Atlas
Annual Thinking LAb on Fibromyalgia Syndrome

I sintomi clinici

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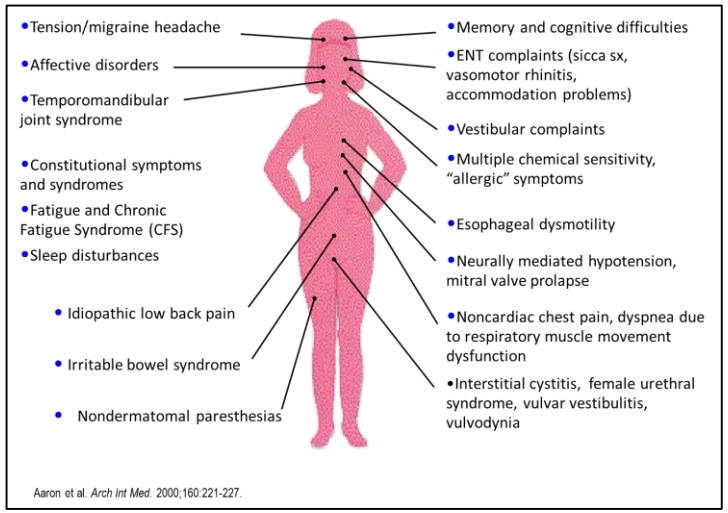
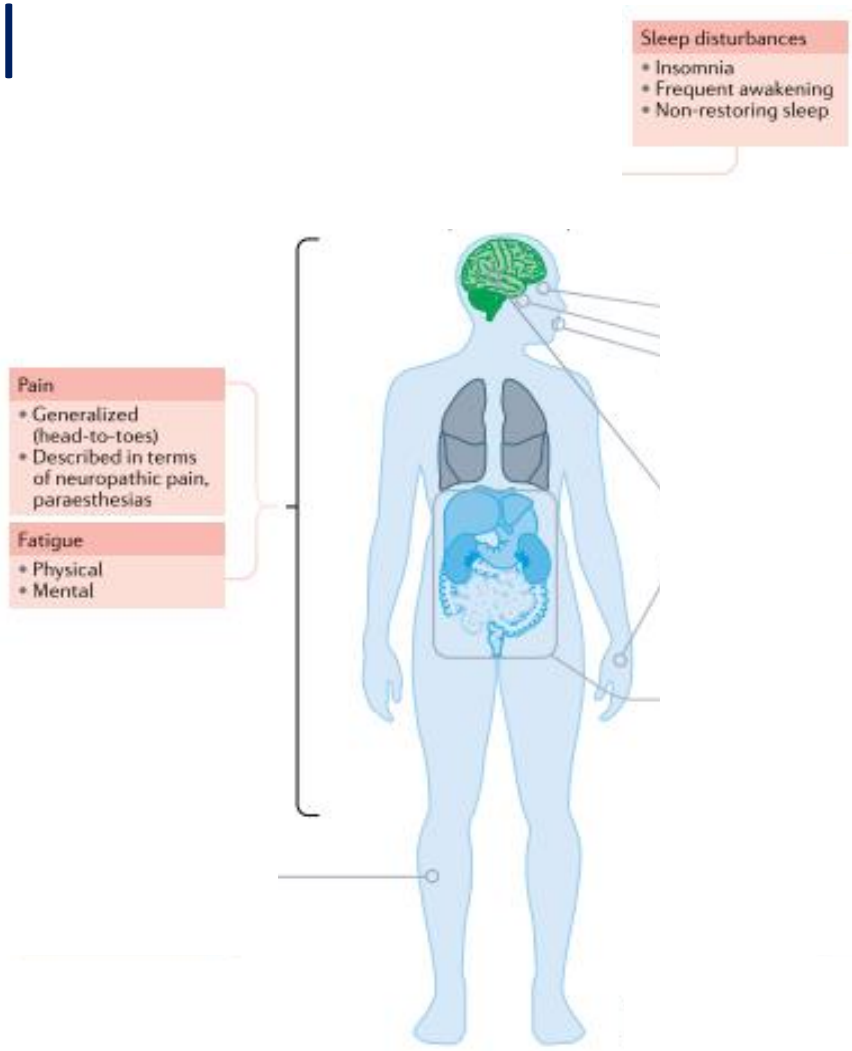
Sindrome Fibromialgica

La Sindrome Fibromialgica è una sindrome dolorosa cronica a eziologia sconosciuta caratterizzata da dolore muscoloscheletrico diffuso, dalla presenza di punti algogeni e da una varietà di sintomi clinici ancillari

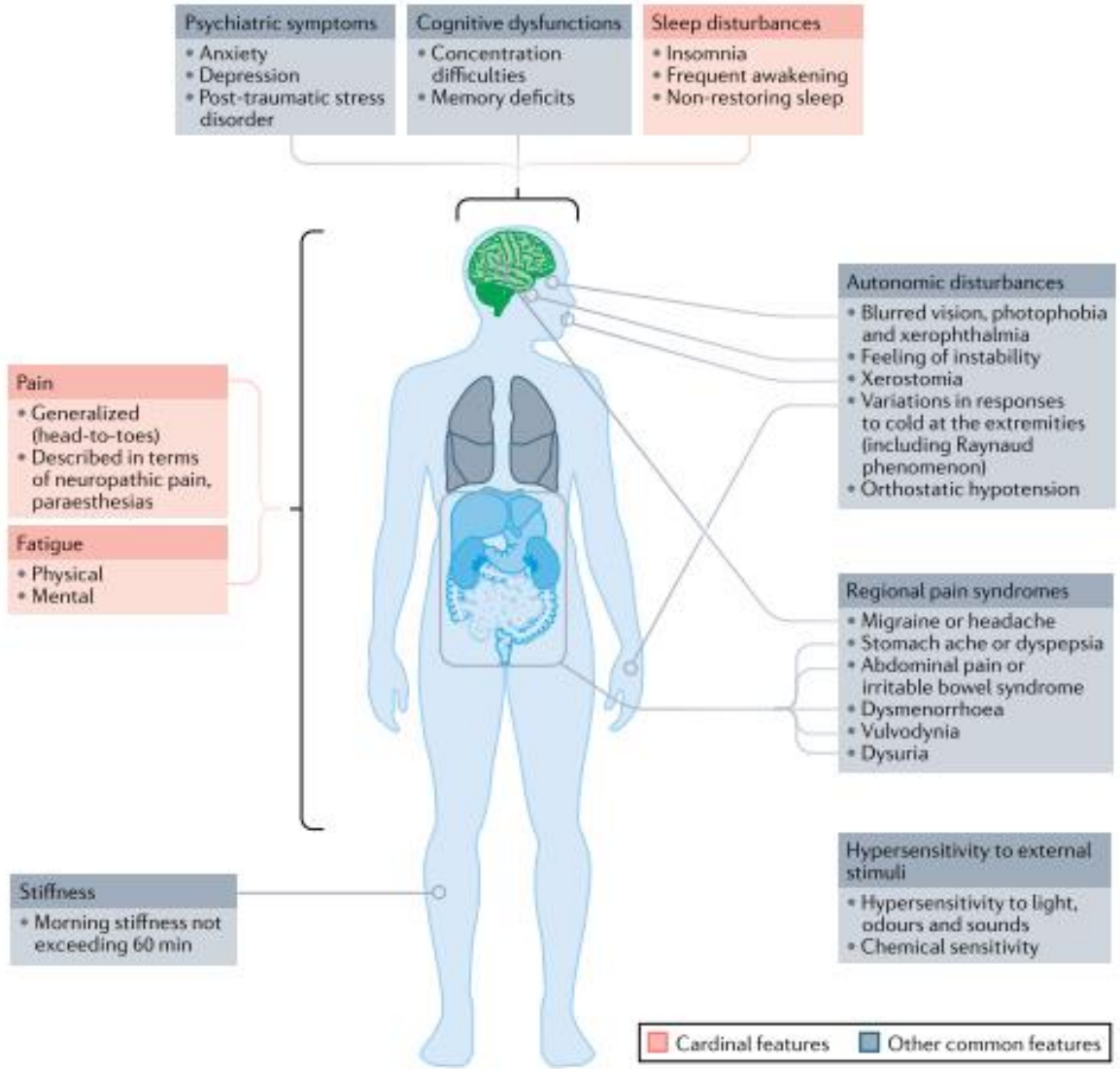


SINTOMI



Sarzi-Puttini P, Giorgi V, Marotto D, Atzeni F. Nat Rev *Rheumatol*. 2020;16:645–660.

Sintomi

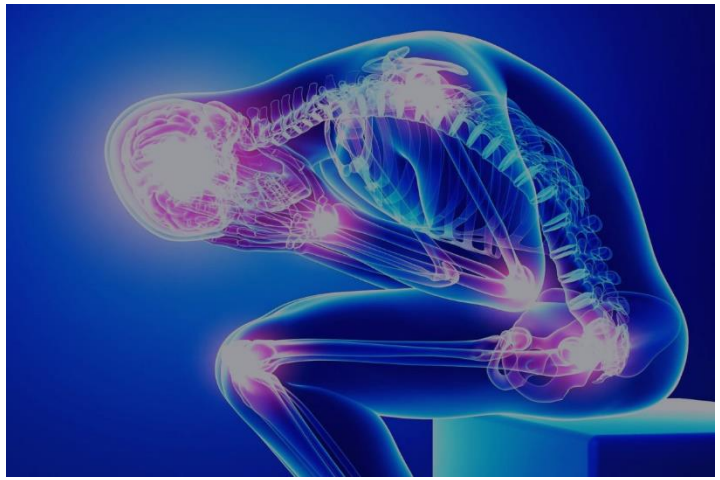


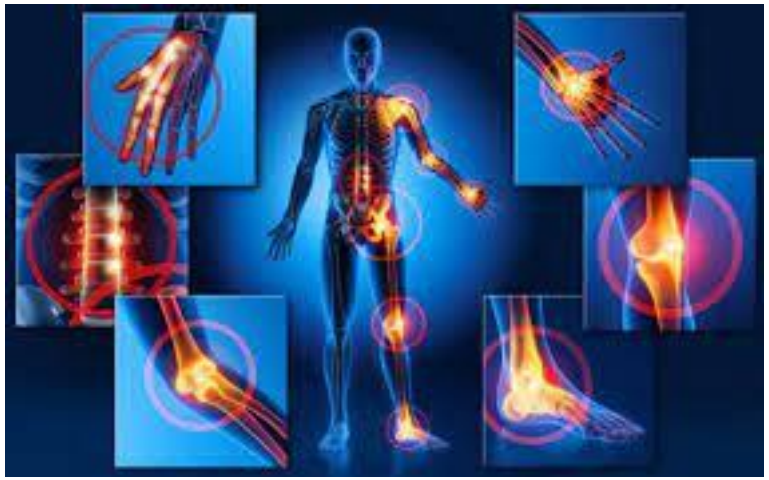
Sarzi-Puttini P, Giorgi V, Marotto D, Atzeni F. Nat Rev *Rheumatol*. 2020;16:645–660.

