
# Μεταβολικό σύνδρομο και υπερουριχαιμία σε ασθενείς με χρόνιες φλεγμονώδεις παθήσεις

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ΠΑΝΕΠΙΣΤΗΜΙΑΚΟ ΓΕΝΙΚΟ ΝΟΣΟΚΟΜΕΙΟ ΑΛΕΞΑΝΔΡΟΥΠΟΛΗΣ

Ρέθυμνο, 5 Οκτωβρίου 2025

# Δήλωση συμφερόντων

**Δεν υπάρχει κάποια σύγκρουση συμφερόντων για αυτήν την ομιλία**

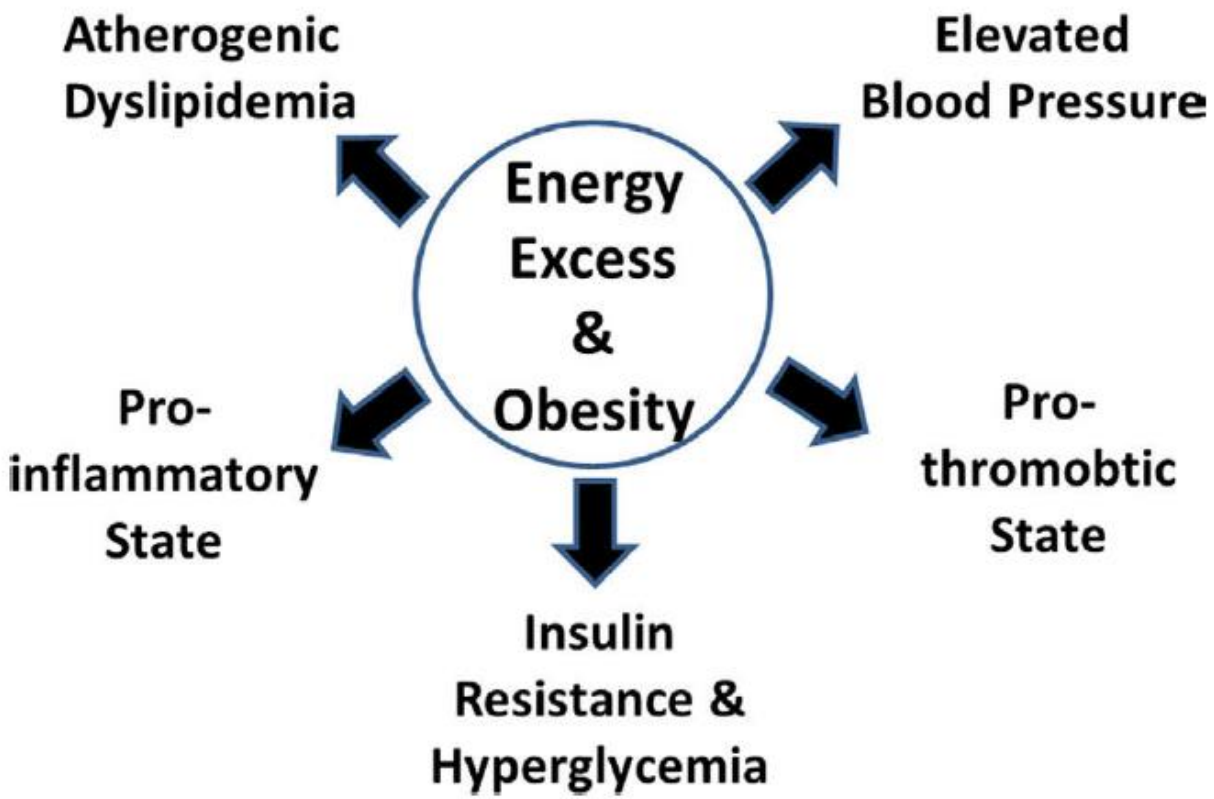
# Το μεταβολικό σύνδρομο

**TABLE 2. Criteria for Clinical Diagnosis of Metabolic Syndrome**

| Measure (any 3 of 5 constitute diagnosis of metabolic syndrome) | Categorical Cutpoints |
|---|---|
| Elevated waist circumference*† | ≥102 cm (≥40 inches) in men<br>≥88 cm (≥35 inches) in women |
| Elevated triglycerides | ≥150 mg/dL (1.7 mmol/L)<br>or<br>On drug treatment for elevated triglycerides‡ |
| Reduced HDL-C | <40 mg/dL (1.03 mmol/L) in men<br><50 mg/dL (1.3 mmol/L) in women<br>or<br>On drug treatment for reduced HDL-C‡ |
| Elevated blood pressure | ≥130 mm Hg systolic blood pressure<br>or<br>≥85 mm Hg diastolic blood pressure<br>or<br>On antihypertensive drug treatment in a patient with a history of hypertension |
| Elevated fasting glucose | ≥100 mg/dL<br>or<br>On drug treatment for elevated glucose |

