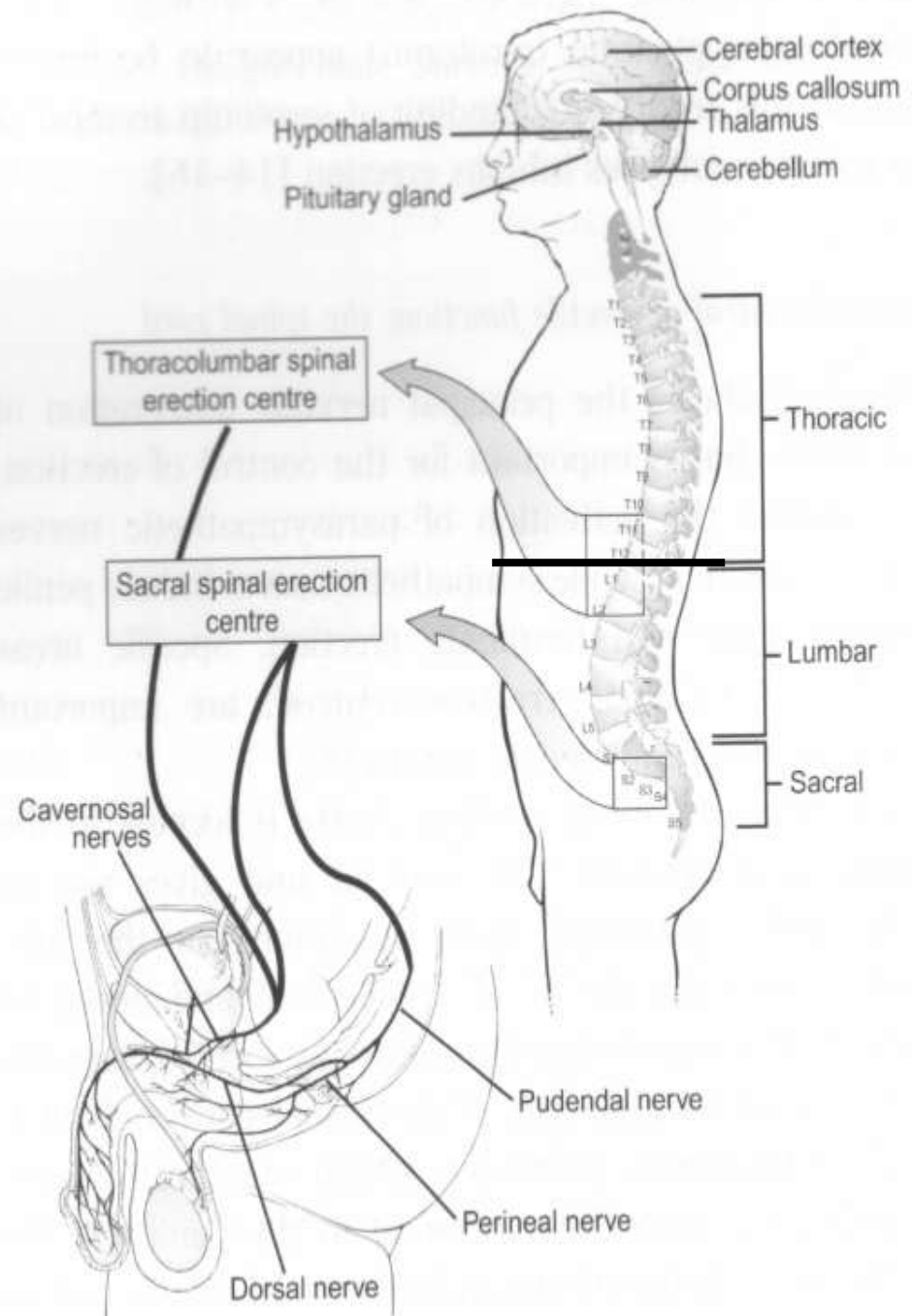
• Lésion entre les centres

- Érections réflexes +
- Érection psychogène O

- Éjaculation possible

=> L1 en zone sous-lésionnel:
éjaculation clonique

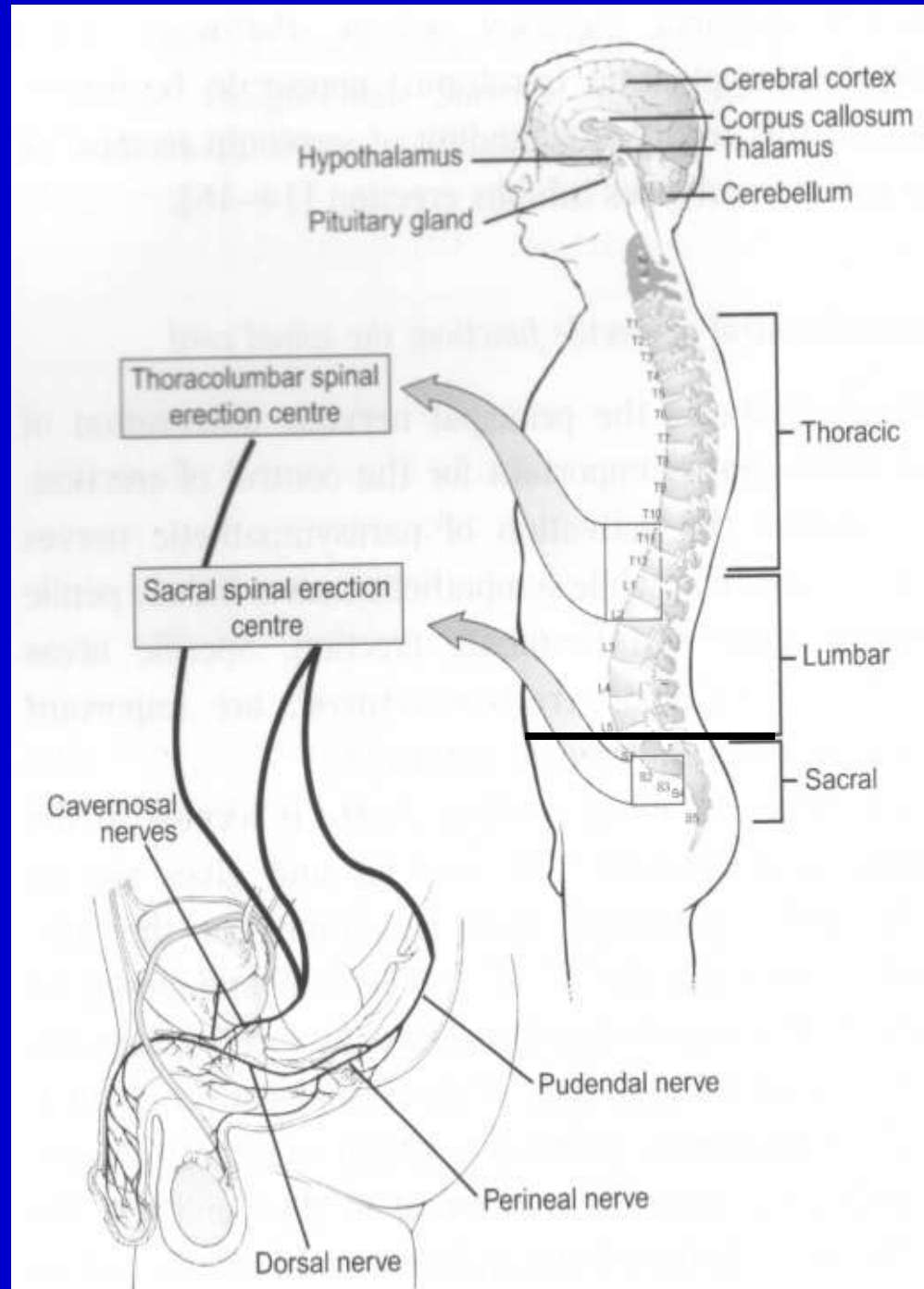
= > L1 en zone sus-lésionnel:
émission baveuse



Lésion entre de L2 et L 5

Lésion basse :

- Érections réflexes +
absence de rigidité des corps
spongieux avec gland mou
intromission plus difficile
- Érection psychogène +
- Éjaculation psychogène +



Lésion de S2 à S5

• Lésion basse :