SINTOMI CARDINE

Dolore diffuso	Stanchezza, astenia	Disturbi del sonno	Sintomi Neurocognitivi	Disturbi dell'umore
Dolore muscoloscheletrico	Fatica mentale	Insonnia	Pensiero rallentato	Ansia
Rigidità	Fatica fisica	Risvegli frequenti	Bassa concentrazione	Depressione
Allodinia, Iperalgesia			Amnesie	

Dolore muscolo-scheletrico diffuso





Il dolore cronico diffuso

- **Il dolore è il sintomo predominante della fibromialgia**. Generalmente si manifesta in tutto il corpo, principalmente ai muscoli, sebbene possa iniziare in una sede localizzata come il collo o le spalle, e successivamente diffondersi in altre sedi col passar del tempo.
- Il dolore fibromialgico viene **descritto in una varietà di modi** comprendenti la sensazione di bruciore,rigidità , contrattura, tensione ecc.

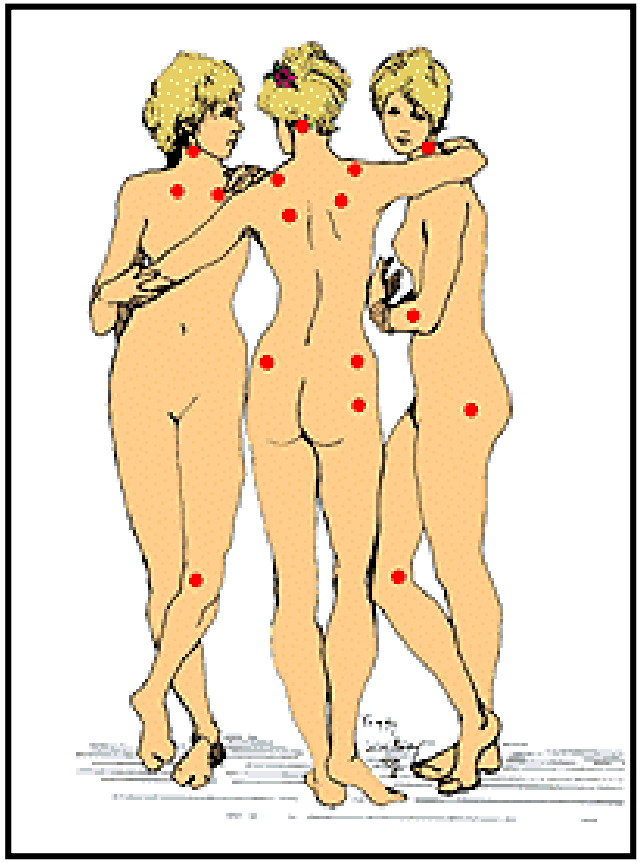
Il dolore cronico diffuso

- Spesso **varia in relazione ai momenti della giornata, ai livelli di attività , alle condizioni atmosferiche, ai ritmi del sonno e allo stress**.
- La maggioranza dei pazienti fibromialgici riferisce di **sentire costantemente un certo grado di dolore.**
- Per alcune persone**, il dolore può essere molto intenso** e impedire diverse attività quotidiane.

FM: Classification

American College of Rheumatology: 1990

- History (> 3 months) of widespread pain
  - Left and right sided
  - Above and below waist
  - Axial skeletal pain must be present
- Pain (not tenderness) on digital (4 kg) palpation in 11 of 18 tender points
- Both criteria must be satisfied



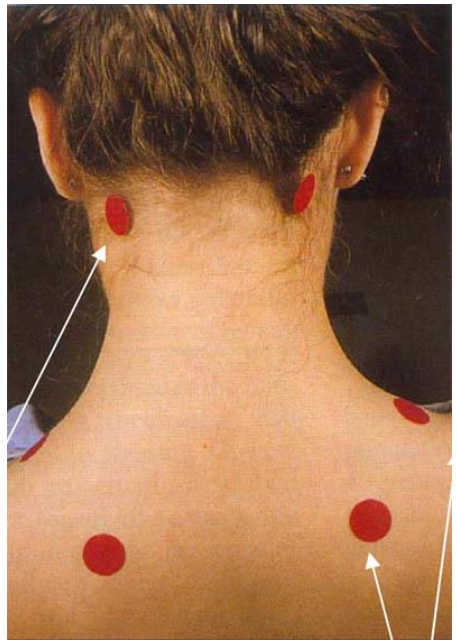
Specificity 88%
Sensitivity 81%

Wolfe et al. Arthritis Rheum. 1990;33:160-172

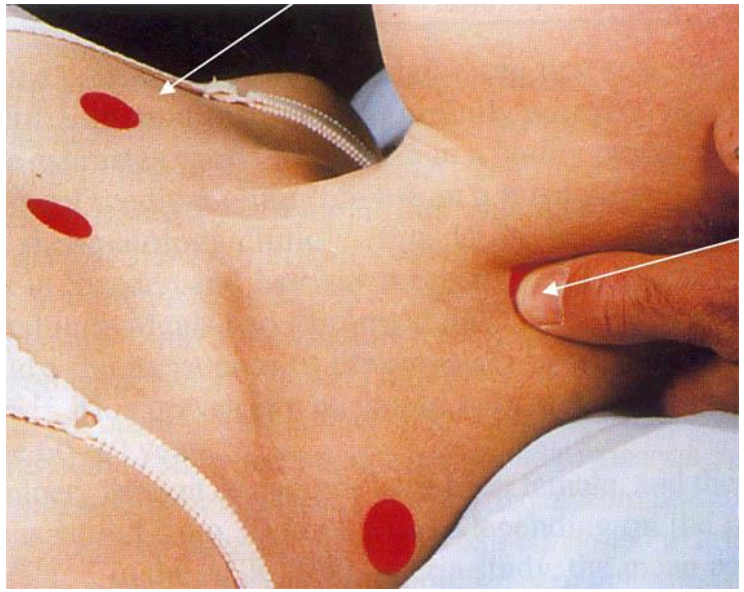
Tender Points Map

18 tender points

Occiput: (back of the neck) at suboccipital muscle insertions



Second Rib: (front chest area) at second costochondral junctions

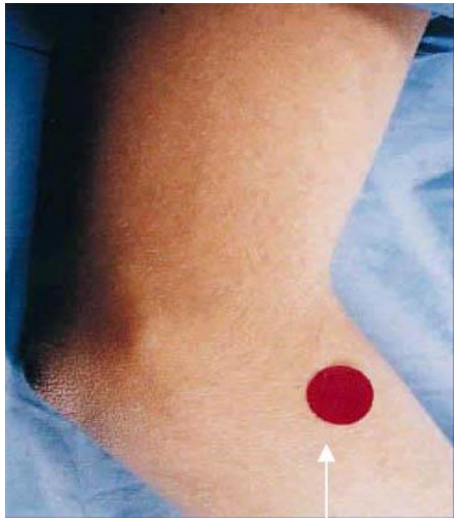


Low Cervical Region: at anterior aspect of the interspaces between the transverse processes

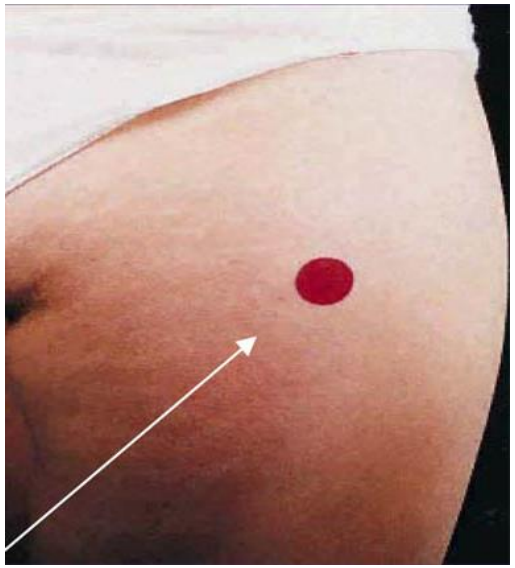
of C5-C7

Trapezius Muscle: (back shoulder area) at midpoint of the upper border

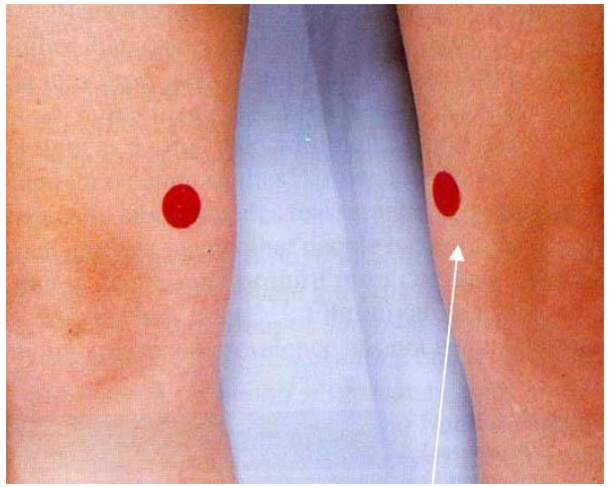
Supraspinatus Muscle: (shoulder blade area) above the medial border of the scapular spine



Lateral Epicondyle: (elbow area) 2 cm distal to the lateral epicondyle



Gluteal: (rear end) at upper outer quadrant of the buttocks



Knee: (knee area) at the medial fat pad proximal to the joint line

Greater Trochanter: (rear hip) posterior to the greater trochanteric prominence.

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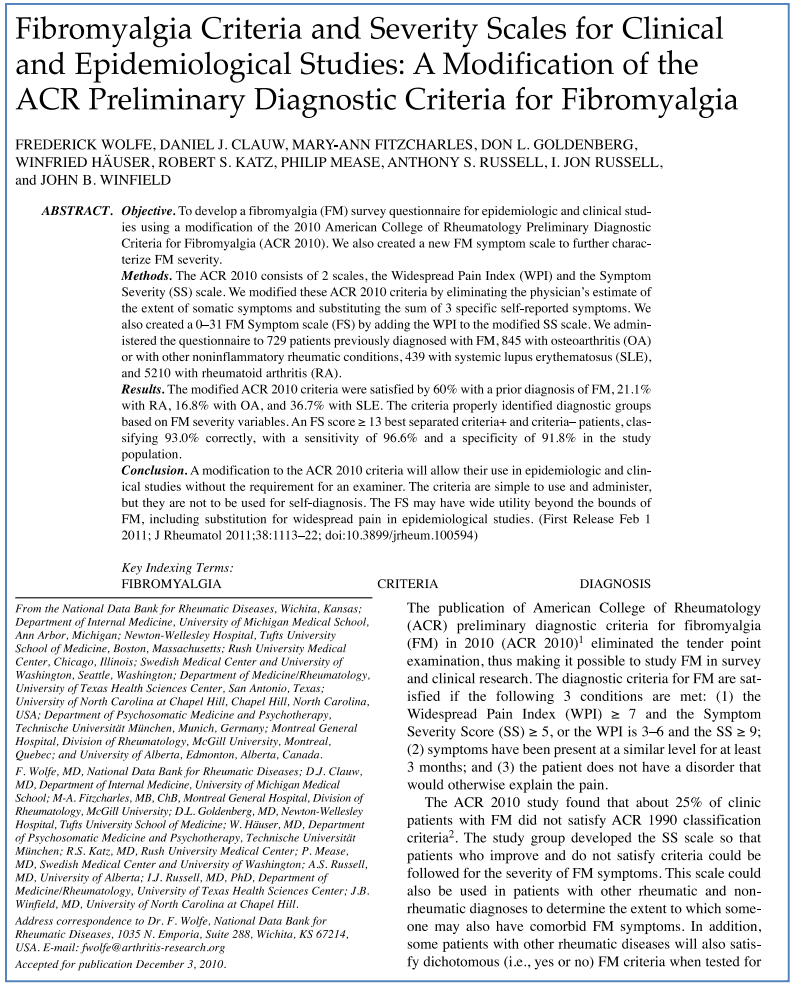
ACR 2011 criteria (2010 modified)

- Widespread pain index
  - -self-report
- Somatic Symptom Scale
  - -fatigue
  - -waking up un-refreshed
  - -cognitive symptoms
- Symptoms generally
  - -headache
  - -pain and cramps in lower abdomen
  - -depression



Fibromyalgia Criteria and Severity Scales for Clinical and Epidemiological Studies: A Modification of the ACR Preliminary Diagnostic Criteria for Fibromyalgia

FREDERICK WOLFE, DANIEL J. CLAUW, MARY-ANN FITZCHARLES, DON L. GOLDENBERG, WINFRIED HÄUSER, ROBERT S. KATZ, PHILIP MEASE, ANTHONY S. RUSSELL, I. JON RUSSELL, and JOHN B. WINFIELD

ABSTRACT. ***Objective.*** To develop a fibromyalgia (FM) survey questionnaire for epidemiologic and clinical studies using a modification of the 2010 American College of Rheumatology Preliminary Diagnostic Criteria for Fibromyalgia (ACR 2010). We also created a new FM symptom scale to further characterize FM severity.