*Circulation. 2005;112:2735-2752*
*Circulation. 2009;120:1640–5*

# Η παχυσαρκία είναι ο σημαντικότερος παράγων



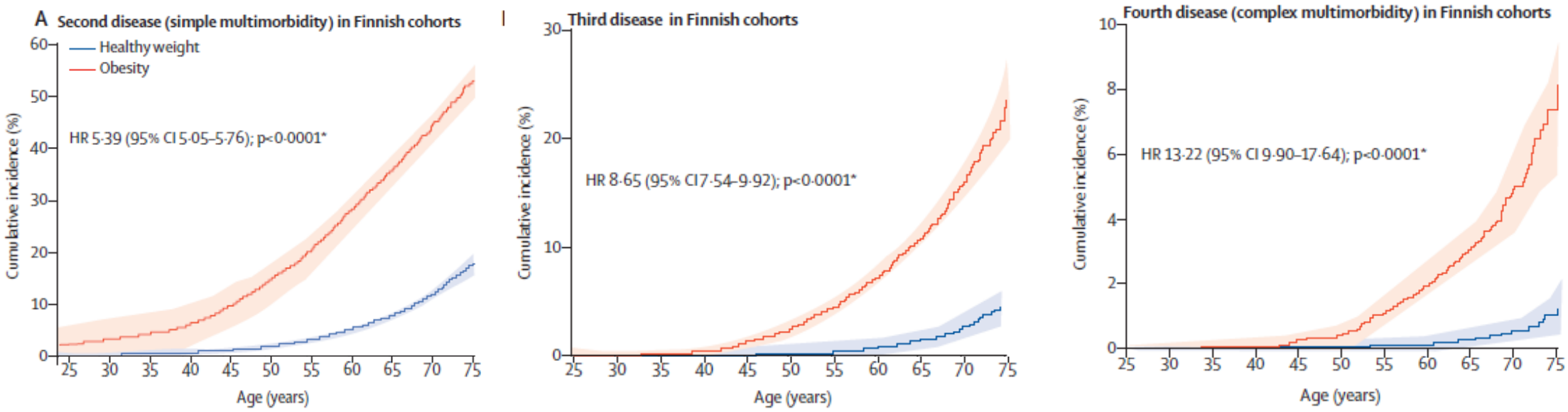

*Trends Cardiovasc Med. 2016 May;26(4):364-73*

# Συσχέτιση μεταξύ παχυσαρκίας, 78 παθήσεων & θανάτου

| Disease category (ICD-10 chapter) | ICD-10 code | HR (95% CI)* | |
|---|---|---|---|
| | | Finnish cohorts | UK Biobank cohort |
| **Infections** | **A01–B89** | **2·01 (1·84–2·19)** | 1·37 (1·32–1·42) |
| Cancer | C00–C97 | 1·08 (1·01–1·16) | 1·06 (1·04–1·08) |
| **Diseases of the blood** | **D50–D89** | **1·78 (1·47–2·16)** | 1·42 (1·36–1·47) |
| **Endocrine diseases** | **E00–E35** | **8·30 (7·78–8·86)** | **2·04 (1·90–2·18)** |
| Mental and behavioural disorders | F00–F99 | 1·08 (0·97–1 | |
| **Diseases of the nervous system** | **G00–G99** | **1·85 (1·74–** | |
| Diseases of the eye | H00–H59 | 1·20 (1·12– | |
| Diseases of the ear | H60–H99 | 1·19 (1·01– | |
| **Diseases of the circulatory system** | **I00–I99** | 1·47 (1·40– | |
| Diseases of the respiratory system | J00–J99 | 1·35 (1·27–1·44) | 1·30 (1·2–1·34) |
| **Diseases of the digestive system** | **K00–K93** | **1·57 (1·50–1·65)** | 1·22 (1·20–1·24) |
| **Diseases of the skin** | **L00–L99** | **2·03 (1·76–2·34)** | 1·37 (1·33–1·41) |
| **Diseases of the musculoskeletal system** | **M00–M99** | 1·41 (1·36–1·47) | **1·65 (1·62–1·68)** |
| Disease of the genitourinary system | N00–N99 | 1·20 (1·14–1·26) | 1·39 (1·36–1·43) |
| Death | | 1·32 (1·20–1·45) | 1·25 (1·22–1·29) |
| Rheumatoid arthritis and related disorders | M05–M06, M08, M13, M30–M35 | 1·33 (1·19–1·48) | 1·49 (1·38–1·61) |
| **Gout†** | **M10** | **4·31 (3·10–5·99)** | **5·27 (4·00–6·95)** |
| **Osteoarthritis†** | **M15–M19** | **2·71 (2·54–2·90)** | **2·56 (2·49–2·64)** |
| **Sciatica** | M50–M51 | 1·14 (0·99–1·32) | **1·71 (1·60–1·82)** |
| **Back pain†** | **M54** | **1·85 (1·54–2·23)** | **1·83 (1·73–1·93)** |
| Soft tissue disorders | M60–M79 | 1·20 (1·11–1·29) | 1·49 (1·45–1·54) |

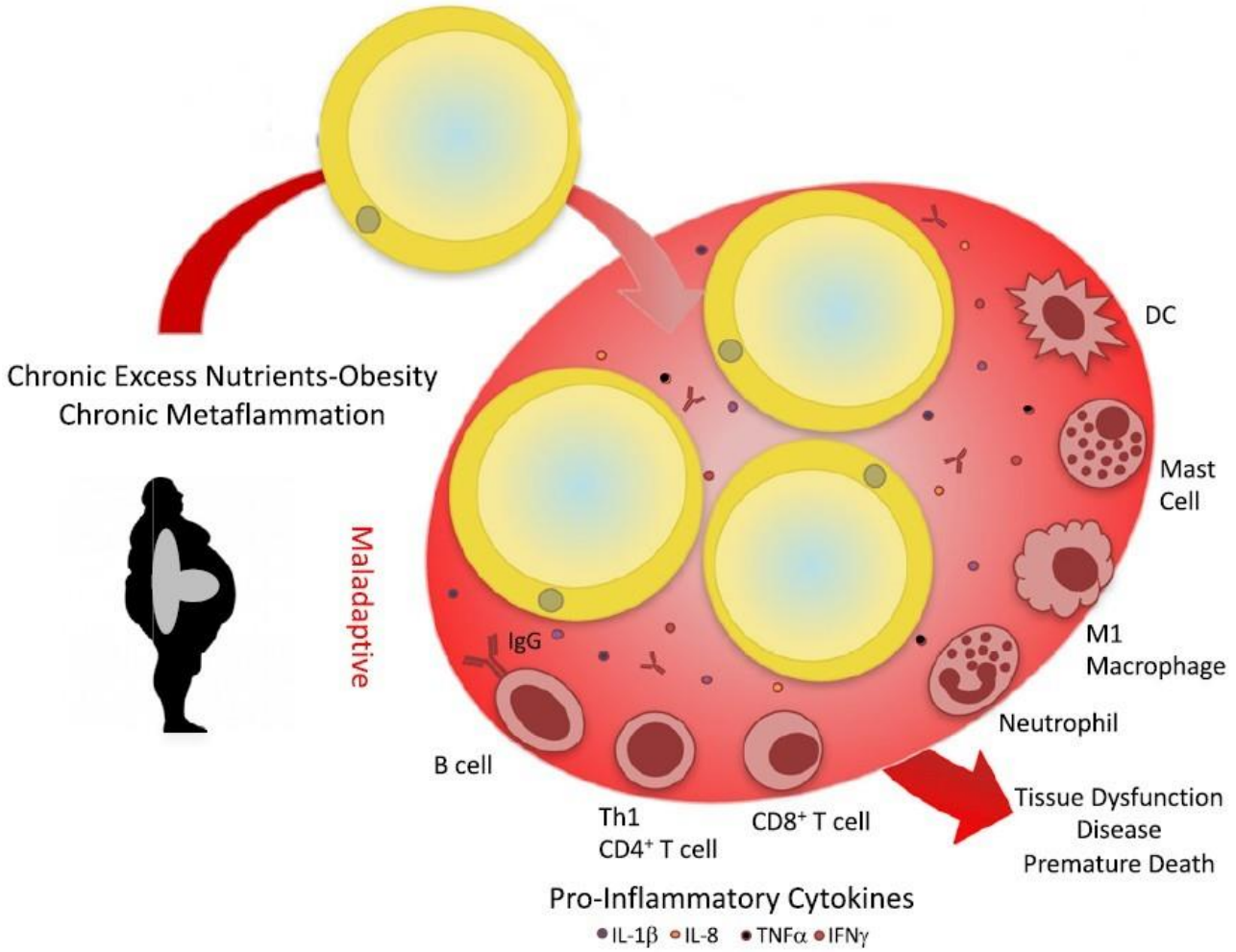
*Lancet Diabetes Endocrinol. 2022; 10: 253–63*