- Érections réflexes O+
- Érection psychogène + mais de mauvaise qualité et non ressentie, intromission difficile
- Éjaculation psychogène +

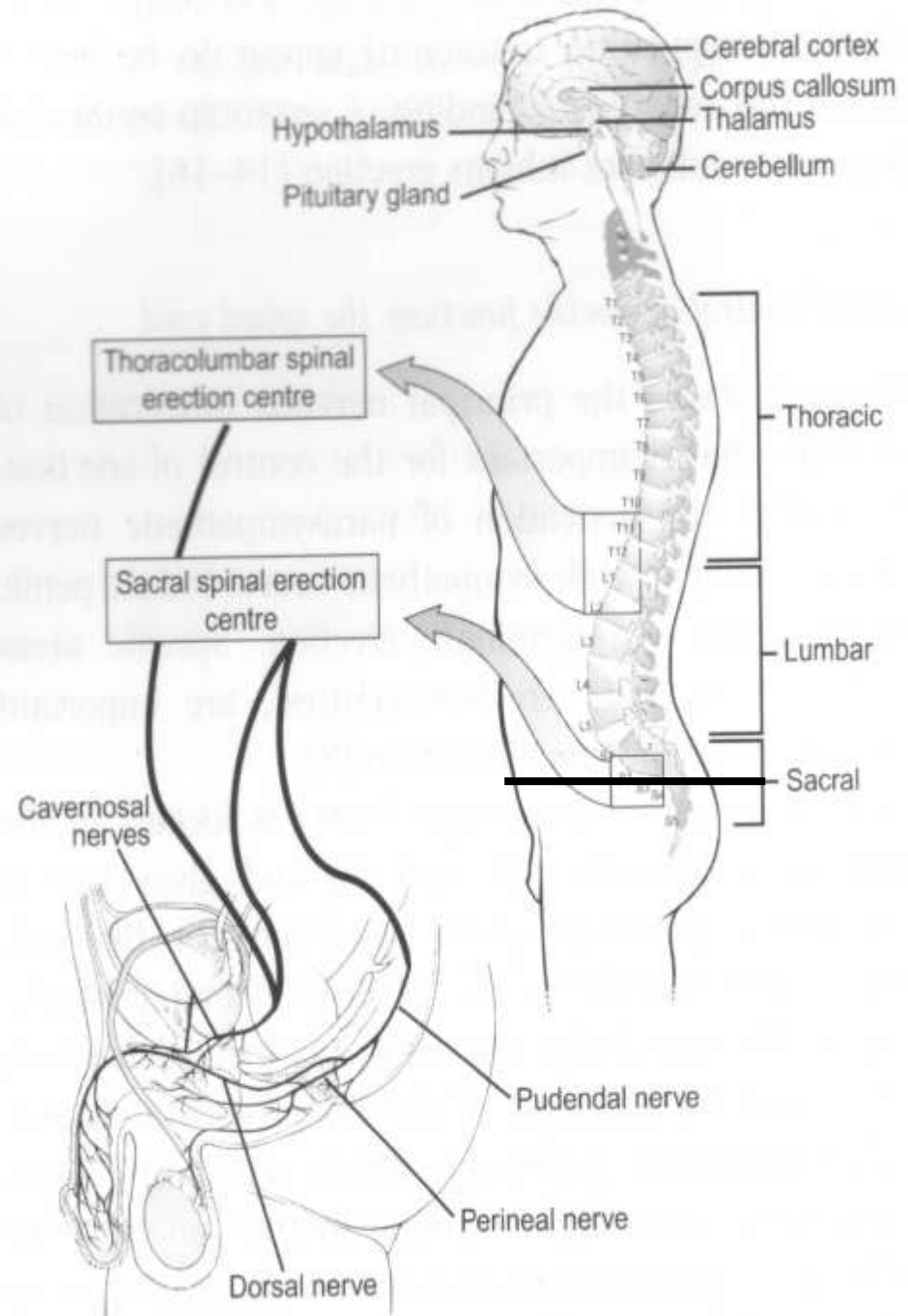


Table 4

Symptoms of sexual dysfunction in men with definite MS

	1st Examination (n = 38)	End of 2-year follow-up (n = 35)	<i>p</i> ^a
Total loss of erection, n (%)	3 (7.9)	8 (22.9)	NS
Incomplete erections, n (%)	23 (60.5)	22 (62.9)	NS
Erections not effective to penetrate, n (%)	4 (10.5)	9 (25.7)	NS
Inability to ejaculate, n (%)	5 (13.2)	12 (34.3)	0.05
Orgasmic dysfunction, n (%)	6 (15.8)	13 (37.1)	0.05
Reduced libido, n (%)	15 (39.5)	17 (48.6)	NS

^aChi square.

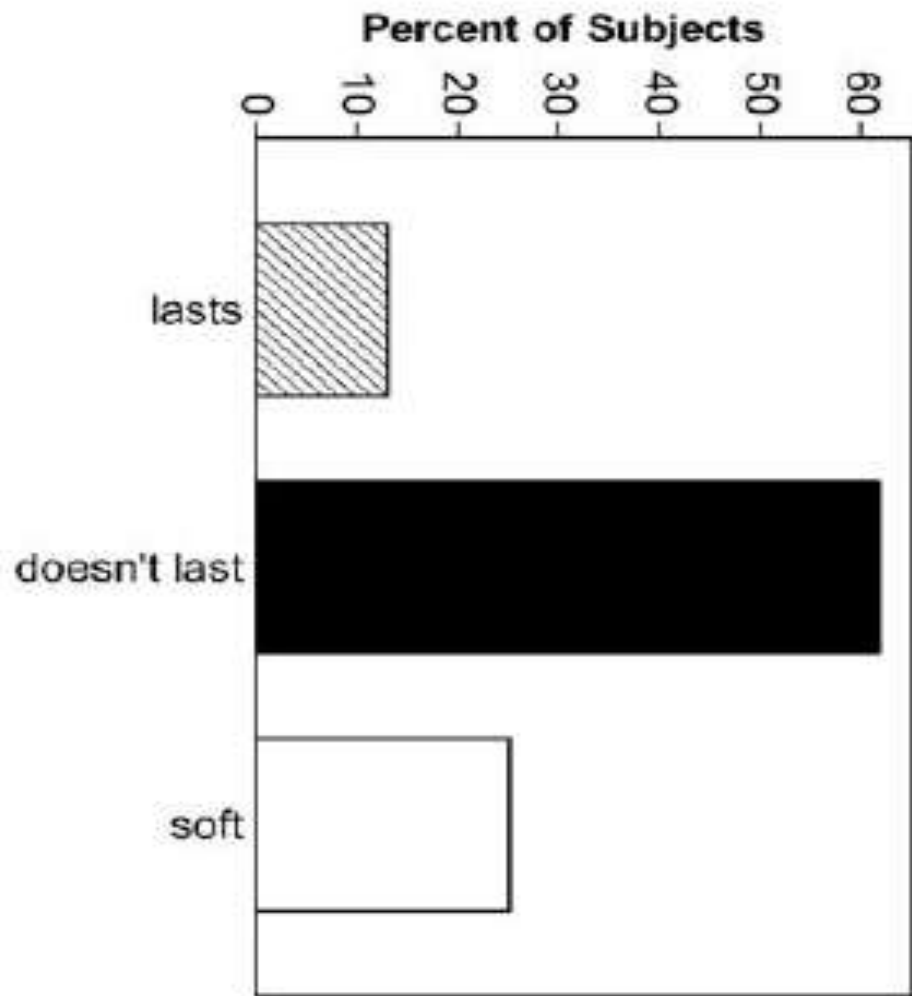


Figure 2 Quality and reliability of erections without medication or assistive devices