Methods. The ACR 2010 consists of 2 scales, the Widespread Pain Index (WPI) and the Symptom Severity (SS) scale. We modified these ACR 2010 criteria by eliminating the physician's estimate of the extent of somatic symptoms and substituting the sum of 3 specific self-reported symptoms. We also created a 0–31 FM Symptom scale (FS) by adding the WPI to the modified SS scale. We administered the questionnaire to 729 patients previously diagnosed with FM, 845 with osteoarthritis (OA) or with other noninflammatory rheumatic conditions, 439 with systemic lupus erythematosus (SLE), and 5210 with rheumatoid arthritis (RA).

Results. The modified ACR 2010 criteria were satisfied by 60% with a prior diagnosis of FM, 21.1% with RA, 16.8% with OA, and 36.7% with SLE. The criteria properly identified diagnostic groups based on FM severity variables. An FS score ≥ 13 best separated criteria+ and criteria– patients, classifying 93.0% correctly, with a sensitivity of 96.6% and a specificity of 91.8% in the study population.

Conclusion. A modification to the ACR 2010 criteria will allow their use in epidemiologic and clinical studies without the requirement for an examiner. The criteria are simple to use and administer, but they are not to be used for self-diagnosis. The FS may have wide utility beyond the bounds of FM, including substitution for widespread pain in epidemiological studies. (First Release Feb 1 2011; J Rheumatol 2011;38:1113–22; doi:10.3899/jrheum.100594)

Key Indexing Terms:
FIBROMYALGIA CRITERIA DIAGNOSIS

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Accepted for publication December 3, 2010.

The publication of American College of Rheumatology (ACR) preliminary diagnostic criteria for fibromyalgia (FM) in 2010 (ACR 2010)[1] eliminated the tender point examination, thus making it possible to study FM in survey and clinical research. The diagnostic criteria for FM are satisfied if the following 3 conditions are met: (1) the Widespread Pain Index (WPI) ≥ 7 and the Symptom Severity Score (SS) ≥ 5, or the WPI is 3–6 and the SS ≥ 9; (2) symptoms have been present at a similar level for at least 3 months; and (3) the patient does not have a disorder that would otherwise explain the pain.

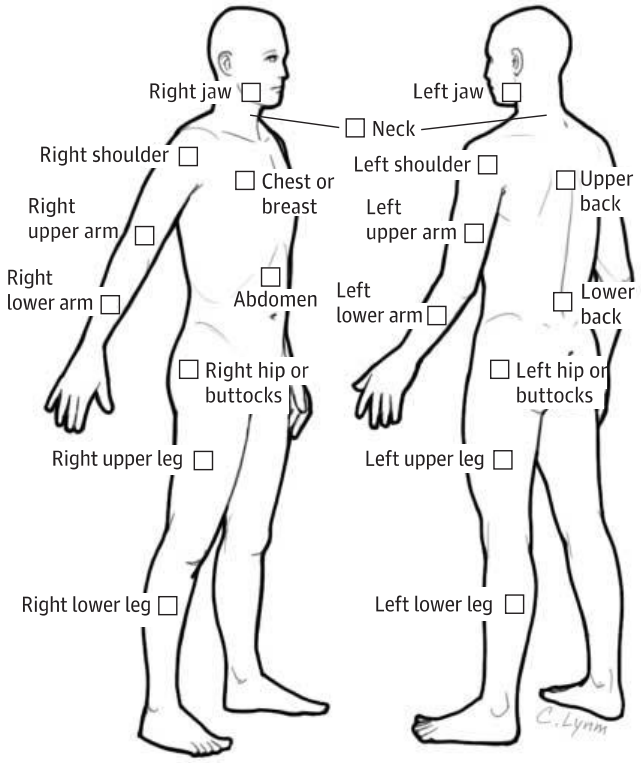
The ACR 2010 study found that about 25% of clinic patients with FM did not satisfy ACR 1990 classification criteria[2]. The study group developed the SS scale so that patients who improve and do not satisfy criteria could be followed for the severity of FM symptoms. This scale could also be used in patients with other rheumatic and non-rheumatic diagnoses to determine the extent to which someone may also have comorbid FM symptoms. In addition, some patients with other rheumatic diseases will also satisfy dichotomous (i.e., yes or no) FM criteria when tested for

Patient Self-report Survey for the Assessment of Fibromyalgia Based on Criteria in the 2011 Modification of the ACR Preliminary Diagnostic Criteria for Fibromyalgia

Widespread pain
(1 point per check box. Score range : 0-19 points)

Symptom severity
(score range: 0-12 points)

(1) Please indicate if you have had pain or tenderness **during the past 7 days** in the areas shown below.
Check the boxes in the diagram for each area in which you have had pain or tenderness.



(2) For each symptom listed below, use the following scale to indicate the severity of the symptom **during the past 7 days**.

- **No problem**
- **Slight or mild problem**: generally mild or intermittent
- **Moderate problem**: considerable problems; often present and/or at a moderate level
- **Severe problem**: continuous, life-disturbing problems

	No problem	Slight or mild problem	Moderate problem	Severe problem
Points	0	1	2	3
A. Fatigue	☐	☐	☐	☐
B. Trouble thinking or remembering	☐	☐	☐	☐
C. Waking up tired (unrefreshed)	☐	☐	☐	☐

(3) During the **past 6 months** have you had any of the following symptoms?

Points	0	1
A. Pain or cramps in lower abdomen	☐ No	☐ Yes
B. Depression	☐ No	☐ Yes
C. Headache	☐ No	☐ Yes

Additional criteria (no score)

(4) Have the symptoms in questions 2 and 3 and widespread pain been present at a similar level for at **least 3 months**?
☐ No ☐ Yes

(5) Do you have a disorder that would otherwise explain the pain?
☐ No ☐ Yes

Additional criteria (no score)

ACR indicates American College of Rheumatology. Scoring information is shown in black. The possible score ranges from 0 to 31 points. **A score ≥12 points is consistent with a diagnosis of fibromyalgia**.

Stanchezza - astenia

Stanchezza, astenia

- La stanchezza è un **sintomo universale**, che compare in tutti gli individui dopo uno sforzo prolungato o per mancanza di sonno.
- Sebbene sia difficile da definire e da misurare in maniera precisa, **la stanchezza è data da una sensazione pervasiva di mancanza o perdita di energia**, che non è esclusivamente correlata alla sforzo fatto.
- **La stanchezza può essere mentale** (centrale) e valutabile in termini di concentrazione, memoria e motivazione oppure **fisica (periferica)** dove I sintomi sono spesso riferiti ai muscoli

La stanchezza: è rilevante?

Dai dati derivati dagli studi di varie popolazioni, la stanchezza ha un'alta prevalenza, colpendo il **6-7.5% della popolazione generale** e rappresentando il 21%-33% dei sintomi riferiti nelle consultazioni dei medici di medicina generale.

La stanchezza è un sintomo frequente che può essere associato a numerosi fattori e malattie (psicologiche, farmacologiche, endocrinologiche, metaboliche, neoplastiche, ematologiche, infettive, infiammatorie e correlate al sonno).

Ferrè A. Neurología. 2018;33(6):385-394

La stanchezza nelle malattie reumatiche

Uno dei principali sintomi riferiti dai pazienti è anche un sintomo spesso non adeguatamente valutato e considerato

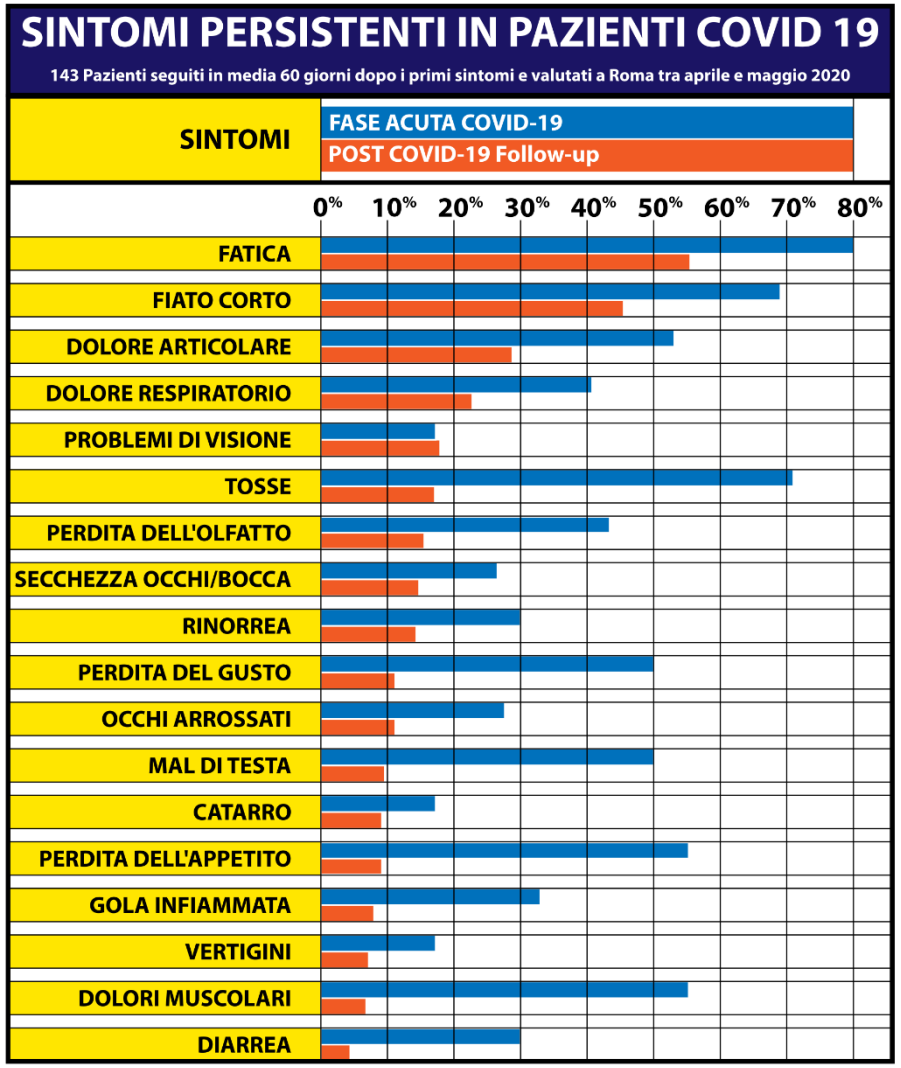
	%
Lupus eritematoso sistemico	60-90%
Sclerodermia	50-70%
Sindrome di Behcet	80%
Spondilite anchilosante	60%
Artrite reumatoide	70-90%
Sindrome di Sjogren	50%
Fibromialgia	80-90%

In 2/3 dei casi viene descritta come intensa o molto intensa e molti pazienti la percepiscono come una causa di disabilità più severa dello stesso dolore

Correlazione tra stanchezza e attività di malattia

Fatica e dolori muscolari e articolari nel post-COVID

Le percentuali di pazienti (fino a luglio 2020) con sintomi correlati alla malattia coronavirus 2019 (COVID-19) durante la fase acuta della malattia (in blu) e al momento della visita di follow-up (in rosso)



Carfì A, Bernabei R, Landi F; Gemelli Against COVID-19 Post-Acute Care Study Group. Persistent Symptoms in Patients After Acute COVID-19. JAMA. 2020 Aug 11;324(6):603-605.