# Η παχυσαρκία είναι παράγων κινδύνου για πολυσυννοσηρότητα




*Lancet Diabetes Endocrinol. 2022; 10: 253–63*

# Η παχυσαρκία έχει ανοσολογικές προεκτάσεις



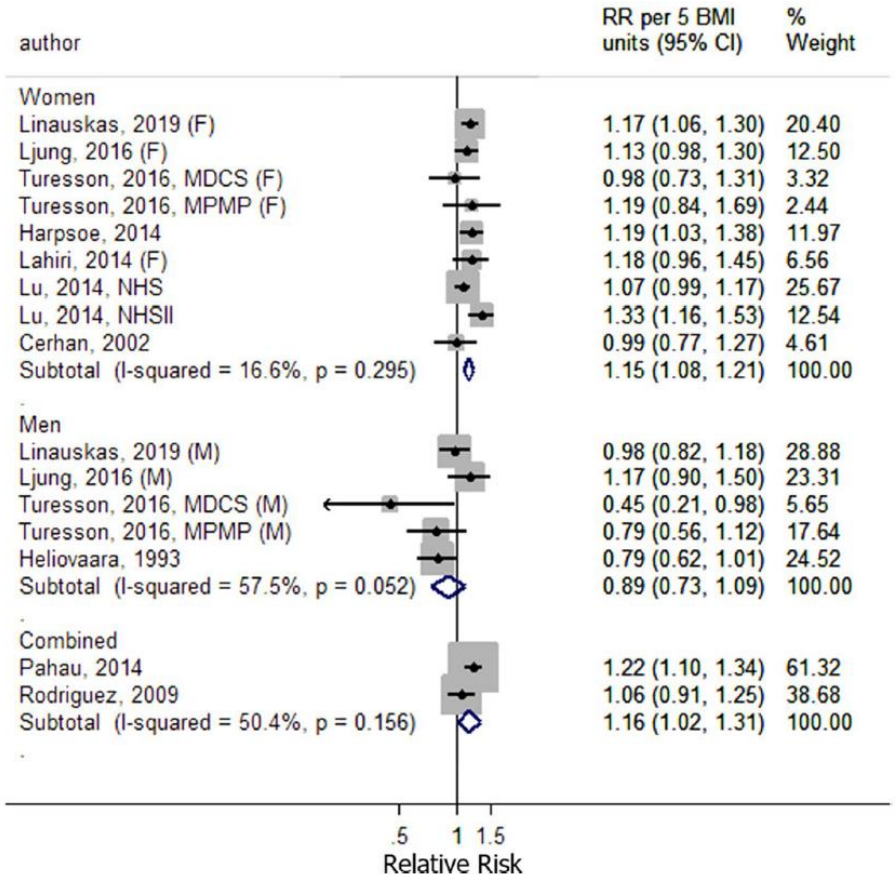

*Immunity. 2017 Sep 19;47(3):406-420*

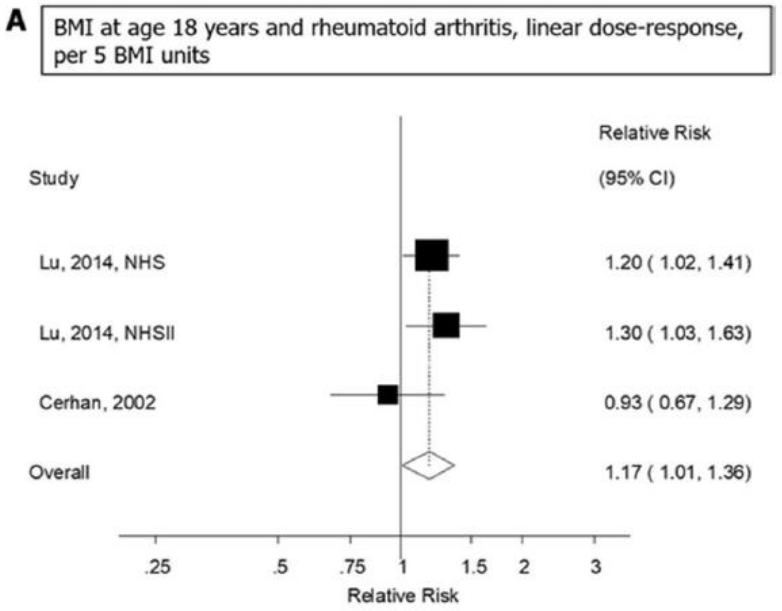
**Είναι η παχυσαρκία παράγων κινδύνου για ρευματικές παθήσεις;**

PA

# Adiposity and the risk of rheumatoid arthritis: a systematic review and meta-analysis of cohort studies

Tomoya Ohno[1,4], Dagfinn Aune[1,2,3,5]✉ & Alicia K. Heath[1,5]




*Sci Rep. 2020 Sep 29;10:16006*

ΨA

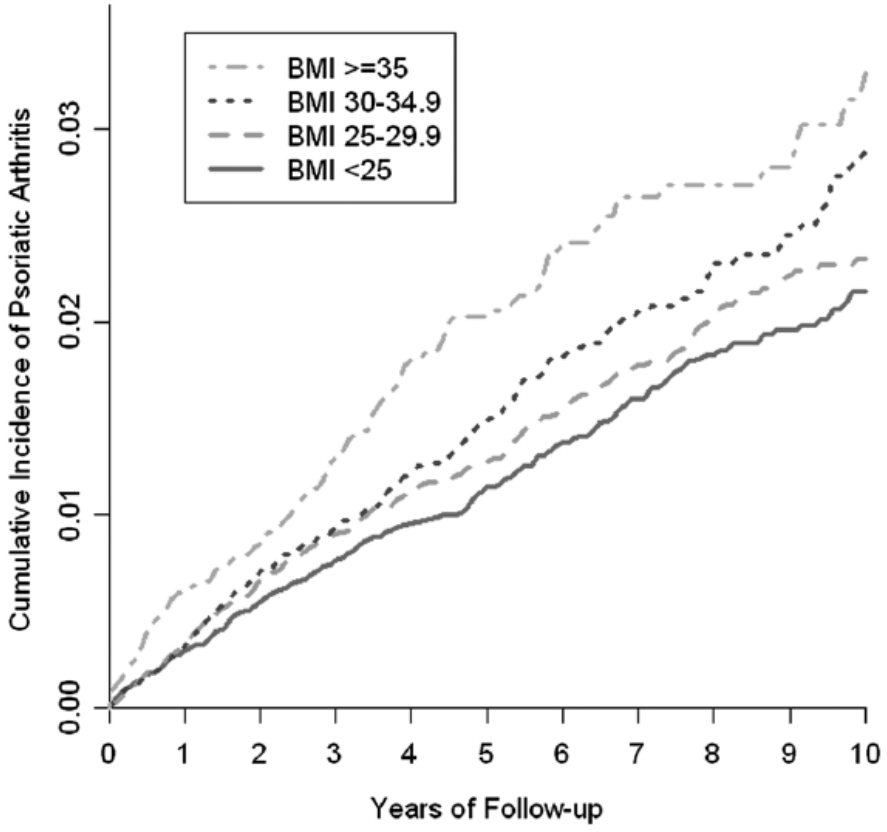



**Figure 1** Time to psoriatic arthritis according to body mass index (BMI) category among patients with psoriasis (N=75 395).

*Love TJ. Ann Rheum Dis. 2012;71:1273-7*

**Table 2** Age and multivariate-adjusted RR for the association of adiposity measurements with risk of psoriatic arthritis among all participants*

| | Cases | Person-years | Age-adjusted RR (95% CI) | Multivariate-adjusted RR† (95% CI) |
|---|---|---|---|---|
| Updated BMI (kg/m$^2$) | 146 | 1 231 693 | | |
| <25.0 | 40 | 703 190 | 1.00 | 1.00 |
| 25.0–29.9 | 35 | 297 149 | 1.88 (1.19 to 2.96) | 1.83 (1.15 to 2.89) |
| 30.0–34.9 | 28 | 133 146 | 3.22 (1.98 to 5.26) | 3.12 (1.90 to 5.11) |
| ≥35.0 | 43 | 98 208 | 6.60 (4.26 to 10.23) | 6.46 (4.11 to 10.16) |
| p for trend | | | <0.0001 | <0.0001 |
| BMI at age 18 years (kg/m$^2$) | 145 | 1 222 076 | | |
| <21.0 | 67 | 701 559 | 1.00 (0.64 to 1.58) | 1.04 (0.66 to 1.64) |
| 21.0–22.9 | 26 | 272 700 | 1.00 | 1.00 |
| 23.0–24.9 | 24 | 125 453 | 2.01 (1.15 to 3.50) | 1.93 (1.11 to 3.37) |
| 25.0–29.9 | 17 | 93 857 | 1.88 (1.02 to 3.46) | 1.74 (0.94 to 3.21) |
| ≥30.0 | 11 | 28 508 | 4.07 (2.01 to 8.24) | 3.55 (1.75 to 7.23) |
| p for trend | | | <0.0001 | <0.0001 |
| Weight change from age 18 years (lb) | 145 | 1 222 076 | | |
| Loss or increase of <20.0 | 32 | 563 364 | 1.00 | 1.00 |
| Increase of 20.0–49.9 | 45 | 435 087 | 1.68 (1.06 to 2.65) | 1.72 (1.09 to 2.72) |
| Increase of 50.0–99.9 | 50 | 191 981 | 3.88 (2.46 to 6.13) | 3.67 (2.31 to 5.84) |
| Increase of ≥100.0 | 18 | 31 645 | 8.09 (4.48 to 14.64) | 7.00 (3.78 to 12.96) |
| p for trend | | | <0.0001 | <0.0001 |
| Waist circumference (inches) | 72 | 599 200 | | |
| Tertile 1, <28.0 | 7 | 168 183 | 1.00 | 1.00 |
| Tertile 2, 28.0–31.9 | 17 | 227 235 | 1.72 (0.71 to 4.16) | 1.65 (0.68 to 4.00) |
| Tertile 3, ≥32.0 | 48 | 203 782 | 5.05 (2.28 to 11.20) | 4.82 (2.15 to 10.83) |
| p for trend | | | <0.0001 | <0.0001 |
| Hip circumference (inches) | 70 | 597 544 | | |
| Tertile 1, <38.0 | 13 | 233 613 | 1.00 | 1.00 |
| Tertile 2, 38.0–40.9 | 13 | 187 362 | 1.18 (0.55 to 2.56) | 1.25 (0.58 to 2.72) |
| Tertile 3, ≥41.0 | 44 | 176 569 | 4.02 (2.16 to 7.51) | 4.32 (2.27 to 8.24) |
| p for trend | | | <0.0001 | <0.0001 |
| Waist–hip ratio | 70 | 596 835 | | |
| Tertile 1, <0.744 | 12 | 199 028 | 1.00 | 1.00 |
| Tertile 2, 0.744–0.800 | 20 | 207 096 | 1.58 (0.77 to 3.23) | 1.49 (0.73 to 3.06) |
| Tertile 3, >0.800 | 38 | 190 712 | 3.12 (1.63 to 5.98) | 2.84 (1.48 to 5.48) |
| p for trend | | | 0.0002 | 0.0006 |

*Psoriasis cases with only skin phenotypes were excluded during the follow-up.
†Adjusted for age (continuous variable), smoking (never, past, current with 1–14, 15–24, or ≥25 cigarettes/day), alcohol drinking (no, <4.9, 5.0–9.9, 10–14.9, 15–29.9 or ≥30.0 g/day), vigorous physical activity (metabolic equivalent hours/week, in quintile), and height (inches, for the analysis of waist circumference, hip circumference and waist–hip ratio), and weight at 18 years (for the analysis of weight change from 18 years).
BMI, body mass index.