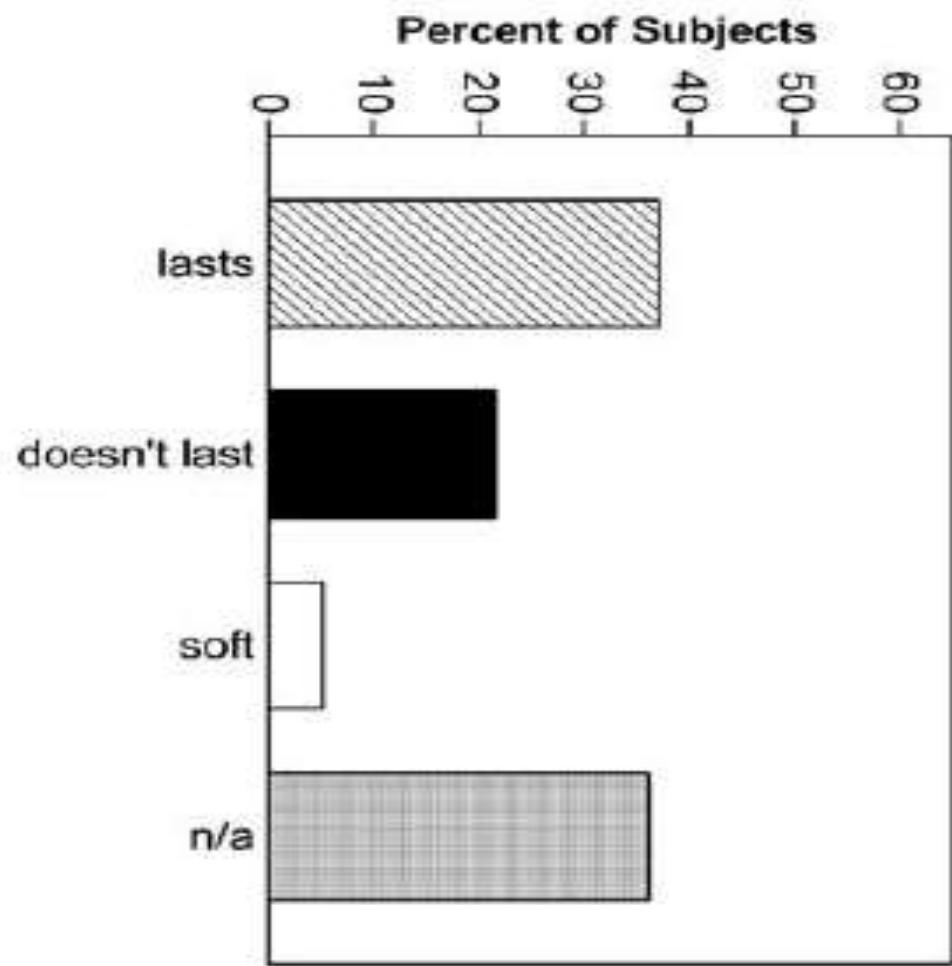


Figure 3 Quality and reliability of erections with medication or assistive devices

Percentage of Citations for each Method (s)

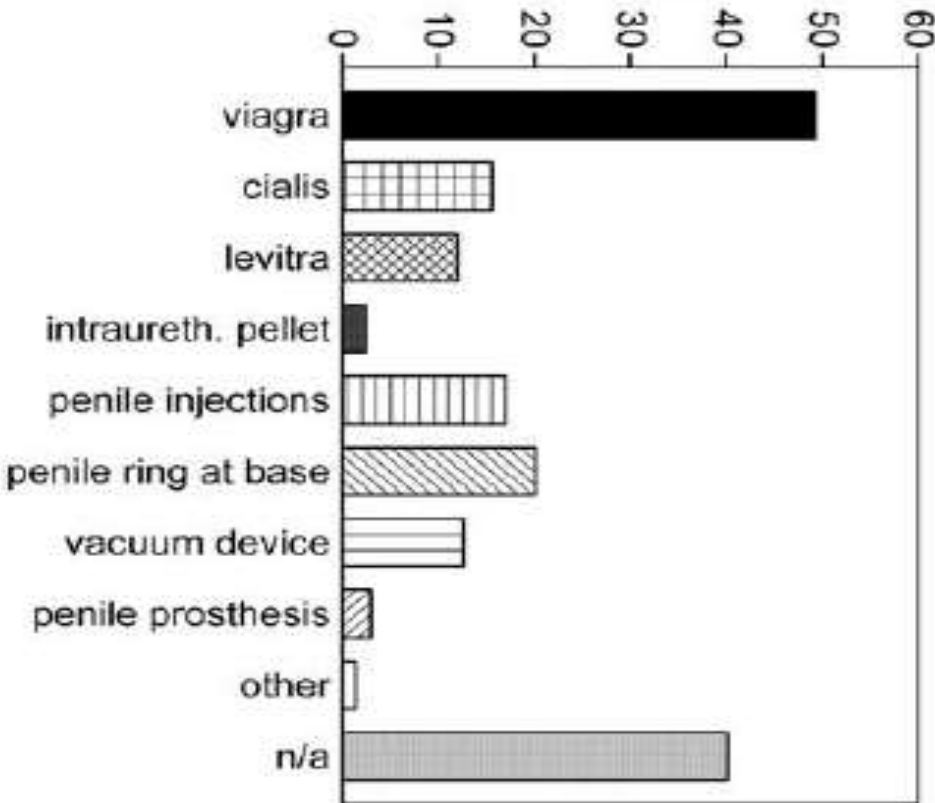


Figure 4 Methods for enhancing erections reported having been tried by participants (some subjects reported having tried multiple methods)

Percentage of Citations for each Side Effect (s)

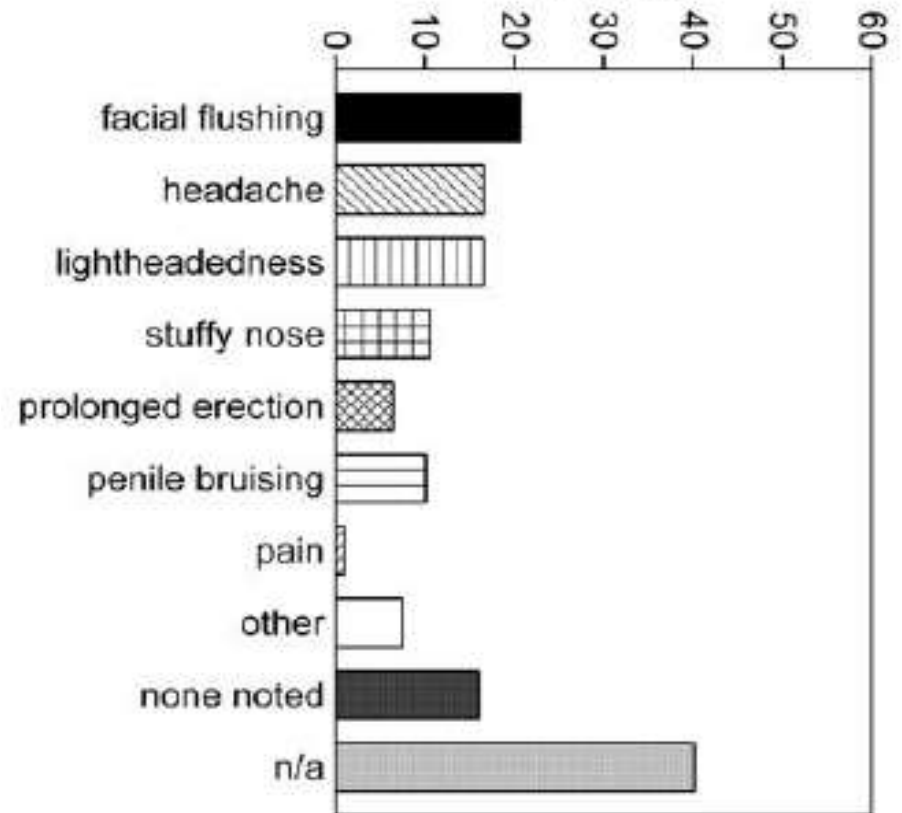


Figure 5 Side effects of erection enhancing methods (some subjects reported multiple side effects)

Tableau 5.27

Pourcentages de personnes déclarant avoir réalisé différentes pratiques sexuelles lors du dernier rapport, selon le sexe et le nombre de partenaires chez les hétérosexuels

Pratiques sexuelles	Hommes		
	Multi-partenaire n = 1022	Mono-partenaire ** n = 1055	
Caresses mutuelles	95	94	
Se faire masturber	41	30	VERSUS 25 %
Masturber le partenaire	65	51	
Le partenaire se masturbe	12	10	
Se masturber soi-même	7	5	
Insérer un doigt dans le vagin	74	62	
Cunnilingus	40	28	
Utilisation du préservatif	25	11	
Fellation			
non	56	76	24% VERSUS 12%
avec préservatif	3	1	
sans préservatif	41	23	
Sodomie			
non	94	96	
avec préservatif	1	1	
sans préservatif	5	3	
Pénétration vaginale			
non	2	1	99 % VERSUS 20 %
avec préservatif	20	7	
sans préservatif	78	92	

* Certaines personnes n'ont pas décrit leur dernier rapport sexuel. C'est le cas de 21 hommes et 8 femmes multipartenaires et de 12 hommes et 35 femmes monopartenaires.