The effect of novel coronavirus disease-2019 (COVID-19) on fibromyalgia syndrome

F. Salaffi[1], V. Giorgi[2], S. Sirotti[2], S. Bongiovanni[2], S. Farah[1], L. Bazzichi[3], D. Marotto[4], F. Atzeni[5], M. Rizzi[6], A. Batticciotto[7], G. Lombardi[8], M. Galli[9], P. Sarzi-Puttini[2]

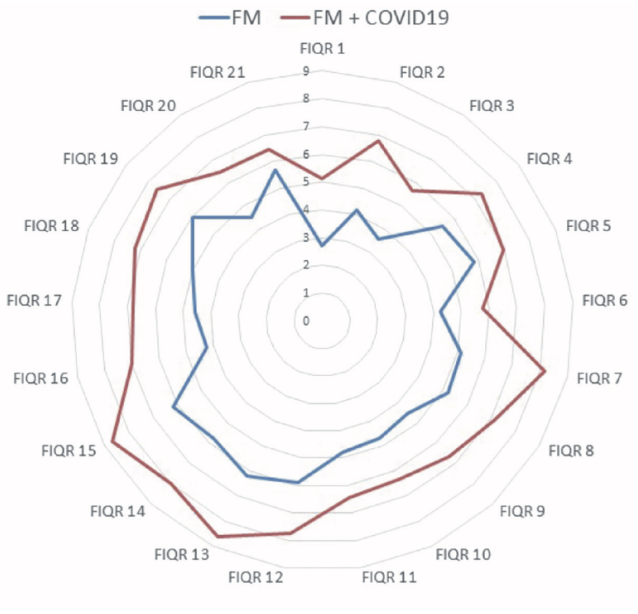


Fig. 2. Polar plot (spydergrams) of mean FIQR single item scores for FM patients with or without concomitant COVID-19 infection (all at *p*-value <0.01).
Note. The domain scores are plotted from 0 (best, at the center) to 10 (worst, at the outside).
FIQR: Fibromyalgia Impact Questionnaire Revised version.

Item	Item Description	FM		FM+COVID19	
		Score	SD	Score	SD
FIQR-1	Brush or comb hair	2.69	3.17	5.13	2.73
FIQR-2	Walk continuously for 20 min.	4.19	3.49	6.77	2.44
FIQR-3	Prepare a homemade meal	3.56	3.17	5.70	2.39
FIQR-4	Vacuum, scrup, or sweep floors	5.49	3.25	7.32	1.89
FIQR-5	Lift and carry a bag full of groceries	5.83	3.44	6.95	2.35
FIQR-6	Climb one flight of stairs	4.26	3.21	5.76	2.59
FIQR-7	Change bed sheets	5.09	3.29	8.19	8.43
FIQR-8	Sit in a chair for 45 min	5.18	3.28	7.11	1.98
FIQR-9	Go shopping for groceries	4.53	3.41	6.66	1.98
FIQR-10	Cannot achieve goals	4.69	3.20	6.32	2.35
FIQR-11	Feel overwhelmed	4.81	3.31	6.44	2.51
FIQR-12	Pain rating	5.89	3.07	7.72	1.02
FIQR-13	Fatigue rating	6.19	3.15	8.60	1.64
FIQR-14	Stiffness rating	5.74	2.99	7.97	1.44
FIQR-15	Sleep quality	6.15	3.16	8.69	1.36
FIQR-16	Depression level	4.26	3.26	6.98	2.11
FIQR-17	Memory problems	4.57	3.10	6.79	1.94
FIQR-18	Anxiety level	4.98	3.15	7.20	2.45
FIQR-19	Tenderness level	5.94	3.11	7.59	1.55
FIQR-20	Balance problems	4.50	3.54	6.48	1.57
FIQR-21	Environmental sensitivity	5.68	3.22	6.47	2.23

Clin Exp Rheumatol 2021; 39 (Suppl. 130): S72-S77.

Stanchezza muscolare nella fibromialgia

- **Circa il 90% dei pazienti affetti da sindrome fibromialgica riferisce astenia moderata o severa**, ridotta resistenza alla fatica o una specie di spossatezza che ricorda quella della sindrome influenzale.
- Qualche volta la stanchezza è più importante della sintomatologia dolorosa muscolo-scheletrica.
- I pazienti con fibromialgia possono avere una stanchezza simile a quella riscontrata in un'altra patologia correlata, denominata **sindrome da affaticamento cronico**.
- Alcuni pazienti con fibromialgia hanno sintomi da sindrome da affaticamento cronico e viceversa. **Le due sindromi spesso si sovrappongono** e può essere impossibile distinguerle

Prevalenza della sindrome fibromialgica in altre sindromi da sensibilizzazione ce

Sindrome da sensibilizzazione centrale	% prevalencza di FMS (media)	% prevalenza di FMS (range)
Disfunzione temporo-mandibolare	40.7	20.0-65.0
Colon irritabile	23.7	13.0-52.0
Mal di testa (tutti i tipi)	26.3	10.0-40.0
Cefalea muscolo-tensiva	29.7	23.0-36.4
Emicrania	16.0	10.0-22.4
Mista*	38.2	36.4-40.0
Cistite interstiziale	15.4	12.0-22.4
Chronic fatigue syndrome	**55.2**	**15.6-80**
Sindrome vulvo-vestibolare	23.4	15.6-31.2
Sindrome della guerra del Golfo	17.6	2.0-33-8

*Mix di cefalea muscolo-tensiva e di emicrania .

Yunus MH. Pain Research and Treatment 2012, ID 584573,

Sindrome da fatica cronica - definizione

- **La sindrome da fatica cronica è una sindrome complicata caratterizzata da estrema spossatezza che dura da almeno 6 mesi** e che non può essere spiegata completamente da una condizione clinica sottostante. **La spossatezza peggiora con attività mentali e fisiche e non migliora con il riposo**

Altri sintomi caratteristici comprendono:

- Sonno non ristoratore
- Disturbi neurocognitivi (memoria e difficoltà nella concentrazione)
- Vertigini che peggiorano con il cambiamento di posizione da supina, o da seduta a posizione eretta

Questa condizione è anche conosciuta come encefalomielite mialgica (ME). Qualche volta abbreviata in ME/CFS. **Il termine proposto pià di recente è di malattia sistemica da intolleranza alla fatica (SEID)**

Mayo Clinic – Patient Care and Health information

Proposed Diagnostic Criteria for ME/CFS also coined systemic exertion intolerance disease (SEID)

Diagnosis requires that the patient have the following three symptoms
1. A substantial reduction or impairment in the ability to engage in pre-illness levels of occupational, educational, social, or personal activities, that persists for more than 6 months and is accompanied by fatigue, which is often profound, is of new or defi nite onset (not lifelong), is not the result of ongoing excessive exertion, and is not substantially allevi-ated by rest,
2. Post-exertional malaise,*
3. Unrefreshing sleep*
At least one of the two following manifestations is also required:
1. Cognitive impairment* or 2. Orthostatic intolerance
* Frequency and severity of symptoms should be assessed. The diagnosis of ME/CFS should be questioned if patients do not have these symptoms at least half of the time with moderate, substantial, or severe intensity.

REPORT BRIEF FEBRUARY 2015

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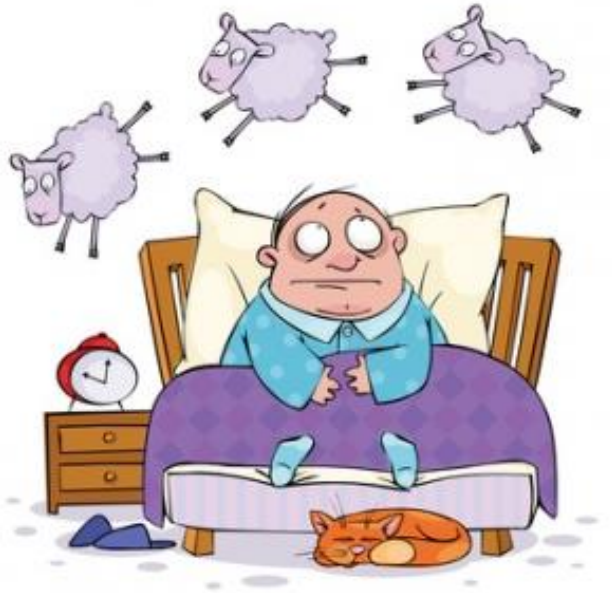

Alterazioni del sonno

Disturbi del sonno e fibromialgia

- Le alterazioni del sonno sono considerate un problema clinico e gli studi di prevalenza mostrano che **solo il 10-12% dei pazienti con diagnosi di fibromialgia riferiscono di avere un sonno di buona qualità** mentre tra il 65 e il 99% manifestano problemi per addormentarsi e per mantenere il sonno

Theadom, A.; Cropley, M. 'This constant being woken up is the worst thing'—Experiences of sleep in fibromyalgia syndrome. Disabil. Rehabil. 2010, 32, 1939–1947.
Wagner, J.-S.; DiBonaventura, M.D.; Chandran, A.B.; Cappelleri, J.C. The association of sleep difficulties with health-related quality of life among patients with fibromyalgia. BMC Musculoskelet. Disord. 2012, 13, 199.