*Li W. Ann Rheum Dis. 2012;71:1267-72*

# ΑξΣπΑ

Observational Study

Medicine

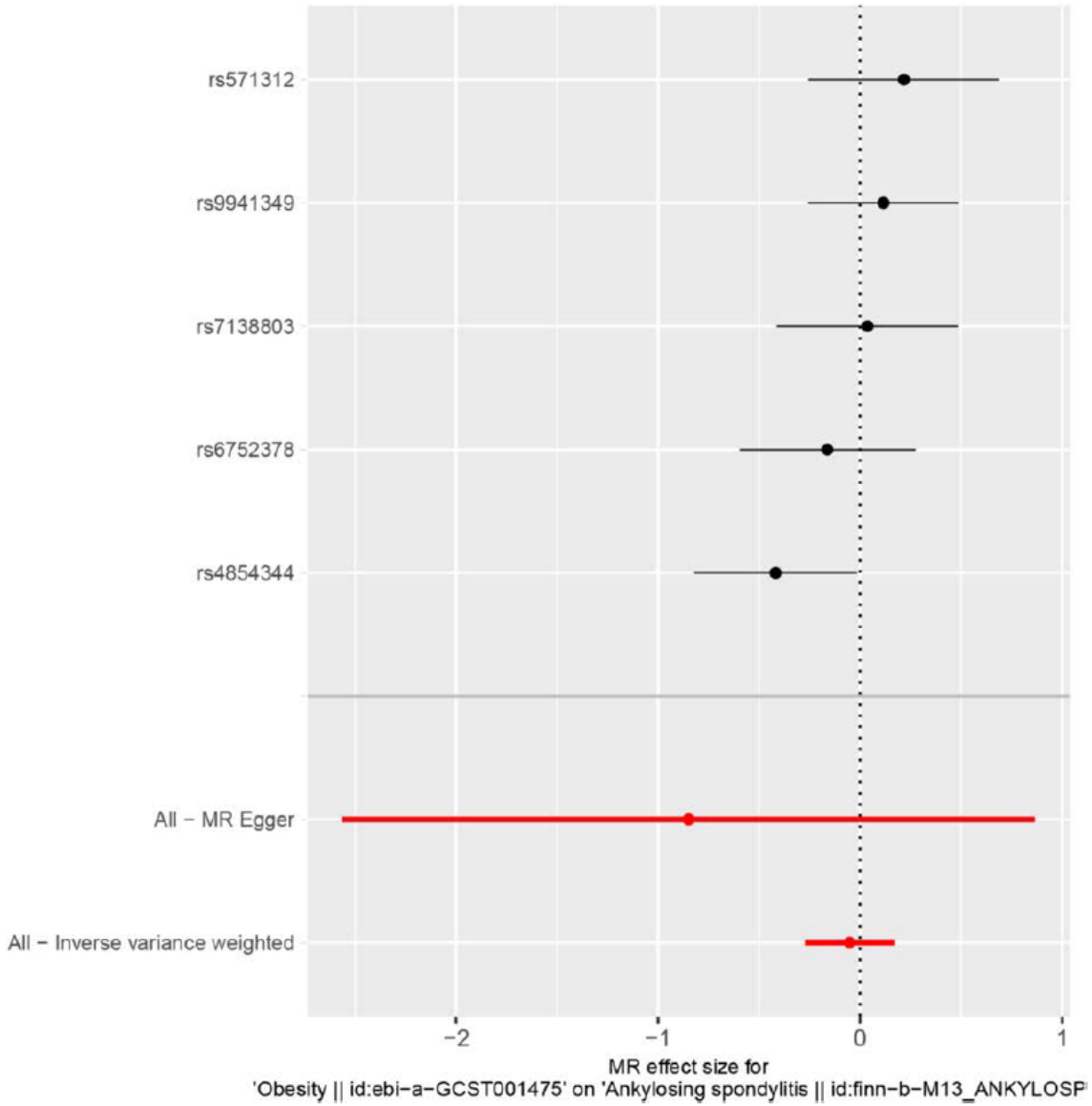
OPEN

**Assessing the causal relationship between obesity and ankylosing spondylitis**

**A two-sample Mendelian randomization study**

Deng Guanghua, MM[a], Shu Yunjun, MM[a,*]

*No evidence of a causal relationship between obesity and the development of AS*




*Medicine 2025;104:21(e42559)*

ΣΕΛ

# Obesity and the risk of systemic lupus erythematosus among women in the Nurses' Health Studies

Sara K. Tedeschi, MD, MPH[a,*], Medha Barbhaiya, MD, MPH[a], Susan Malspeis, MS[a], Bing Lu, MD, PhD[a], Jeffrey A. Sparks, MD, MMSc[a], Elizabeth W. Karlson, MD[a], Walter Willett, MD, DrPH[b,c], Karen H. Costenbader, MD, MPH[a]

SLE risk by cumulative average BMI category among 114,527 women in the Nurses' Health Study (NHS, 1976–2012) and 109,033 women in the Nurses' Health Study II (NHSII, 1989–2013)

| | Cumulative average BMI, kg/m$^2$ | | | |
|---|---|---|---|---|
| | 18.5 to $<25$ Normal | 25 to $<30$ Overweight | $\geq 30$ Obese | $p$ Trend[b] |
| NHS, $n = 153$ *cases* | | | | |
| Mean BMI, kg/m$^2$ (SD) | 22.2 (1.6) | 27.0 (1.4) | 33.8 (3.6) | |
| Cases/person-years | 88/1,989,754 | 47/897,130 | 18/380,805 | |
| Adjusted HR (95% CI)[a] | 1.00 | 1.28 (0.89–1.84) | 1.11 (0.65–1.87) | 0.49 |
| NHSII, $n = 115$ *cases* | | | | |
| Mean BMI, kg/m$^2$ (SD) | 22.1 (1.6) | 27.1 (1.4) | 35.2 (4.8) | |
| Cases/person-years | 67/1,375,334 | 18/569,188 | 30/390,442 | |
| Adjusted HR (95% CI)[a] | 1.00 | 0.70 (0.41–1.18) | 1.85 (1.17–2.91) | 0.02 |
| NHS + NHSII meta-analysis | | | | |
| Cases/person-years | 155/3,365,088 | 65/1,466,318 | 48/771,247 | |
| Adjusted HR (95% CI)[a] | 1.00 | 0.97 (0.54–1.76) | 1.46 (0.88–2.40) | 0.60 |

[a] HRs adjusted for age in months, questionnaire cycle, pregnancy during the questionnaire cycle (yes/no), race (White/non-White), census-tract household median income ($<$\$60,000 vs. $\geq$\$60,000), smoking (never/past/current), alcohol intake (none, $>0$ to $<5$, $\geq 5$ g/day), oral contraceptive use (ever/never), age at menarche ($\leq 10$ vs. $>10$ years), menopausal status, and post-menopause hormone (PMH) use (pre-menopausal, post-menopausal/never used PMH, post-menopausal/ever used PMH).

[b] $p$ Value for cumulative average BMI (continuous kg/m$^2$) in multivariable Cox models.