** Il s'agit d'individus correspondant à l'échantillon témoin mentionné au chapitre 3 ayant en outre répondu qu'ils n'avaient pas consommé de drogue dans les 12 derniers mois.

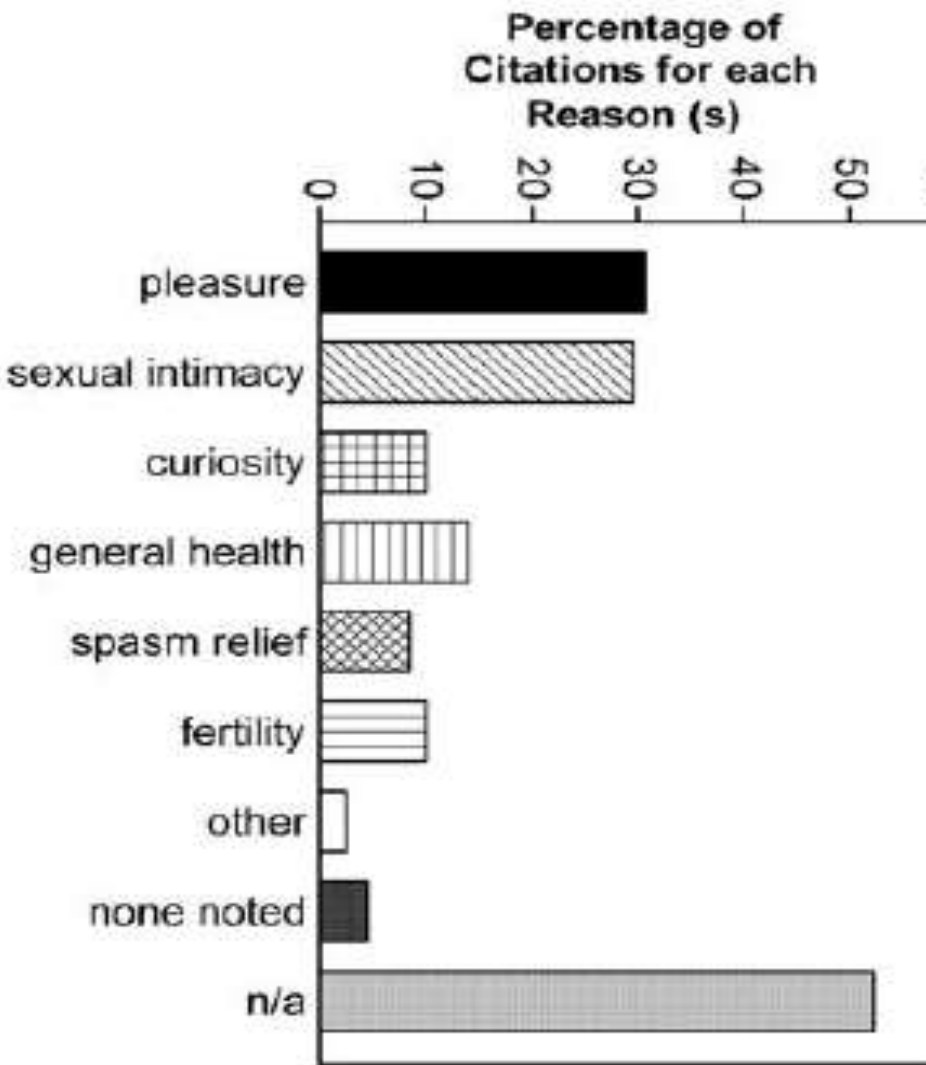


Figure 7 Reasons for ejaculating

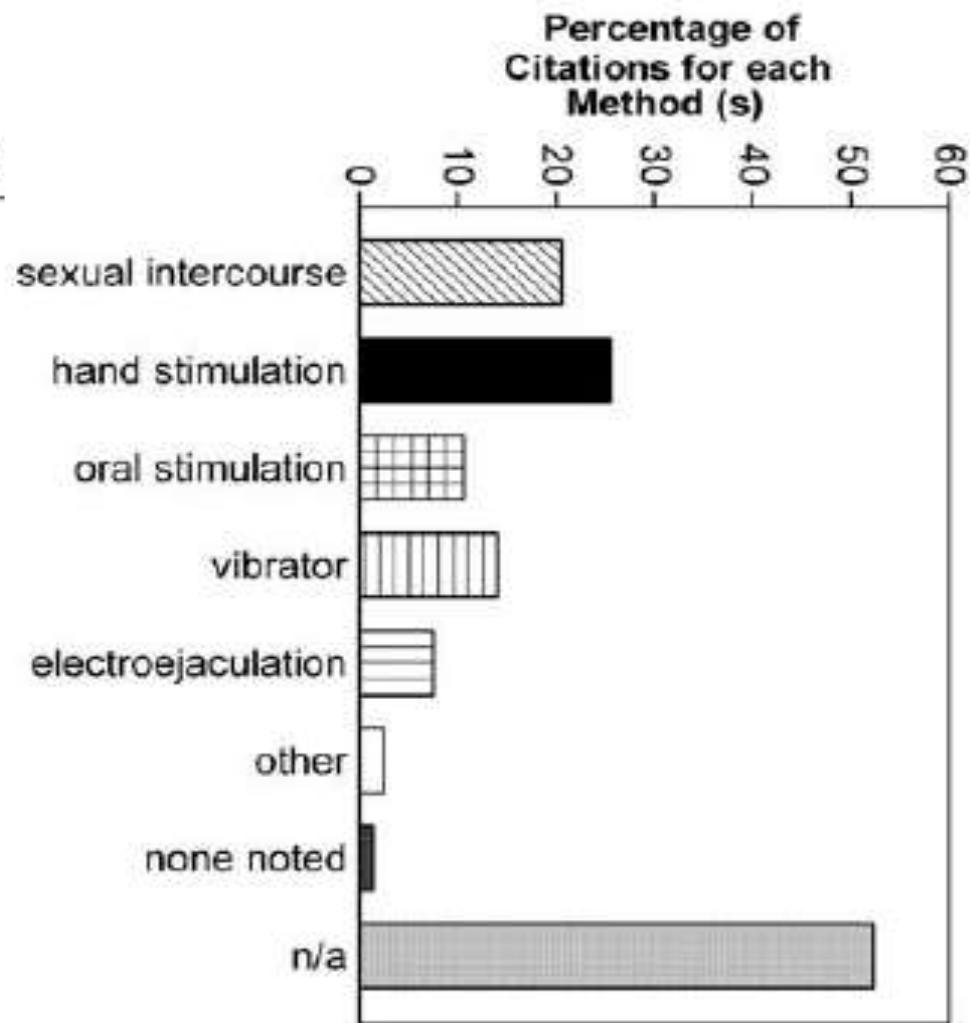
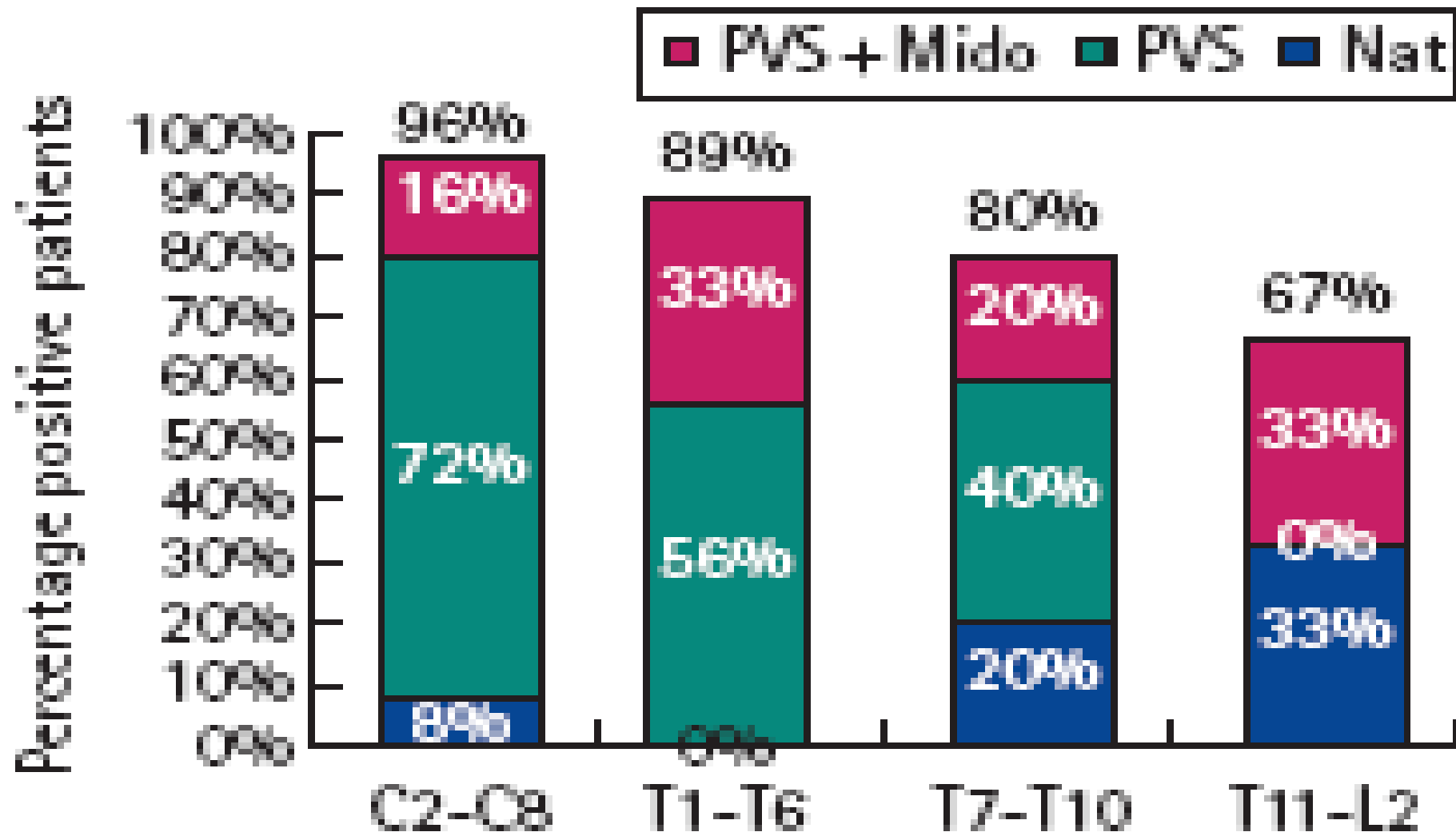