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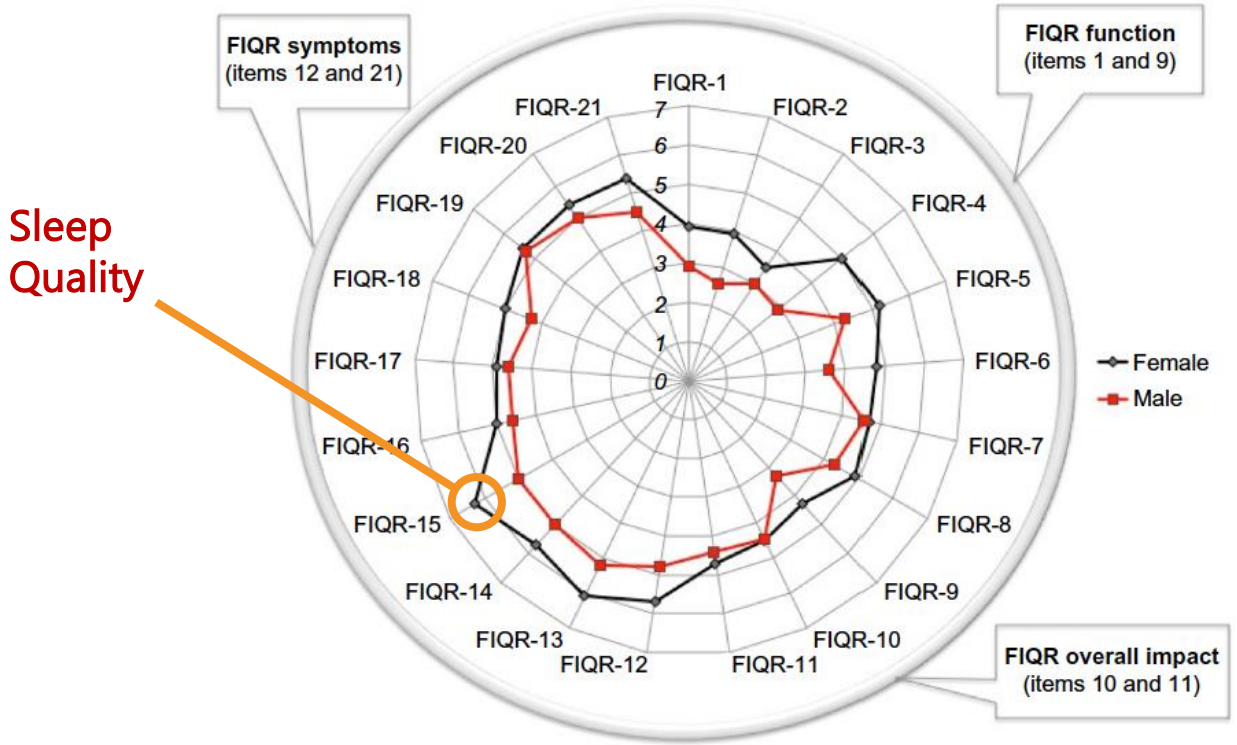
Alessandro Ciapetti[4]
Marco Di Carlo[1]
Piercarlo Sarzi Puttini[5]

Identifying the symptom and functional domains in patients with fibromyalgia: results of a cross-sectional Internet-based survey in Italy



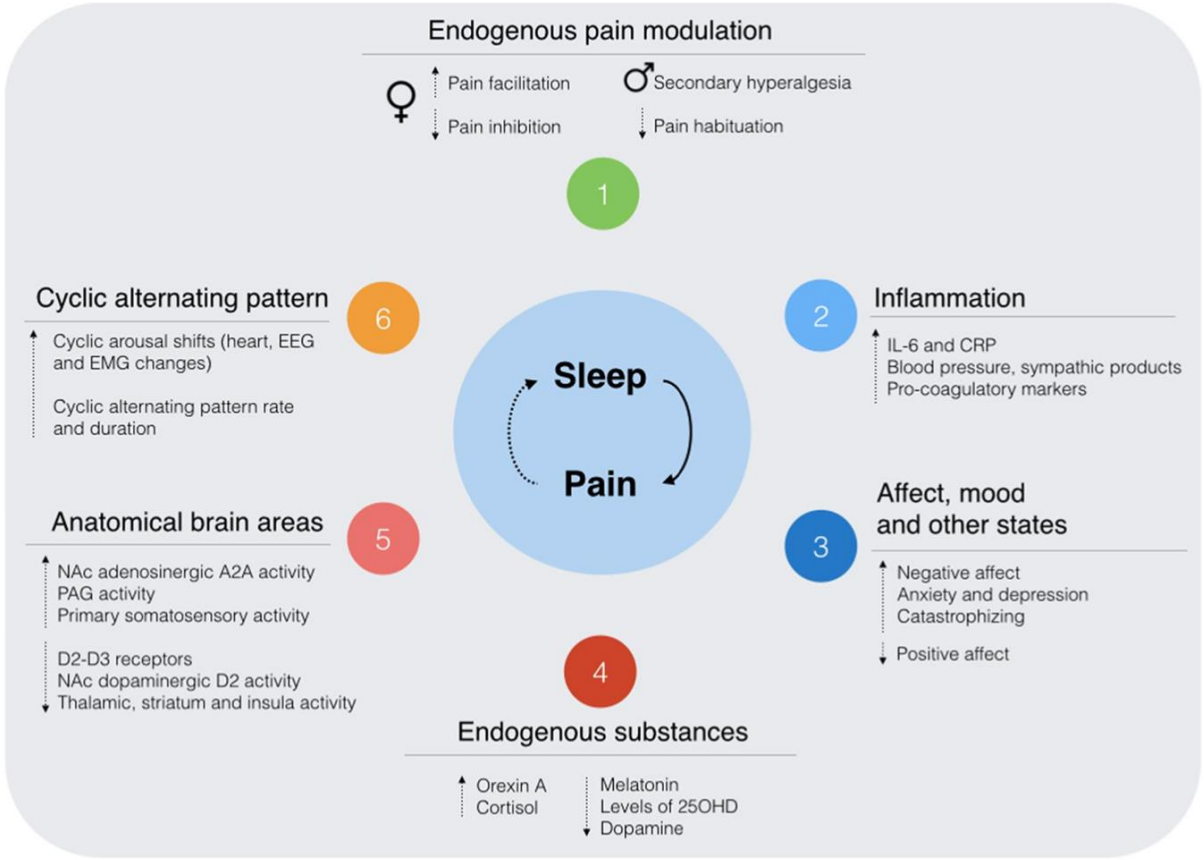
Spydergrams of the FIQR domains. The domain scores are plotted from 0 (worst, at the center) to 10 (best, at the outside).

FIQR overall impact subtotal		9.16
12	Pain rating	5.69
13	Fatigue rating	6.04
14	Stiffness rating	5.64
15	Sleep quality	6.18
16	Depression level	4.94
17	Memory problems	4.90
18	Anxiety level	4.99
19	Tenderness level	5.42
20	Balance problems	5.33
21	Environmental sensitivity	5.32

The highest scoring items (those with the greatest disease impact) were the following symptoms related: sleep quality (FIQR15), fatigue/energy (FIQR13), pain (FIQR12), stiffness (FIQR14), tenderness (FIQR19), balance problems (FIQR20), and environmental sensitivity (FIQR21).

Journal of Pain Research 2016:9 1–8

Alterazioni del Sonno



Moldofsky was the first one to show that people with “fibrositis” experienced objective sleep disturbances, and that the same symptoms could be induced in sleep-deprived healthy subjects.

A Norwegian longitudinal study that observed thousands of women for **ten years** showed that those who had often or always experienced sleep disturbances were more likely to develop FM

Herrero Babiloni A et al. Sleep and pain: recent insights, mechanisms, and future directions in the investigation of this relationship. J Neural Transm (Vienna). 2020 Apr;127(4):647-660.

WAKING UNREFRESHED

Disturbi del sonno: oltre il 75%

- Insonnia precoce, media, tardiva
- Frequenti risvegli
- Sonno leggero
- Riposo irregolare di giorno
- Inversione del normale ritmo del sonno
- Ipersonnia

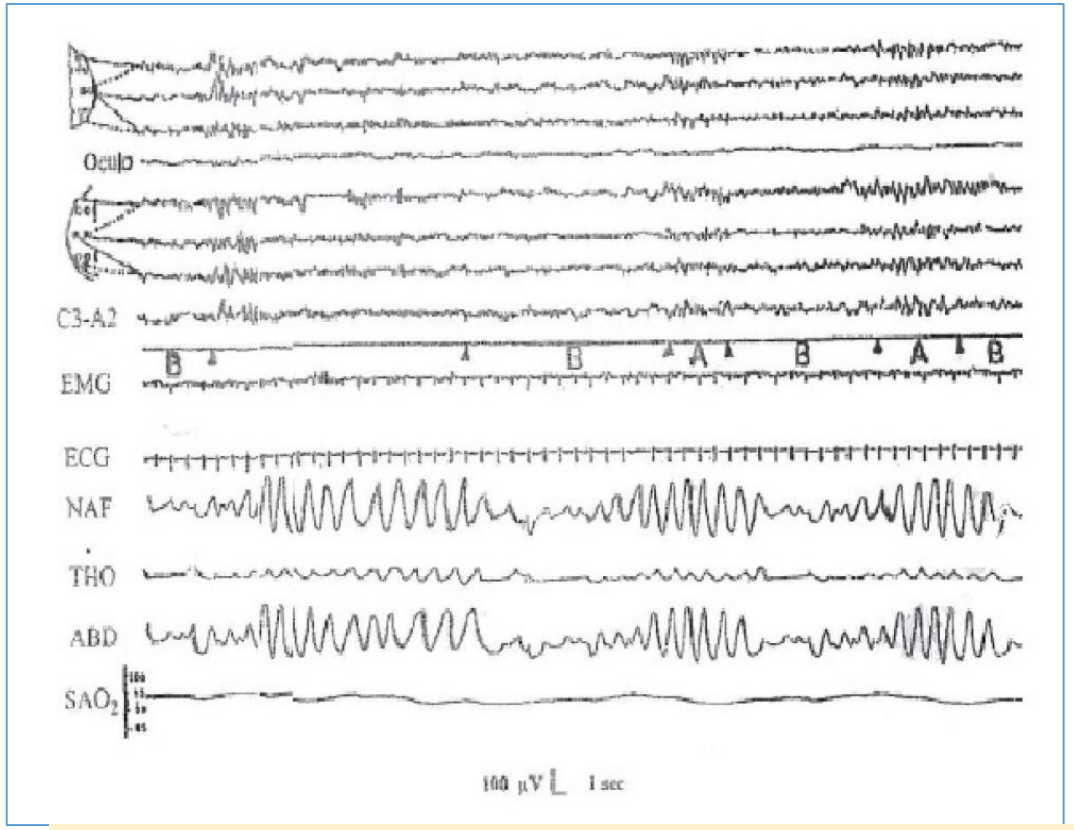
NON BASTA CHIEDERE:
«DORMI BENE?»

Fare molta attenzione al sonno non ristoratore collegato a dolore interferente col sonno!