*Semin Arthritis Rheum. 2017 Dec;47(3):376-383*

**Πόσο συχνό είναι το μεταβολικό σύνδρομο σε ασθενείς με ρευματικές παθήσεις;**

PA

# Prevalence of Metabolic Syndrome in Patients With Rheumatoid Arthritis: An Updated Systematic Review and Meta-Analysis

*Wei Cai[1]*, Xuemi Tang[2] and Min Pang[2]*

**TABLE 2 |** Subgroup prevalence of MetS among patients with RA.

| Subgroups | Number of studies | Prevalence (95% CI) |
|---|---|---|
| **Continent** | | |
| Asia | 39 | 32.7 (29–36.3) |
| Europe | 25 | 32.7 (27.5–38) |
| America | 18 | 32.3 (27–37.5) |
| Africa | 14 | 28 (22.8–33.2) |

*Front Med. 2022; 9:855141*

# ΨΑ, ΨΩΡΙΑΣΗ, ΡΑ

REVIEW

International Journal of Rheumatic Diseases WILEY

## Systematic review and meta-analysis on prevalence of metabolic syndrome in psoriatic arthritis, rheumatoid arthritis and psoriasis

TABLE 1 Prevalence of metabolic syndrome in psoriatic arthritis, psoriasis and rheumatoid arthritis (random-effects model)

| Population group | Prevalence | SE | 95% CI | $I^2$ |
|---|---|---|---|---|
| Psoriatic arthritis | 0.46 | 0.06 | 0.40-0.51 | 91 |
| Psoriasis | 0.34 | 0.03 | 0.32-0.37 | 95 |
| Rheumatoid arthritis | 0.31 | 0.04 | 0.27-0.35 | 91 |

TABLE 3 Prevalence of individual characteristics of metabolic syndrome in psoriatic arthritis, psoriasis and rheumatoid arthritis

| Population group | Central obesity/ elevated WC (%) | Hyper-triglyceridemia (%) | Reduced HDL (%) | DM/insulin resistance (%) | Impaired fasting glucose (%) | HTN (%) |
|---|---|---|---|---|---|---|
| Psoriatic arthritis | 62.1 | 35.6 | 36.6 | 20.6 | 25.8 | 50.2 |
| Psoriasis | 49.5 | 37.3 | 42.6 | 21.3 | 32.9 | 40.2 |
| Rheumatoid arthritis | 62.5 | 35.4 | 43.6 | 19.9 | 26.4 | 51.9 |

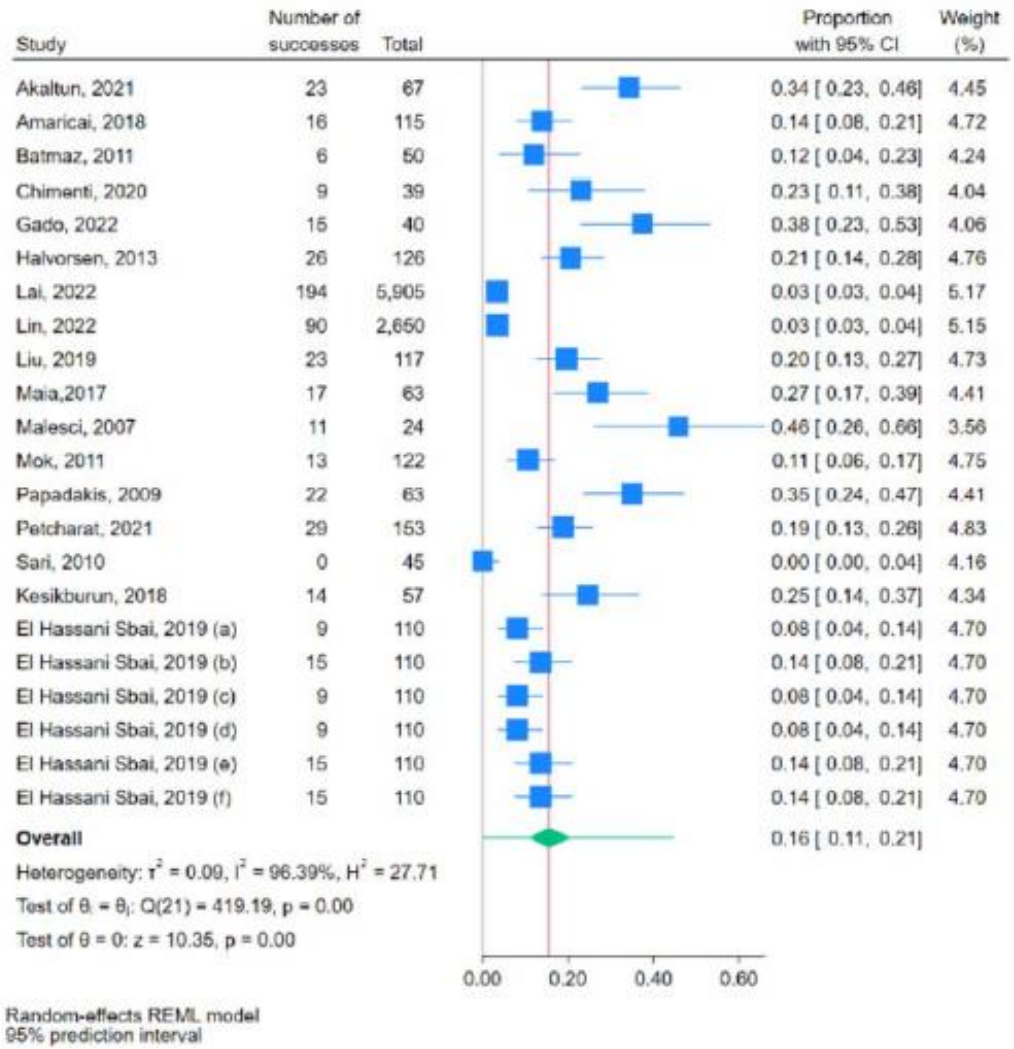
*Int J Rheum Dis. 2021;24:1112–1120*

# ΑξΣπΑ

## Prevalence of metabolic syndrome in ankylosing spondylitis: a multi national meta-analysis study

Sandeep Samethadka Nayak[1], Kwame Boateng Agyeman[2], Khushbu Viresh Janani[3], Maryam Jafari[4], Mohammad Amouzadeh Lichahi[4], Pubali Biswas[6], Mohammad Hashemi[7], Nimra Shafi[8], Yasmin Sahli[9], Ehsan Amini-Salehi[5*] and Narsimha Rao Keetha[10]

Pooled prevalence of MetS in AS
15.5% (95% CI 10.9–20.8%)




*Diabetol Metab Syndr. 2025 May 16;17(1):158*

# ΣΕΛ

Prevalence and risk of metabolic syndrome in patients with systemic lupus erythematosus: A meta-analysis

Chong SUN,[1] Wen QIN,[2] Yu-Hui ZHANG,[1] Yan WU,[1] Qian LI,[1] Mei LIU[1] and Chun-Di HE[1]

- Επιπολασμός ΜΣ στο ΣΕΛ
  - 0.26 (95% CI: 0.23–0.29)
- Σχετικός κίνδυνος ΜΣ στο ΣΕΛ (σε σχέση με ομάδα ελέγχου)
  - OR = 1.88 (95% CI: 1.54–2.30)