Figure 6 Methods utilized for achieving ejaculation (some subjects reported using multiple methods)

PERCENTAGE SCI PATIENTS REACHING EJACULATION



Lesion levels

J COURTOIS
BJU 2007

CHEZ LA FEMME

- Niveau de la lésion
- Complete ou incomplète
- Bilan des continences
- Degré d'autonomie

Satisfaction with sexual life in general

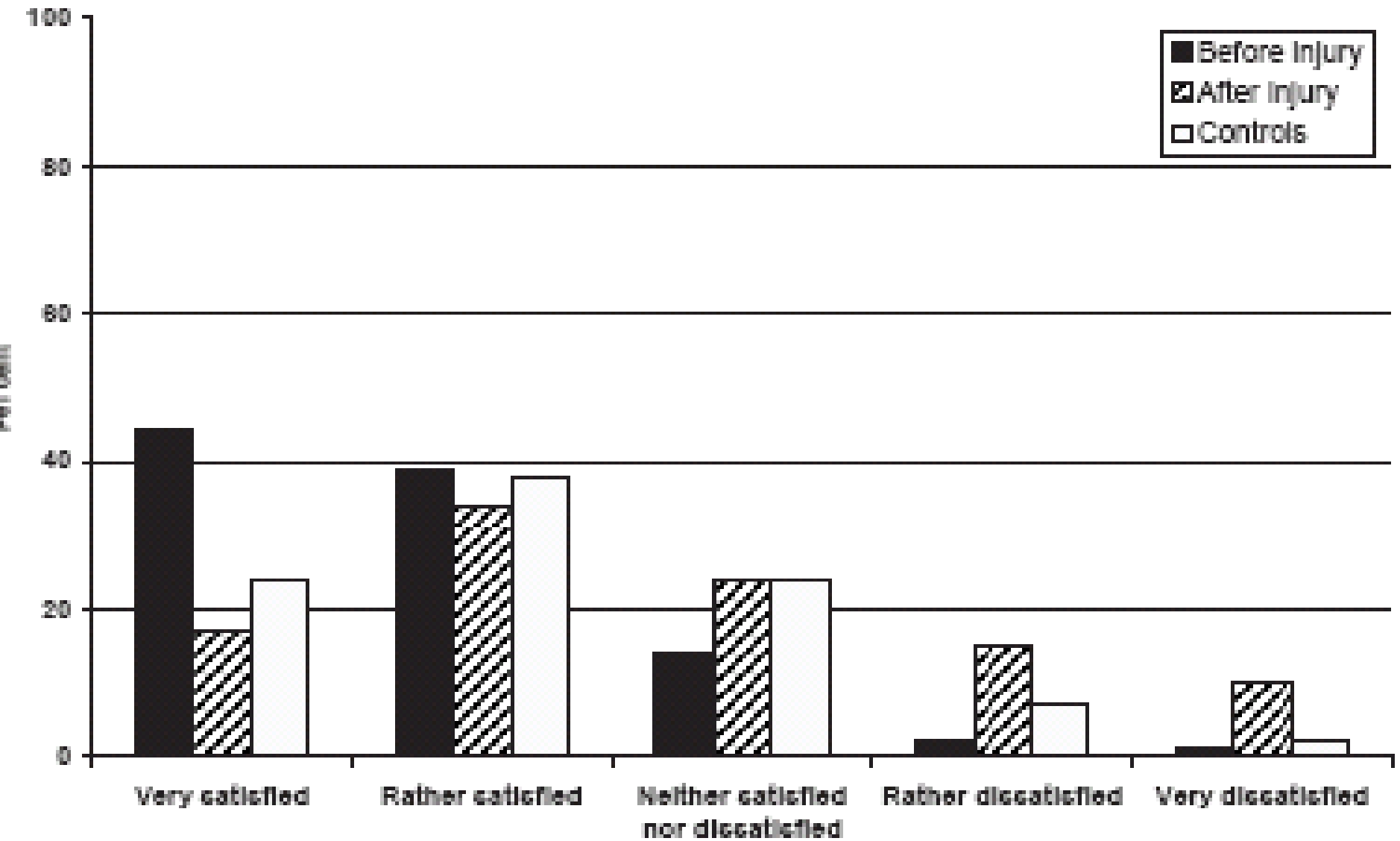


Fig. 1. Satisfaction with sexual life in general in women with spinal cord injury before and after injury and in controls.