Alterations of Sleep Physiology in Fibromyalgia

- A study published in 1999 also found increased incidence of periodic breathing in patients with FM, which could **contribute to poor sleep complained by the patients ;**
- a subsequent study evidenced a high frequency of Cyclic Alternating Pattern (CAP), and particularly CAP phases A2 and A3, which are a periodic EEG sleep marker that can **suggest sleep instability or poor sleep quality.**
- Finally, some studies showed reduced sleep spindles in N2 stage compared to healthy controls

This intrinsic periodic arousal disturbance in the sleep EEG is accompanied by less efficient sleep, and is correlated to the severiy of clinical symptoms in FM patients



Periodic breathing and the Cyclic Alternating Pattern (CAP) in a patient with fibromyalgia; A and B correspond to Phase A and Phase B of CAP cycles

Rizzi M,Sarzi-Puttini P et al J Rheumatol 2004;31.1193-99

PSG data in FM patients and control

	FMS	Controls	P-value
Sleep time min	303.80	398.33	0.001
Stage 1 % sleep time	21.6	11.4	0.001
Stage 2 % sleep time	34.8	38.8	NS
Stage 3 % sleep time	7.5	12.3	0.01
Stage 4 % sleep time	1.1	8.4	0.0001
REM % sleep time	17.9	16.5	NS
Sleep efficiency %	79.10	89.6	0.01
DEF tot	37.20	16.10	0.001
Total DEF duration	517.574	161.163	0.05
RDI events.h-1	5.1.3.5	3.2.1.6	NS
PB % sleep time	15.8	1.2	0.0001
Arousal index n.h-1	8.4.3.5	4.0.1.4	0.001

DEF: desaturation event frequency : the average number of episodes of apnoea and hypopnoea per hour of sleep
RDI: respiratory disturbance index = number of episodes of a fall ≥4% in oxyhaemoglobin saturation per hour of sleep
PB: periodic breathing; a series of at least three successive cycles of waxing and waning in ventilation,with apnoeas or hypopnoeas

Sergi M,Sarzi-Puttini Pet al. Eur Resp J 1999;14:203-

Sleep alterations and FM

Symptoms	FM	Controls	*P*
Bad quality of sleep	90	17	.001
Hypersomnolence	59	11	.01
Tiredness at awakening	82	17	.001
Frequent night arousals	100	11	.001
Fatigue	90	29	.001
Morning headache	82	11	.001
Habitual snorers	53	29	ns
Irritable bowel	47	23	ns
N tender points	13,8±2,1		
FM (disease duration yrs)	4,7±2,5		

Sergi M, Sarzi-Puttini et al Eur Resp J 1999;14:203-208

Crampi notturni

Sindrome delle gambe senza riposo

Tipico disturbo neurologico del sonno :il paziente affetto percepisce il desiderio irrefrenabile di muovere gli arti inferiori,unico apparente rimedio per trovare sollievo e conforto al dolore,fastidio e fitte alle gambe.

Sindrome delle apnee notturne

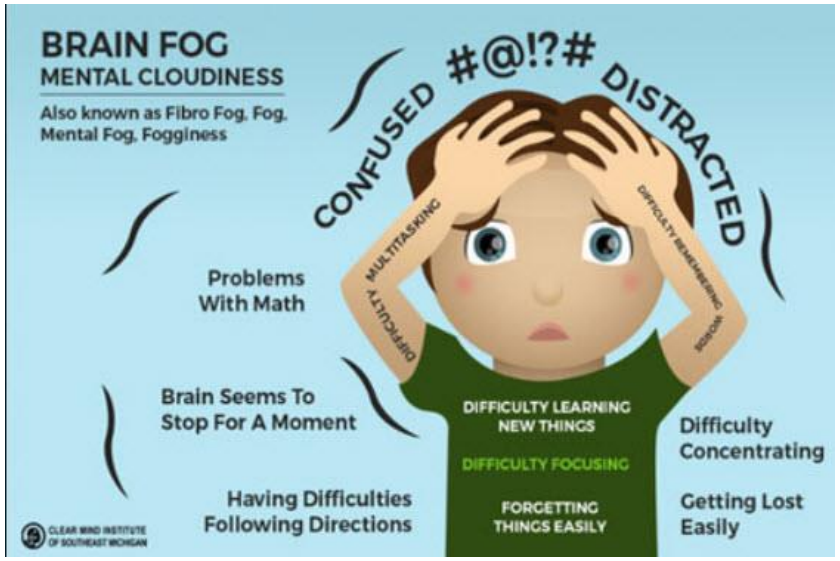
(frequente nei soggetti fibromialgici, soprattutto quelli obesi)

Disturbo in cui la respirazione del paziente si interrompe a causa dell'ostruzione delle prime vie aeree,vi è un abbassamento improvviso del livello di ossigeno nel sangue e il cervello a causa di ciò inizia a disturbare Il sonno,perché manda impulsi nervosi per cercare di irrigidire i muscoli delle vie aeree superiori e tenere aperta la trachea.

Bruxismo

Digrignamento dei denti dovuto alla contrazione della muscolatura masticatoria soprattutto durante il sonno.
Al momento non c'è terapia specifica,ma vengono utilizzati degli opportuni dispositivi detti BITE,che oltre a proteggere lo smalto dall'abrasione,possono facilitare il ripristino di un allineamento corretto delle arcate

Alterazioni neurocognitive- Fibro-fog



Cos’ è la fibro-fog?

- Quando si parla di Fibro-fog si fa riferimento a **riduzione della lucidità, senso di confusione in testa, diminuzione della memoria a breve termine, difficoltà nell’apprendimento, difficoltà di concentrazione**, problemi durante una conversazione dimenticando quello che si voleva dire e problemi di memoria visiva. Le persone avvertono sostanzialmente un senso di confusione in testa.

Cos’ è la fibro-fog?

- Le persone con fibromialgia si rendono conto ben presto che **la loro memoria non è più quella di prima e inizia ad instaurarsi in loro il pensiero della tanta temuta demenza**, questo causa nelle persone fibromialgiche difficoltà nei rapporti interpersonali, per cui molto spesso tendono ad isolarsi, oltre che depressione.

Fibrofog and fibromyalgia: a narrative review and implications for clinical practice

Howard M. Kravitz · Robert S. Katz

Alterazioni cognitive nella fibromialgia: la grandezza del problema

Se confrontiamo i pazienti fibromialgici con pazienti affetti da altre condizioni reumatologiche,

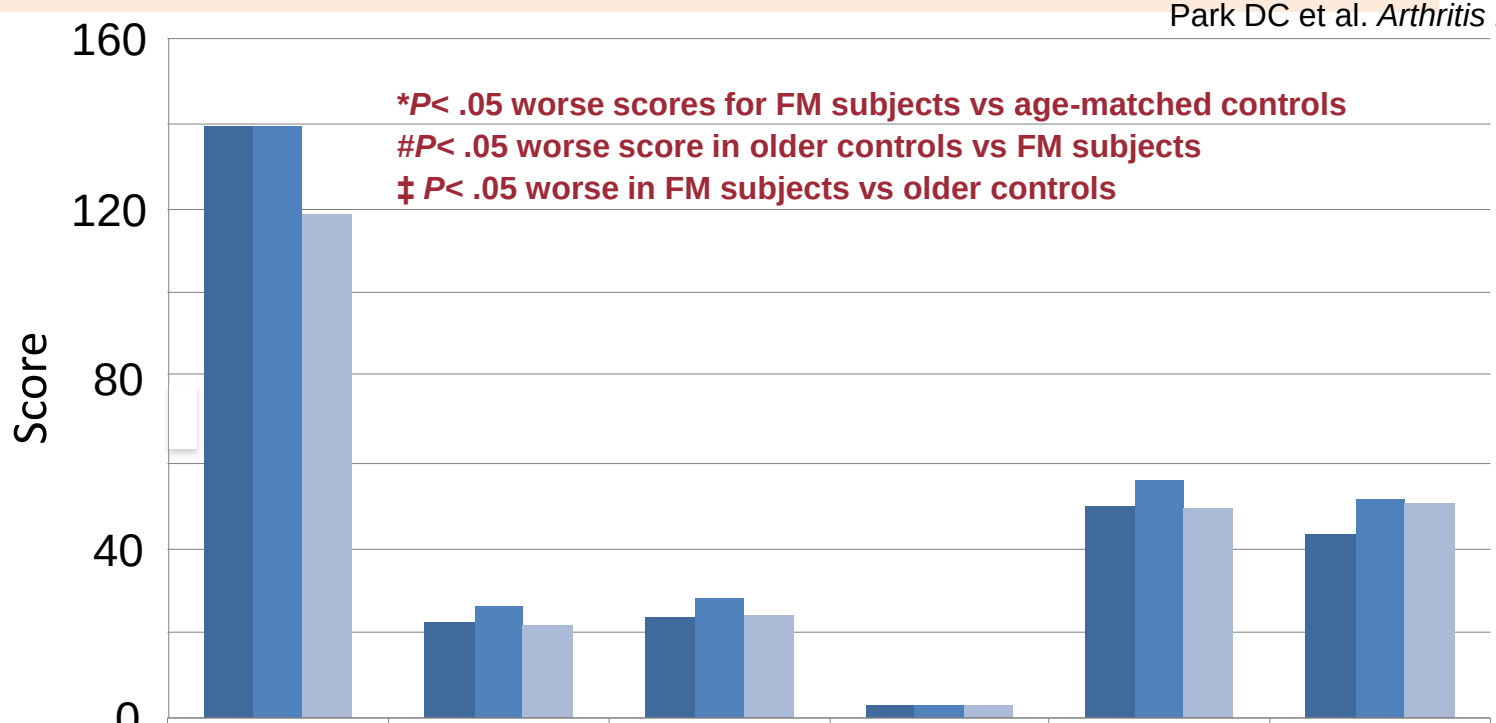
- i sintomi cognitivi sono 2.5 volte più prevalenti nei pazienti fibromialgici;
- circa il 75% dei pazienti affetti da fibromialgia riferiscono difficoltà cognitive e più del 50% «confusione mentale»

Cognitive Deficits in FM Patients: Comparison With Age-Matched Controls and Older Controls

Park DC et al. *Arthritis Rheum*. 2001;44:2125-2133.

Mean age=47.8 y;
mean age (older)=66.9 y;

n=23 patients with FM and
23 age-matched controls;
22 older controls (age + 20 years).