*Int J Rheum Dis. 2017; 20: 917–928*

# Ελληνικά Δεδομένα

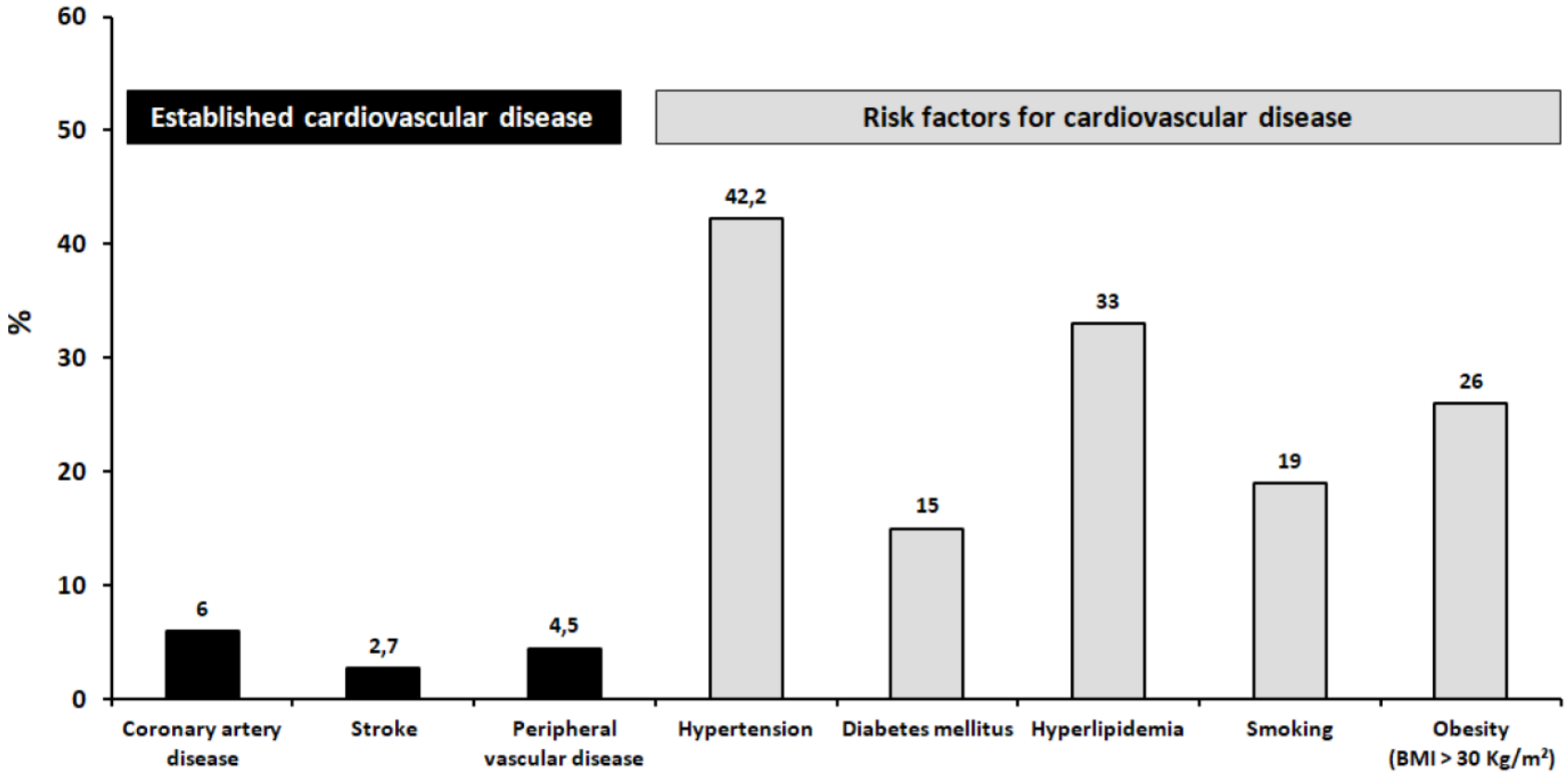
PA

MEDITERRANEAN JOURNAL OF RHEUMATOLOGY | 29 1 2018



ORIGINAL PAPER

## Multicenter Cross-sectional Study of Patients with Rheumatoid Arthritis in Greece: Results from a cohort of 2.491 patients




*Thomas K et al. Mediterr J Rheumatol 2018; 29(1):27-37*

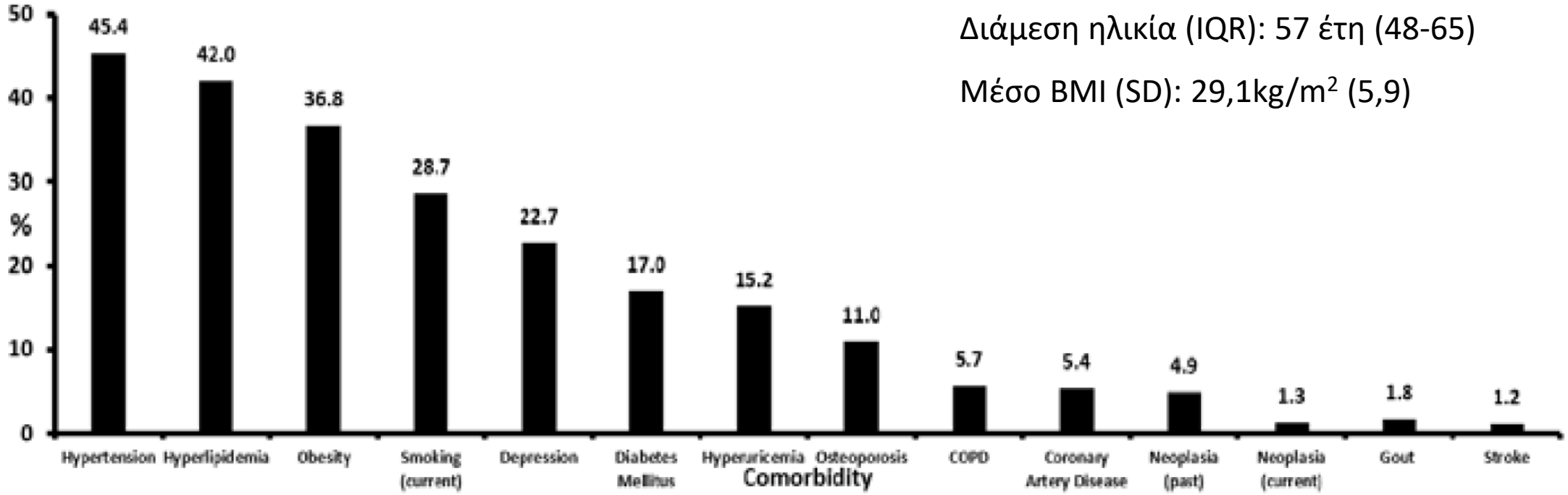
# ΨΑ

N=923

Γυναίκες: 55%

Διάμεση ηλικία (IQR): 57 έτη (48-65)

Μέσο BMI (SD): 29,1kg/$m^2$ (5,9)




*Fragoulis GE et al. Mediterr J Rheumatol. 2023 Dec 30;34(4):418-426*

ΑξΣπΑ

Contents lists available at ScienceDirect

Seminars in Arthritis and Rheumatism

journal homepage: www.elsevier.com/locate/semarthrit

# Disease characteristics, co-morbidities and treatment response in a contemporary axial spondyloarthritis cohort: Analysis of 717 patients from the Greek AxSpA registry

Charalampos Papagoras [a,*,1], George E. Fragoulis [b,1], Nikolaos Fytanidis [a], Michael Krikelis [c],

**Table 2**
Main comorbidities of patients in the AxSpA cohort.

| | |
|---|---|
| BMI, kg/m$^2$,median (SD) (N=626) | 26.6 (4.4) |
| *Normal, n (%)* | 232 (37.1) |
| *Overweight, n (%)* | 248 (39.6) |
| *Obesity, n (%)* | 136 (21.7) |
| Smoking *(N=670)* | |
| *Former, n (%)* | 143 (21.3) |
| *Current, n (%)* | 240 (35.8) |
| *Never, n (%)* | 287 (42.8) |
| COPD, n/N (%) | 35/675 (5.2) |
| Dyslipidemia, n/N (%) | 212/681 (31.1) |
| Total cholesterol, mg/dL, median (IQR) | 189 (164–213) |
| Triglyceride, mg/dL, median (IQR) | 118 (83–160) |
| HDL cholesterol, mg/dL, median (IQR) | 50 (43–60) |
| LDL cholesterol, mg/dL, median (IQR) | 107 (87–136) |
| Hypertension, n/N (%) | 209/688 (30.4) |
| Diabetes, n/N (%) | 61/685 (8.9) |
| Coronary artery disease, n/N (%) | 42/681 (6.2) |
| Peripheral arterial disease, n/N (%) | 16/679 (2.4) |
| Stroke, n/N (%) | 7/678 (1) |
| Depression, n/N (%) | 93/674 (13.8) |
| Osteoporosis, n/N (%) | 69/669 (10.3) |
| Arthroplasty (N=705) | 34 (4.8) |
| Malignancy (N=617) | |
| *Active malignancy, n (%)* | 6 (1) |
| *Past malignancy, n (%)* | 15 (2.4) |