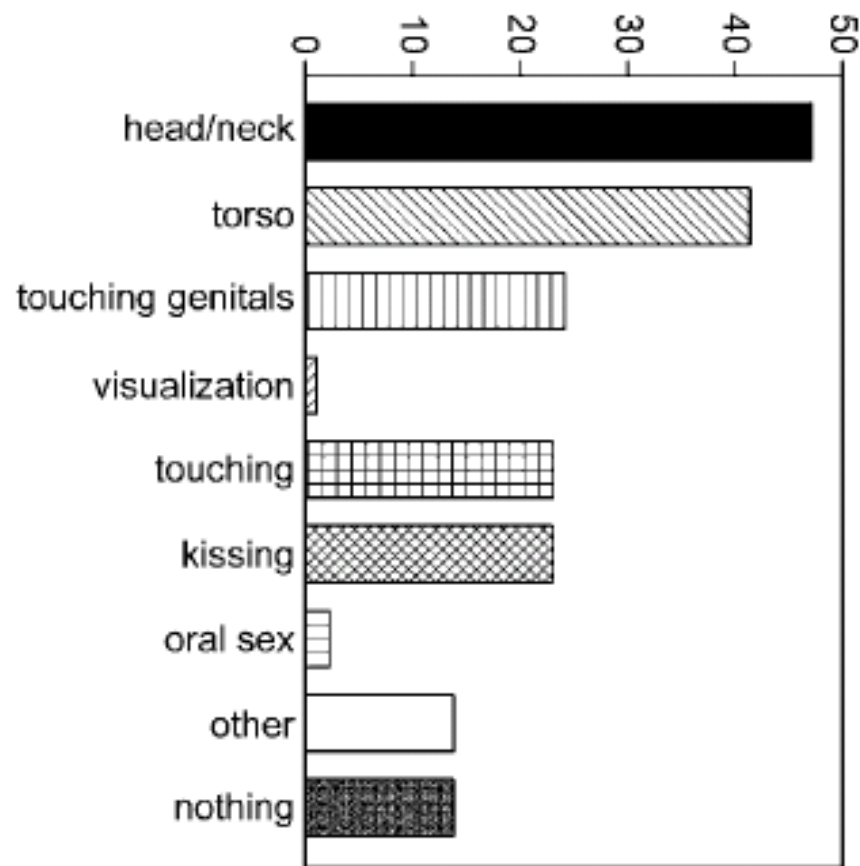
Table IV. Sexual expressions listed to be of importance for becoming sexually aroused

	Before injury <i>n</i> = 415 <i>n</i> (%)	After injury <i>n</i> = 415 <i>n</i> (%)	Before vs after injury <i>p</i> -value	Controls <i>n</i> = 502 <i>n</i> (%)	Before injury vs controls <i>p</i> -value	After injury vs controls <i>p</i> -value
Preferred type of sensory stimulation for becoming sexually aroused						
Visual	137 (33)	147 (35)	1	131 (26)	0.027	0.0028
Hearing	65 (16)	88 (21)	0.0021	58 (12)	0.086	< 0.001
Taste	45 (11)	55 (13)	0.2101	53 (11)	0.97	0.25
Smell	97 (23)	113 (27)	0.3915	147 (29)	0.052	0.54
Sexual fantasies	114 (27)	156 (38)	< 0.001	125 (25)	0.42	< 0.001
Hugging, kisses, caresses	297 (72)	304 (73)	0.7428	372 (74)	0.43	0.83
Caresses of the breast with hands	198 (48)	220 (53)	0.7035	232 (46)	0.70	0.047
Caresses of the breast with mouth	192 (46)	209 (50)	1	257 (51)	0.16	0.85
Caresses of the genitals with hands	226 (54)	171 (41)	< 0.001	307 (61)	0.048	< 0.001
Caresses of the genitals with mouth	173 (42)	109 (26)	< 0.001	198 (39)	0.53	< 0.001
Vibrator stimulation of clitoris	38 (9)	37 (9)	0.4050	45 (9)	1	1
Vibrator stimulation with artificial penis	26 (6)	30 (7)	1	20 (4)	0.16	0.045
Stimulation of vagina and clitoris	112 (27)	84 (20)	< 0.001	123 (24)	0.43	0.14
Sexual intercourse	231 (56)	171 (41)	< 0.001	211 (42)	< 0.001	0.85
Caressing of body parts at the level of injury	n.a.	41 (10)		n.a.	n.a.	n.a.

p-values for Fisher's exact test.

n.a.: not applicable

Percentage of Citations



Percentage of Citations

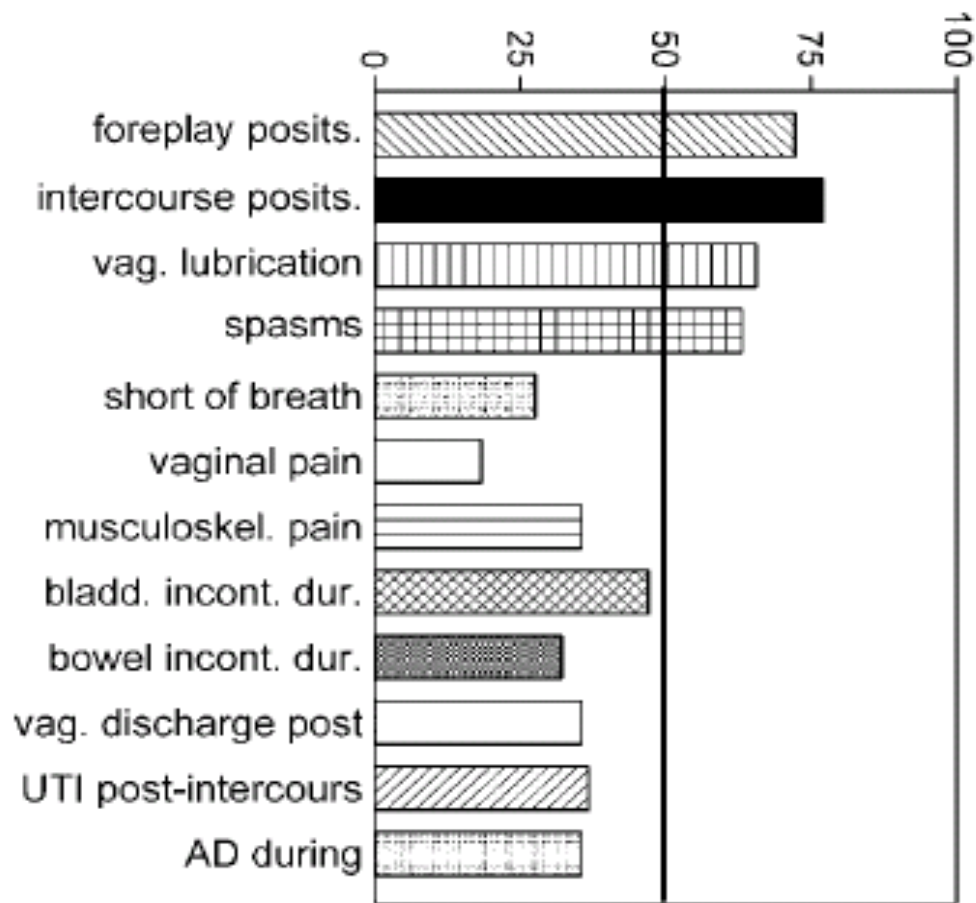


Figure 1 Nature and location of specific sexual stimulation leading to the best arousal

Figure 2 Difficulties related to sexual intercourse

Tableau 5.27

Pourcentages de personnes déclarant avoir réalisé différentes pratiques sexuelles lors du dernier rapport, selon le sexe et le nombre de partenaires chez les hétérosexuels

Pratiques sexuelles		Femmes	
		Multi-partenaire n = 596	Mono-partenaire ** n = 1167
Caresses mutuelles		91	92
Se faire masturber	35 % VERSUS	54	40
Masturber le partenaire		54	44
Le partenaire se masturbe		8	8
Se masturber soi-même		7	6
Insérer un doigt dans le vagin		66	47
Cunnilingus	3 % VERSUS	43	25
Utilisation du préservatif		15	8
Fellation			
non		58	80
avec préservatif		3	0
sans préservatif		39	20
Sodomie			
non		92	97
avec préservatif		0	0
sans préservatif		8	3
Pénétration vaginale			
non		3	1
avec préservatif	40 % VERSUS 99 %	10	3
sans préservatif		87	96

* Certaines personnes n'ont pas décrit leur dernier rapport sexuel. C'est le cas de 21 hommes et 8 femmes multipartenaires et de 12 hommes et 35 femmes monopartenaires.

** Il s'agit d'individus correspondant à l'échantillon témoin mentionné au chapitre 3 ayant en outre répondu qu'ils n'avaient pas consommé de drogue dans les 12 derniers mois.