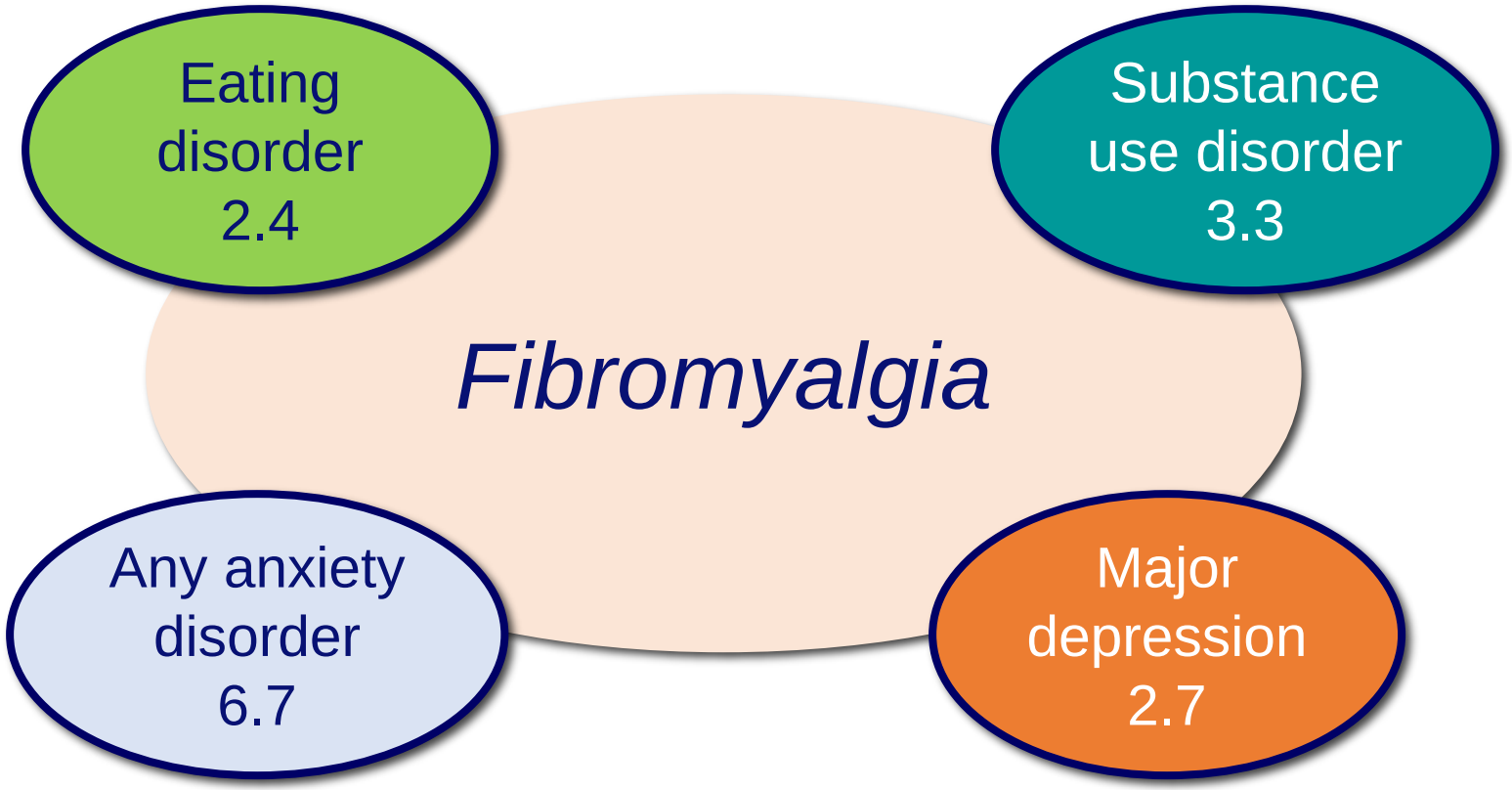


	information	working memory	free recall	recognition memory	verbal fluency	verbal knowledge
fibromyalgia	139.45	22.22 *	23.56 *	2.53 *	49.78	43.17 *‡
age-matched controls	139.23	26.3	27.83	2.95	56.08	51.26
older controls	118.5#	22.09	23.91	2.8	49.43	50.5

Disturbi psichiatrici

- Depressione
- Ansia
- Disturbi post-traumatici da stress

“Ring of Fire”: Odds Ratio of Psychiatric Comorbidities in FM



Arnold LM, et al. *J Clin Psychiatry* 2006;67:1219–25.

Research article

Open Access

Major depression, fibromyalgia and labour force participation: A population-based cross-sectional study

Aliya Kassam[1] and Scott B Patten*[2,3]

BMC Musculoskeletal Disorders 2006, **7**:4

Data from the Canadian Community Health Survey (CCHS) were used

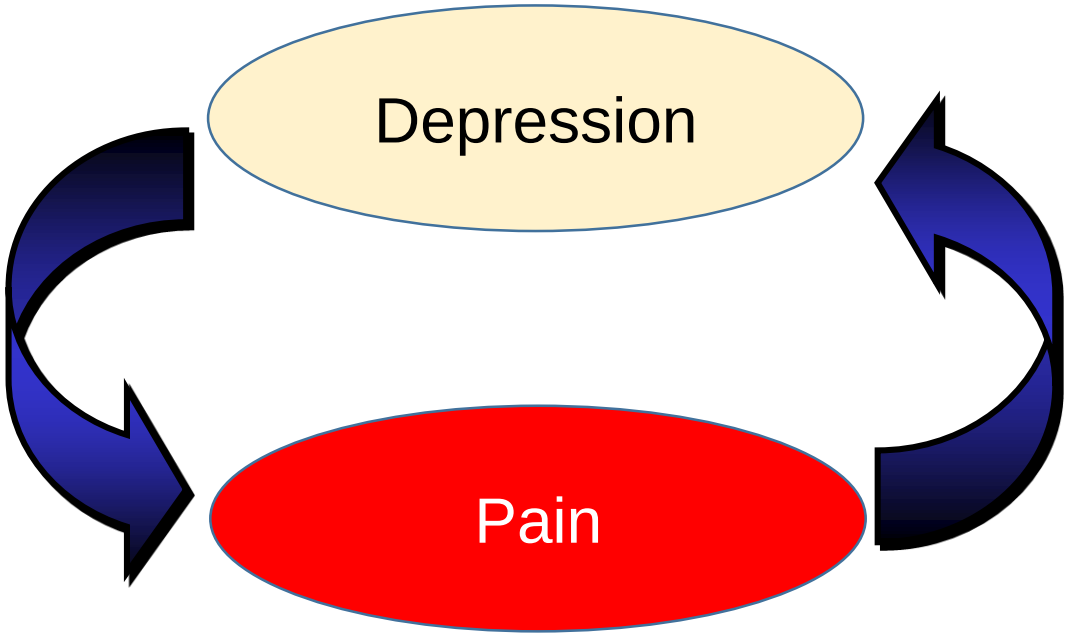
The annual prevalence of major depression was three times higher in subjects with fibromyalgia: 22.2%, than in those without this condition: 7.2%.

Logistic regression model predicting labour force participation indicated that this conditions had an independent
(negative) effect on labour force participation.

Alterazioni Umore…

Stress Cronico, Ansia e Depressione

Central sensitization
Reduction of pain threshold



Chronicity
Disability
Perceived self-efficacy
Strained relationships

Mood depression and pain are strictly related: depression reduces the pain threshold and chronic pain first induces demoralization and then mood depression

Alterazioni autonomiche (disautonomia)

- Visione sfocata , fotofobia, xeroftalmia
- Xerostomia
- Senso di instabilità
- Intolleranza al freddo (simil-Raynaud)
- Ipotensione ortostatica

Alterazioni Autonomiche

The sympathetic autonomic nervous system is **hyper-active** but also **hypo-reactive** in fibromyalgia, blunting the response to stressors:

- ✓ Reduced vasoconstrictor responses to acoustic and cold stressors
- ✓ Reduced heart rate response to exercise
- ✓ Reduced epinephrine response to hypoglycemic stress
- ✓ Altered response to tilt-table testing
- ✓ This is mirrored by a low Heart Rate Variability (a powerful indicator of sympathetic-parasympathetic imbalance)

Sindromi dolorose idiopatiche regionali

- Emicrania e cefalea
- Sindrome da colon irritabile
- Vulvodinia
- Sindrome da vescica irritabile

Cefalea

- **Cefalea** è il termine scientifico utilizzato per indicare il mal di testa, cioè un dolore a qualsiasi parte del capo (incluso viso, interno del cranio e cuoio capelluto) o alla parte superiore del collo
- Le cefalee sono distinte in **primarie** e **secondarie**, a seconda che siano un problema in sé o la conseguenza di una patologia, come trauma cranico o cervicale, disturbi circolatori cerebrali, infezioni, infiammazione, epilessia, intossicazioni o abuso di determinate sostanze (alcolici, droghe, analgesici), malattie del cranio, collo, orecchie, naso, denti, bocca e altre, disturbi psichiatrici, malattie internistiche (per es. ipertensione, anemia).

Prevalenza della sindrome fibromialgica in altre sindromi da sensibilizzazione c

Sindrome da sensibilizzazione centrale	% prevalencza di FMS (media)	% prevalenza odiFMS (range)
Disfunzione temporo-mandibolare	40.7	20.0-65.0
Colon irritabile	23.7	13.0-52.0
Mal di testa (tutti i tipi)	26.3	10.0-40.0
Cefalea muscolo-tensiva	29.7	23.0-36.4
Emicrania	16.0	10.0-22.4
Mista*	38.2	36.4-40.0
Cistite interstiziale	15.4	12.0-22.4
Chronic fatigue syndrome	**55.2**	**15.6-80**
Sindrome vulvo-vestibolare	23.4	15.6-31.2
Sindrome della guerra del Golfo	17.6	2.0-33-8

*Mix di cefalea muscolo-tensiva e di emicrania .

Yunus MH. Pain Research and Treatment 2012, ID 584573,

THE AMERICAN JOURNAL OF GASTROENTEROLOGY
© 1999 by Am. Coll. of Gastroenterology
Published by Elsevier Science Inc.

Vol. 94, No. 12, 1999
ISSN 0002-9270/99/$20.00
PII S0002-9270(99)00702-9

Fibromyalgia in the Irritable Bowel Syndrome: Studies of Prevalence and Clinical Implications

A. D. Sperber, M.D., M.S.P.H., Y. Atzmon, M.D., L. Neumann, Ph.D., I. Weisberg, M.D., Y. Shalit, M.D., M. Abu-Shakrah, M.D., A. Fich, M.D., and D. Buskila, M.D.

- The prevalence of fibromyalgia syndrome in IBS and IBS in FS is similar:
  - 79 patients with IBS : 31,6 % with FS
  - 100 patients with FS : 32,0 % with IBS

  FS and IBS coexist in many patients.
  - Patients with both disorders have worse scores on health related quality of life HRQOL indices

  than patients with either disorder alone, or controls.

LINK FMS AND IRRITABLE BOWEL SYNDROME

Triadafilopoulos et al. Dig Dis Sci 1991; Pace F, Sarzi-Puttini P, et al. J Musculoskel Pain 2001;

Abdominal pain and disturbed bowel function without evidence of structural or laboratory abnormalities on routine testing are reported in FM patients

- 60% prevalence of IBS in FMS patients, compared to 13% in the degerative joint disease patients *

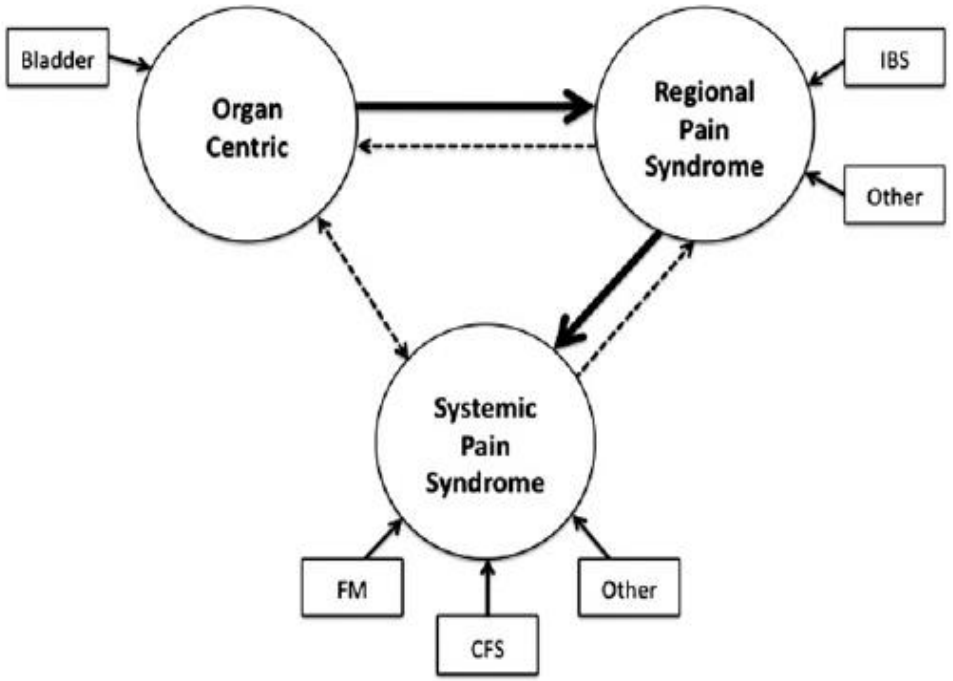
- 66% prevalence of IBS in FMS patients (only 27 patients)*

Interstitial Cystitis/Painful Bladder Syndrome and Associated Medical Conditions With an Emphasis on Irritable Bowel Syndrome, Fibromyalgia and Chronic Fatigue Syndrome

J. Curtis Nickel,*,† Dean A. Tripp,‡ Michel Pontari,§ Robert Moldwin,‖ Robert Mayer,¶ Lesley K. Carr, Ragi Doggweiler,** Claire C. Yang, Nagendra Mishra and Jorgen Nordling

0022-5347/10/1844-1358/0
THE JOURNAL OF UROLOGY®

Vol. 184, 1358-1363, October 2010
Printed in U.S.A.
DOI:10.1016/j.juro.2010.06.005



Irritable bowel syndrome, fibromyalgia and chronic fatigue syndrome are more prevalent in patients with interstitial cystitis/painful bladder syndrome than in asymptomatic control subjects, and result in significant impact.