BMI: Body mass index, COPD chronic obstructive pulmonary disease

*Semin Arthritis Rheum. 2025 Apr:71:152645*

# Η παχυσαρκία επηρεάζει τις εκβάσεις στις ρευματικές παθήσεις;

PA

# Impact of Obesity on Remission and Disease Activity in Rheumatoid Arthritis: A Systematic Review and Meta-Analysis

YANG LIU, GLEN S. HAZLEWOOD, GILAAD G. KAPLAN, BERTUS EKSTEEN, AND CHERYL BARNABE

| Study or Subgroup | log[Odds Ratio] | SE | Obese Total | Non-Obese Total | Weight | Odds Ratio Random, 95% CI |
|---|---|---|---|---|---|---|
| Pers (2015) | -0.49429632 | 0.53348878 | 12 | 48 | 6.3% | 0.61 [0.21, 1.74] |
| Ellerby (2014) | -0.82098055 | 0.35652906 | 173 | 57 | 14.1% | 0.44 [0.22, 0.88] |
| Sandberg (2014) | -1.02165125 | 0.36063606 | 255 | 240 | 13.7% | 0.36 [0.18, 0.73] |
| Ajeganova (2013) | -0.52763274 | 0.16467325 | 211 | 1063 | 65.9% | 0.59 [0.43, 0.81] |
| **Total (95% CI)** | | | **651** | **1408** | **100.0%** | **0.53 [0.41, 0.69]** |

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 1.92$, df = 3 ($P = 0.59$); $I^2 = 0\%$
Test for overall effect: $Z = 4.75$ ($P < 0.00001$)

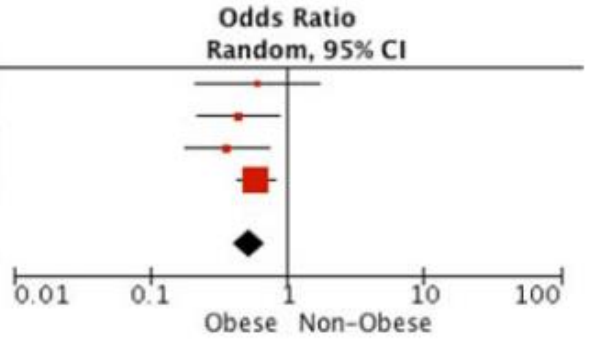
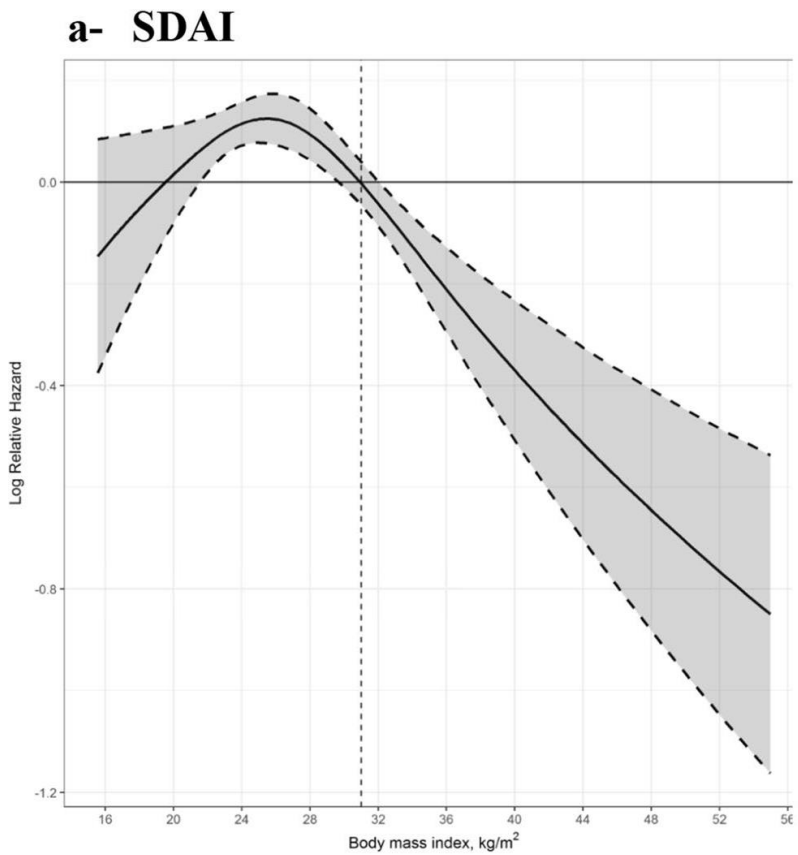