Table 2: Observed Marital Status 1, 2, and 5 Years Postinjury by Race/Ethnicity

J KREUTZER 2009 Characteristics	1-Year Follow-up		2-Year Follow-up		5-Year Follow-up	
	n	%	n	%	n	%
White						
Married	995	93.8	790	90.7	528	81.7
Not married	66	6.2	81	9.3	118	18.3
Divorced	37	3.5	58	6.7	101	15.6
Separated	29	2.7	23	2.6	17	2.6
Black						
Married	222	89.2	156	81.2	90	71.4
Not married	27	10.8	36	18.8	36	28.6
Divorced	11	4.4	14	7.3	24	19.1
Separated	16	6.4	22	11.5	12	9.5
Hispanic						
Married	149	93.7	117	91.4	61	75.3
Not married	10	6.3	11	8.6	20	24.7
Divorced	4	2.5	8	6.3	16	19.8
Separated	6	3.8	3	2.3	4	4.9
Overall						
Married	1366	93.0	1063	89.3	679	79.6
Not married	103	7.0	128	10.7	174	20.4
Divorced	52	3.5	80	6.7	141	16.5
Separated	51	3.5	48	4.0	33	3.9

Table 3: Effect Tests for Adjusted Model

Effects	F	NDF, DDF	P
Year	35.93	2, 1953	<.001
Race/ethnicity	6.41	2,1493	.002
Year×race/ethnicity	0.88	4,1953	.474
Employment at admission	5.57	2,1493	.004
AIS	2.02	1,1493	.155
Year×AIS	7.27	2,1953	.001
Cause of injury	6.38	1,1493	.012
Age at injury	68.04	1,1493	<.001

Abbreviations: DDF, denominator degrees of freedom; NDF, numerator degrees of freedom.

Table III. Reasons listed for being single (more than one reason could be given)

	SCI	Controls
	<i>n</i> = 102	<i>n</i> = 82
Reason	<i>n</i> (%)	<i>n</i> (%)
Have not met the “right” partner yet	55 (54)	70 (85)
Low self-esteem	36 (35)	16 (20)
Feelings of being unattractive	39 (38)	9 (11)
Fewer opportunities to make new contacts	49 (48)	28 (34)
Doubts about sexual ability	34 (33)	4 (5)
Decreased sexual interest	14 (14)	6 (7)
Fear of bladder and/or bowel leakage	32 (31)	0
Feelings of being inadequate when confined to a wheelchair or having a visible disability	54 (53)	–
Feelings of inadequacy	–	11 (13)
Lack of time	6 (6)	15 (18)

SCI: spinal cord injury.

LES PARTENAIRES

Table III Partner ratings on VAS QL Scale, Sexual Adjustment – SIAS Scale, the Sexual Behaviour Scale and the Emotional Quality of the Relationship Scale ($n = 49$ partners)

Variable	Partners in preinjury relationships ($n = 26$)		Partners in postinjury relationships ($n = 23$)		Age-adjusted difference p -level
	Mean score (SD)	Median score (Range)	Mean score (SD)	Median score (Range)	
VAS Quality of Life Rating	52.5 (34.3)	56.5 (5–99)	79.4 (16.1)	85.0 (48–100)	n.s.
Sexual Adjustment (SIAS Scale)	13.8 (6.7)	14 (6–24)	22.4 (3.7)	23 (14–27)	n.s.
The Emotional Quality of the Relationship Scale	21.6 (5.0)	23 (7–28)	23.9 (3.9)	25 (15–28)	n.s.
The Sexual Behaviour Scale	22.8 (11.9)	24 (7–43)	40.0 (7.3)	43 (25–49)	*

Quality of Life rating: range of score 0–100.

Sexual Adjustment rating: range of raw score 6–28.

The Emotional Quality of the Relationship rating: range of raw score 7–28.

The Sexual Behaviour rating: range of score 0–49.

* = $p < 0.01$ Pitman's permutation test.

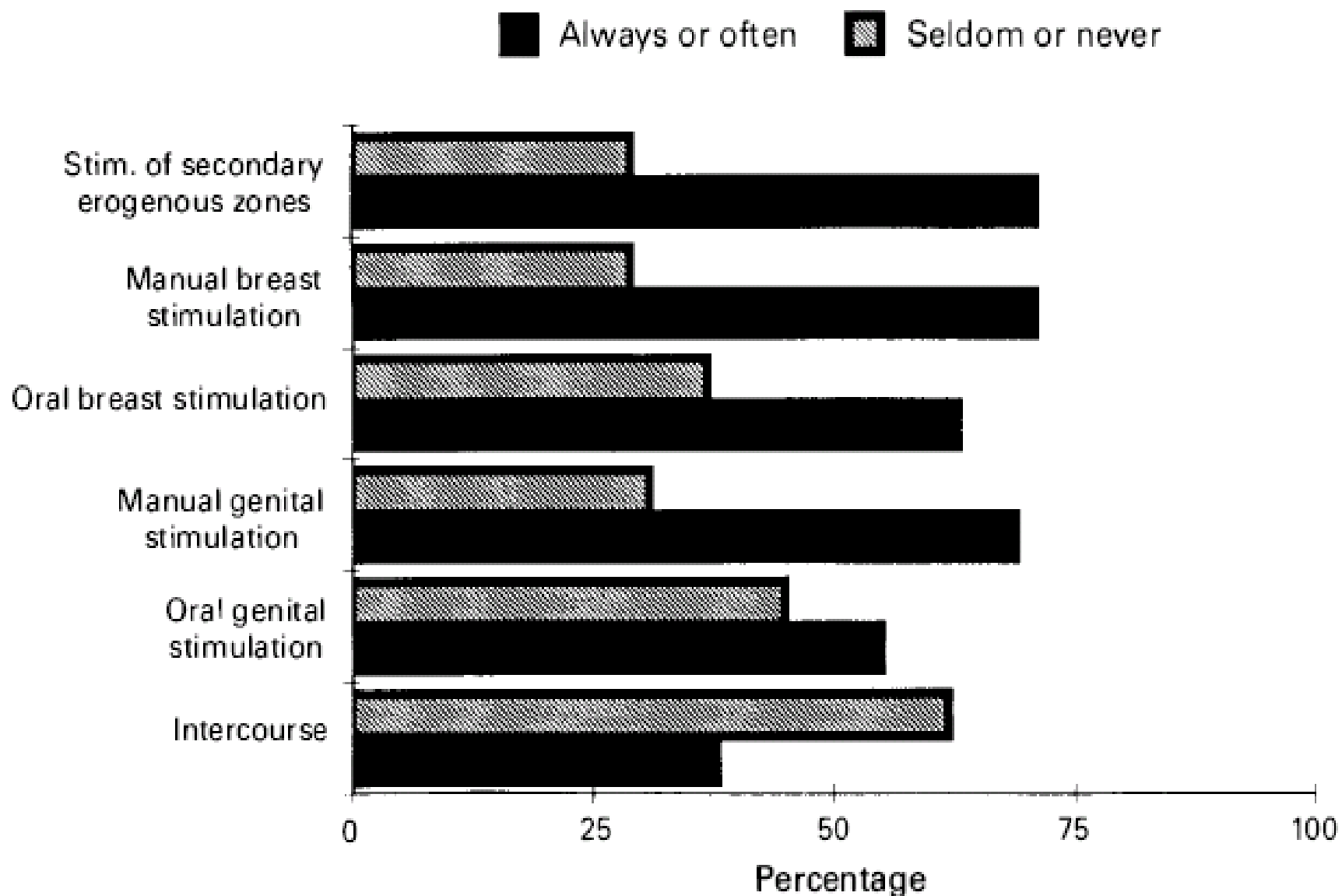


Figure 2 Relative frequency of use of various sexual expressions ($n = 49$).