Neurourol. Urodynam. © 2012 Wiley Periodicals, Inc.

The Association Between Overactive Bladder and Fibromyalgia Syndrome: A Community Survey

Jae Hoon Chung,[1] Shin Ah Kim,[2] Bo Youl Choi,[2] Hye-Soon Lee,[3] Seung Wook Lee,[1] Yong Tae Kim,[1] Tchun Yong Lee,[1] and Hong Sang Moon[1]*

Variables	FMS (n = 53), n (%)	Non-FMS (n = 867), n (%)	Crude OR (95% CI)†	*P*-Value†
Gender				
Male	13 (24.5)	389 (44.9)	1 (referent)	0.0049
Female	40 (75.5)	478 (55.1)	2.5 (1.32–4.75)	
Age groups				
40–49	3 (5.6)	230 (26.5)	1 (referent)	<0.0001
50–59	10 (18.9)	259 (29.8)	2.96 (0.81–10.86)	
60–69	11 (20.8)	206 (23.8)	4.09 (1.13–14.87)	
70–79	20 (37.7)	135 (15.6)	11.36 (3.31–38.93)	
≥80	9 (17)	37 (4.3)	18.65 (4.83–72.06)	
Residence area				
Rural (Yangpyeong)	38 (71.7)	550 (63.4)	1 (referent)	0.2268
Urban (Guri)	15 (28.3)	317 (36.6)	0.69 (0.37–1.27)	
Overactive bladder				
Non-OAB	32 (60.4)	760 (87.7)	1 (referent)	<0.0001
OAB	21 (39.6)	107 (12.3)	4.66 (2.59–8.38)	

Individuals with fibromyalgia had a significantly increased symptoms of of overactive bladder (OAB) after adjustment for gender, age group, and area of residence (odds ratio (OR) 3.39, 95% confidence interval (CI) 1.82–6.31).

SINDROMI DOLOROSE IDIOPATICHE REGIONALI

- Molti pazienti manifestano disturbi genito-urinari (come urgenza urinaria in assenza di infezioni del tratto urinario, dismenorrea o vestibolite vulvare, che porta a difficoltà nel rapporto sessuale, ecc.).

Lower urinary tract symptoms, *n* (%)	FG (*n* = 62)	NFG (*n* = 64)	*P* value
Increased urinary frequency and nocturia	1 (1.6)	0 (0)	0.492[a]
Nocturia without leakage	1 (1.6)	0 (0)	0.492[a]
Stress incontinence	10 (16.1)	8 (12.5)	0.560[b]
Stress and urgency incontinence	17 (27.4)	5 (7.8)	0.003[b]
Stress and urgency incontinence and increased urinary frequency	2 (3.2)	0 (0)	0.240[a]
Urgency incontinence	5 (8.1)	3 (4.7)	0.488[a]
Urinary urgency without leakage	1 (1.6)	0 (0)	0.492[a]
No symptoms	22 (35.4)	47 (73.4)	< 0.001[b]

FG Fibromyalgia Group, *NFG* Non-fibromyalgia Group

[a] Analysis conducted with the Fisher's exact test

[b] Analysis conducted with the chi-square test

The odds of presenting lower urinary tract symptoms (LUTS) is 5.03 (95%CI 2.35–10.75) higher in women with fibromyalgia.

Nickel, J. C. et al. J. Urol. 184, 1358–1363 (2010).
Kalichman, L. Clin. Rheumatol. 28, 365–369 (2009).
Souza de Carvalho Fusco, et al. Clin Rheum,

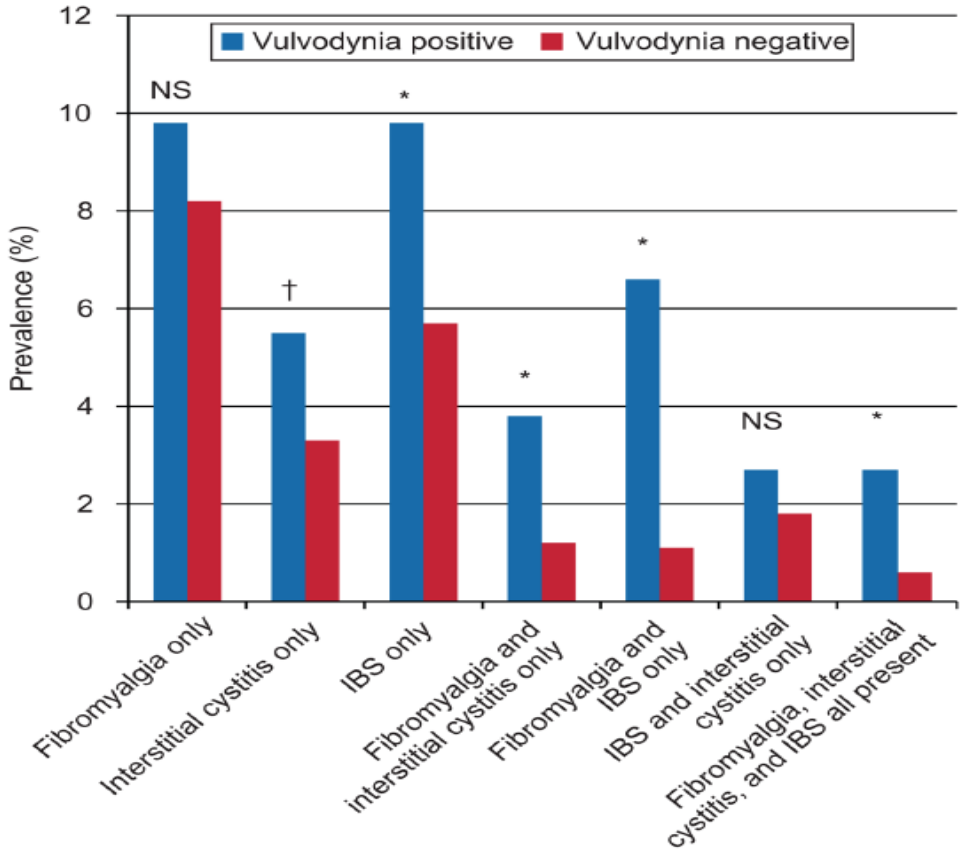
La vulvodinia è un dolore cronico localizzato alla vulva senza una causa attualmente identificabile e colpisce le donne in tutte le fasi del ciclo vitale.

Disorder	Number surveyed	Have It	Suspect It
Chronic Fatigue	1566	12.6%	19.9%
Endometriosis	1452	15.6%	4.4%
Fibromyalgia	**1547**	**20.0%**	**15.4%**
Interstitial Cystitis	1662	25.2%	22.0%
Irritable Bowel	1675	34.9%	15.8%
Low Back Pain	1729	55.5%	-
Migraine Headaches	1564	31.2%	-
Chemical Sensitivities	1595	27.2%	18.2%
Other Chronic Pain	2150	40.5%	-

Results from a self-report survey of vulvodynia patients administered by the National Vulvodynia Association

Relationship Between Vulvodynia and Chronic Comorbid Pain Conditions

Barbara D. Reed, MD, MSPH[1], Siobán D. Harlow, PhD[2], Ananda Sen, PhD[1,3], Rayna M. Edwards, MPH[2], Di Chen, MPHc[2], and Hope K. Haefner, MD[4]

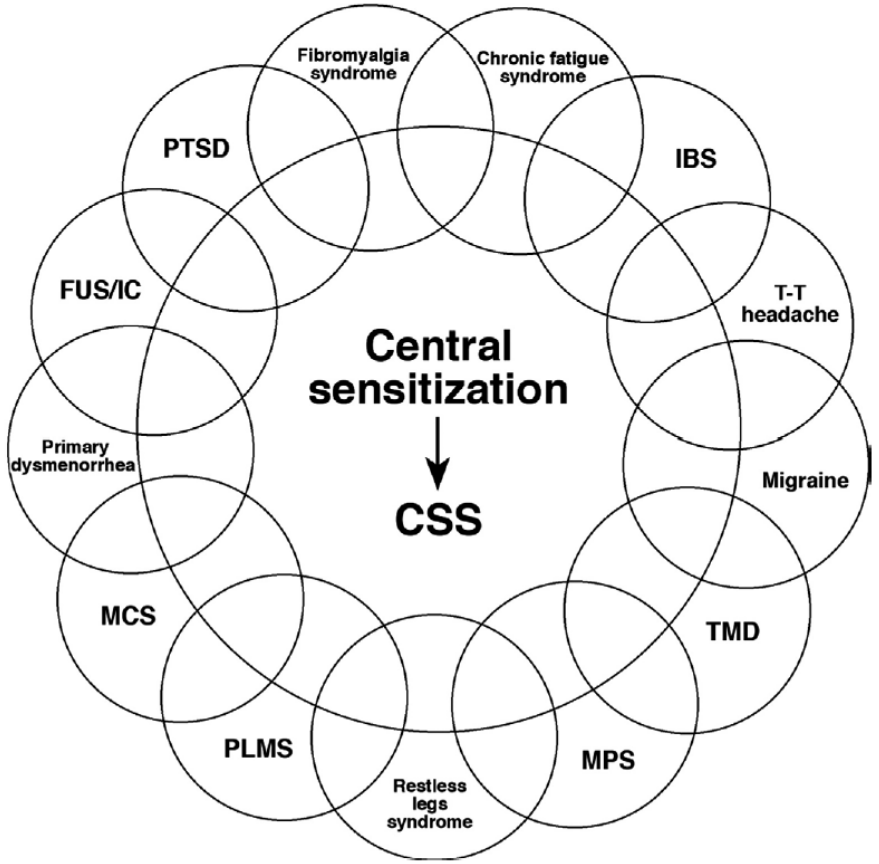


Prevalence of other chronic comorbid pain conditions, individually or in combination, in women with and without vulvodynia (weighted data). *P≤0.001. †P=.03.

Obstet Gynecol. 2012 July ; 120(1): 145–151

Chronic widespread pain in the spectrum of rheumatological diseases

Fabiola Atzeni, MD, PhD [a,f,*], Marco Cazzola, MD [b], Maurizio Benucci, MD [c], Manuela Di Franco, MD [d], Fausto Salaffi, MD, PhD [e], Piercarlo Sarzi-Puttini, MD [a]



Best Practice & Research Clinical Rheumatology 25 (2011) 165–171

It is important for health professionals to be aware of this syndrome and to diagnose the patients to avoid a steady increase in diagnostic tests.

In rheumatology practice it is especially important to be aware of the existence of FMS in association with immune inflammatory diseases.