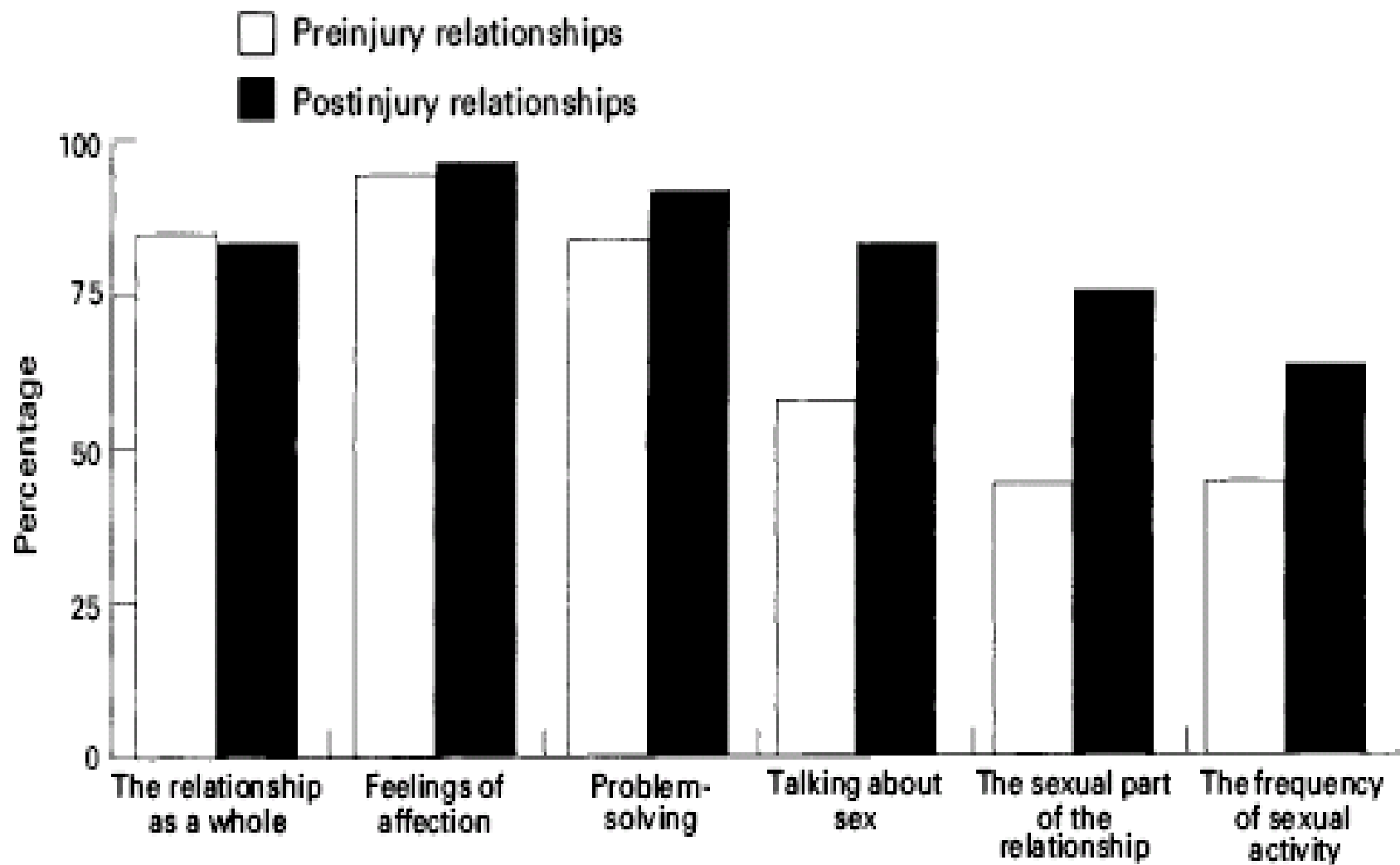


Figure 1 Relative frequency of partners being satisfied with different areas in the relationship ($n = 26$ preinjury and 23 postinjury partners).

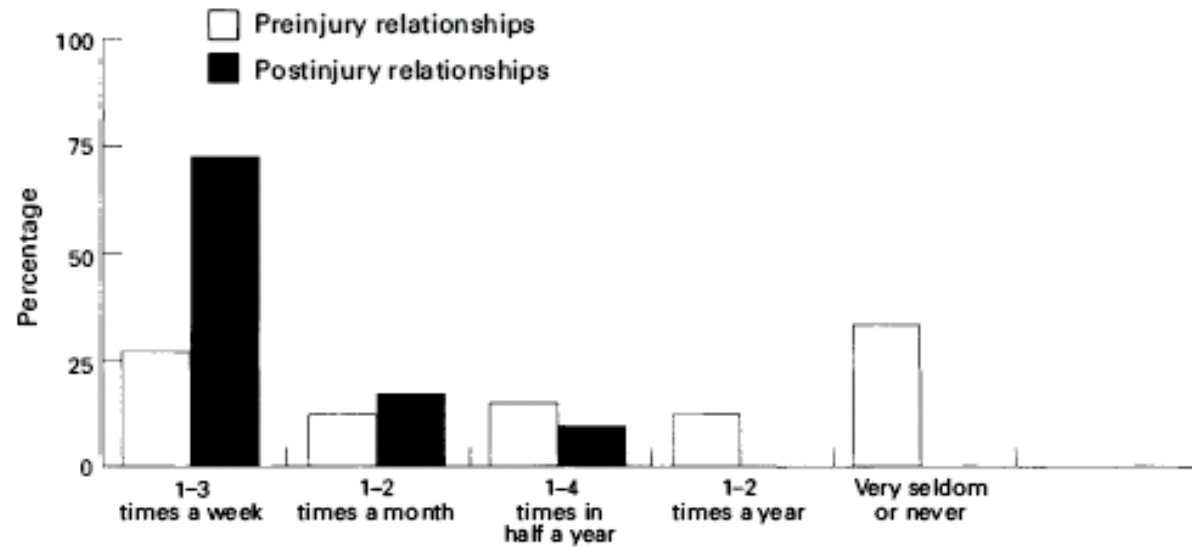


Figure 2 Frequency of sexual activity as reported by the partners ($n = 26$ preinjury and 23 postinjury partners).

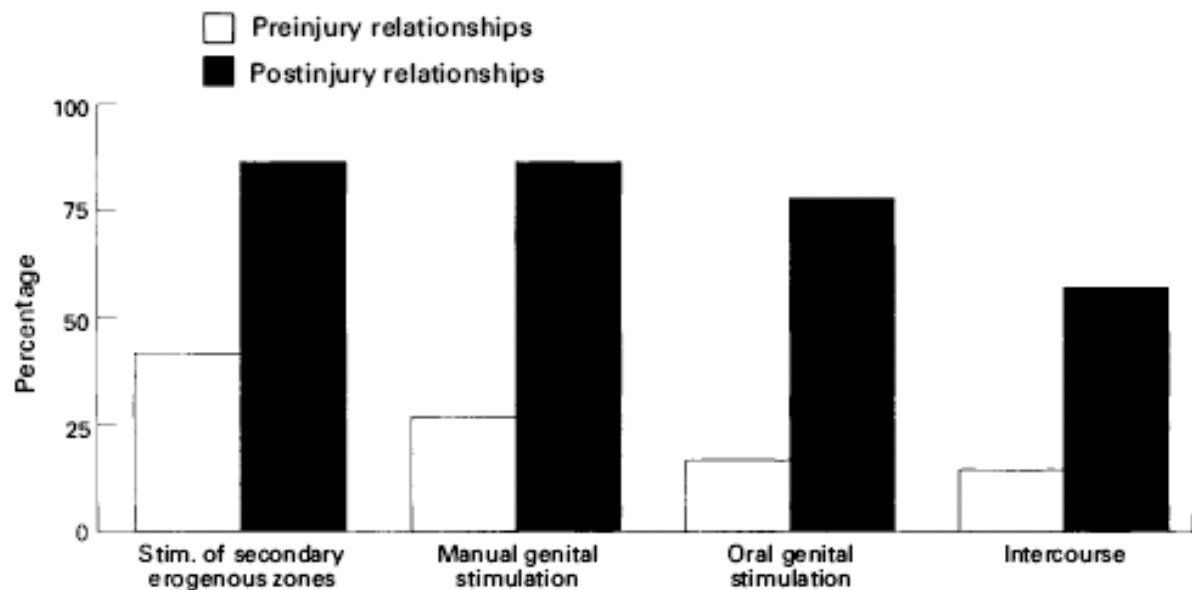


Figure 3 Relative frequency of use of various sexual expressions ($n = 26$ preinjury and 23 postinjury relationships)

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CONCLUSION

« La sexualité apparaît quand l'urinaire disparaît... »

- Chez l'homme
 - quelques moyens diagnostiques
 - des thérapeutiques
- Chez la femme
 - peu de moyens objectifs
 - peu ou pas de thérapeutique
 - problème de la césarienne