**Figure 2.** Odds of obese patients attaining remission at any time point.

*Arthritis Care Res (Hoboken). 2017 Feb;69(2):157-165*

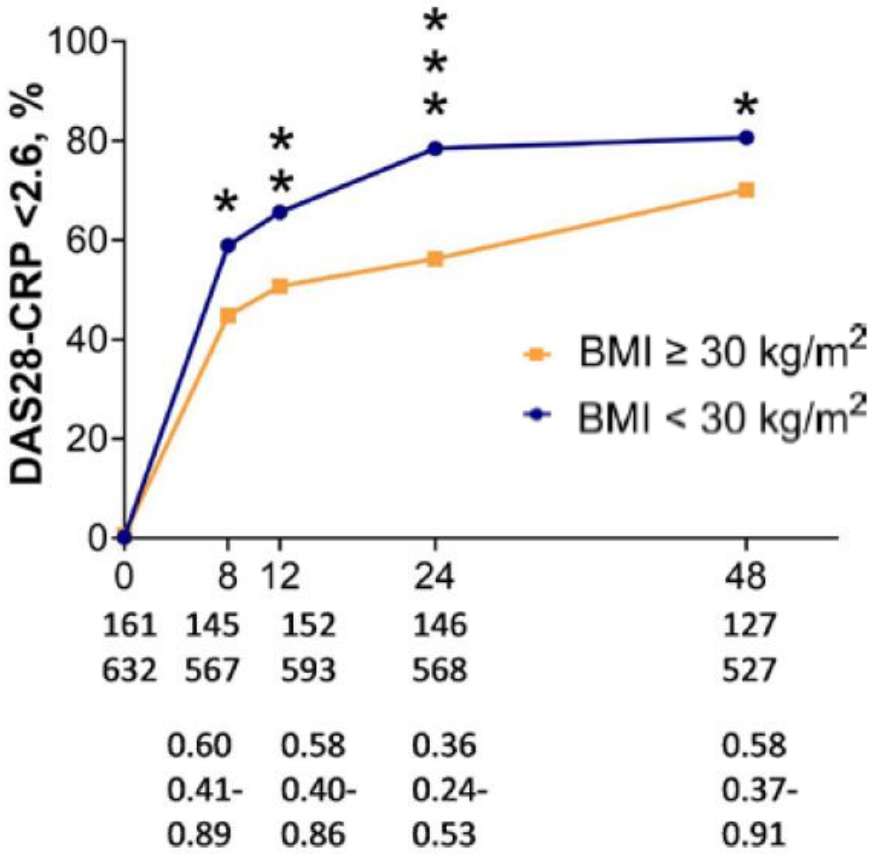
# BMI & ύφεση στη PA

**RCT του TCZ**




*Sci Rep. 2020 Oct 29;10(1):18634*

**NORD-STAR**




*RMD Open 2024;10:e004227*

# Ελληνικά Δεδομένα

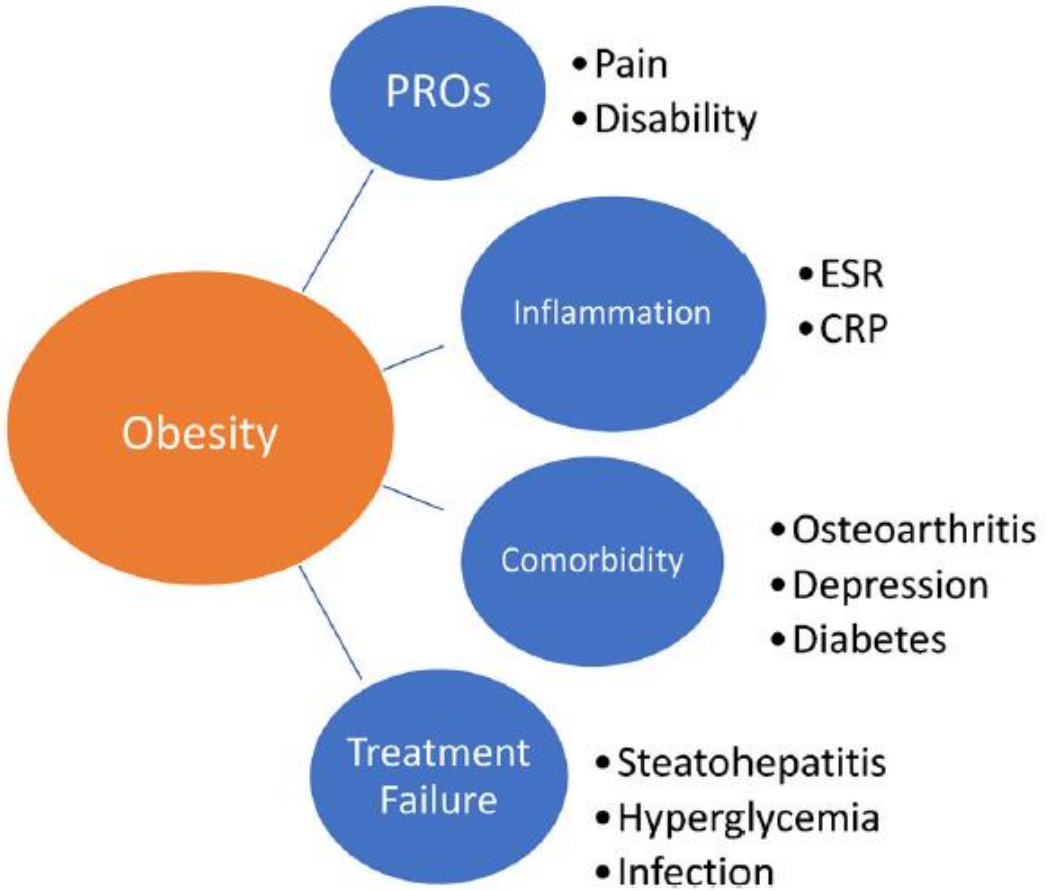
**Table 2.** Univariate and multivariate analysis of factors associated with achievement of low disease activity (DAS28ESR <3.2) for the whole RA cohort ($n = 1317$).

| Variable | Univariate analysis | | | | | Multivariate analysis | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 95% CI | | *p* | | 95% CI | | *p* |
| | *n* | OR | Lower | Upper | | OR | Lower | Upper | |
| **Sex, male** | 1317 | 2.48 | 1.84 | 3.33 | <0.001 | **2.29** | **1.62** | **3.23** | **<0.001** |
| **Age** | 1317 | 0.98 | 0.97 | 0.99 | <0.001 | **0.98** | **0.97** | **0.99** | **0.005** |
| Disease duration | 1219 | 0.98 | 0.97 | 0.99 | 0.035 | | | | |
| Seropositivity, RF/anti-CCP | 1280 | 0.62 | 0.49 | 0.77 | <0.001 | | | | |
| **GC use** | 1317 | 0.62 | 0.49 | 0.77 | <0.001 | **0.75** | **0.57** | **0.98** | **0.037** |
| bDMARD use | 1317 | | | | | | | | |
| 1st line *versus* no bDMARD | | 0.92 | 0.7 | 1.2 | 0.53 | 0.84 | 0.62 | 1.16 | 0.3 |
| **⩾2nd line *versus* no bDMARD** | | 0.59 | 0.45 | 0.78 | <0.001 | **0.61** | **0.44** | **0.84** | **0.002** |
| **HAQ score at first evaluation** | 1195 | 0.46 | 0.37 | 0.57 | <0.001 | **0.57** | **0.45** | **0.72** | **<0.001** |
| **Co-morbidity index (RDCI)** | 1317 | 0.79 | 0.72 | 0.86 | <0.001 | **0.86** | **0.76** | **0.96** | **0.011** |
| Active smoking | 1265 | 1.26 | 0.94 | 1.69 | 0.117 | | | | |
| **Obesity, BMI >30 kg/m$^2$** | 1149 | 0.51 | 0.39 | 0.67 | <0.001 | **0.62** | **0.46** | **0.84** | **0.002** |
| Erosions | 1317 | 0.66 | 0.51 | 0.84 | <0.001 | | | | |

Κατηγορίες ενεργότητας νόσου στο 1ο έτος βάσει της ενεργότητας στην εκκίνηση

*Thomas K et al. Ther Adv Musculoskelet Dis. 2020 Sep 28:12:1759720X20937132*

# Παχυσαρκία & ενεργότητα στη ΡΑ



ΨA

RMD Open
Rheumatic & Musculoskeletal Diseases

ORIGINAL RESEARCH

# Association between obesity and likelihood of remission or low disease activity status in psoriatic arthritis applying index-based and patient-based definitions of remission: a cross-sectional study

**Table 1** Patient characteristics of psoriatic arthritis patients with/without obesity (n=431)

| | Non-obese (n=295) | Obese (n=136) |
|---|---|---|
| Age, years | 51.5 (13.1) | 54.4 (11.0) * |
| Female, n (%) | 125 (43.3) | 84 (62.2) ** |
| Schooling, years | 12.5 (4.2) | 11.7 (4.6) |
| Duration of PsA, years | 11.1 (8.3) | 10.5 (7.8) |
| Number of other comorbidities (FCI), 0–17 | 1.6 (0.9) | 2.4 (2.0) ** |
| Current use of csDMARDs, n (%) | 170 (61.2) | 85 (66.9) |
| Current use of bDMARDs n (%) | 173 (61.3) | 76 (60.8) |
| Tender joints, 0–68 | 4.0 (8.4) | 6.5 (11.7) * |
| Swollen joints, 0–66 | 2.5 (8.4) | 1.7 (2.8) |
| Leeds enthesitis index, 0–6 | 0.5 (1.2) | 0.9 (1.7) ** |
| Psoriasis severity, n (%) | | |
| No psoriasis/ limited psoriasis (<1–5%) | 258 (91.8) | 116 (88.6) |
| Extensive psoriasis (6–20%) | 18 (6.4) | 13 (9.9) |
| Very extensive psoriasis (>20) | 5 (1.8) | 2 (1.5) |
| CRP, mg/dL | 1.2 (3.5) | 2.3 (8.1) * |
| Pain, 0–10 | 3.8 (2.7) | 4.8 (2.8) ** |
| PGA disease activity, 0–10 | 2.9 (2.5) | 3.5 (2.5) * |
| HAQ-DI, 0–3 | 0.5 (0.6) | 0.9 (0.7) ** |
| DAPSA | 15.2 (17.0) | 19.9 (18.0) * |
| PsAID-12, 0–10 | 3.0 (2.3) | 4.1 (2.6) ** |
| Pain, 0–10 | 3.7 (2.8) | 4.7 (2.8) ** |
| Skin, 0–10 | 2.5 (2.7) | 3.0 (2.9) |

**Table 2** Summary of odds to be in remission/LDA comparing patients with obesity versus non-obese

| | Univariable model | | Multivariable model* | |
|---|---|---|---|---|
| | OR (95% CI) | P | OR (95% CI) | P |
| Remission | | | | |
| DAPSA-REM | **0.32 (0.16, 0.62)** | **0.001** | **0.39 (0.19, 0.80)** | **0.009** |
| VLDA | **0.23 (0.10, 0.55)** | **0.001** | **0.31 (0.13, 0.77)** | **0.011** |
| Remission by patients' opinion | 0.869 (0.504, 1.497) | 0.613 | – | – |
| LDA | | | | |
| DAPSA-LDA | 0.448 (0.263, 0.762) | 0.003 | 0.728 (0.446, 1.187) | 0.203 |
| MDA | **0.50 (0.31, 0.78)** | **0.002** | **0.61 (0.38, 0.99)** | **0.045** |
| LDA by patients' opinion | 0.80 (0.51, 1.26) | 0.333 | – | – |

*Leung YY et al. RMD Open 2023;9:e003157*

# D2T ΨA

Clinical science

## Identification and characteristics of patients with potential difficult-to-treat psoriatic arthritis: exploratory analyses of the Greek PsA registry

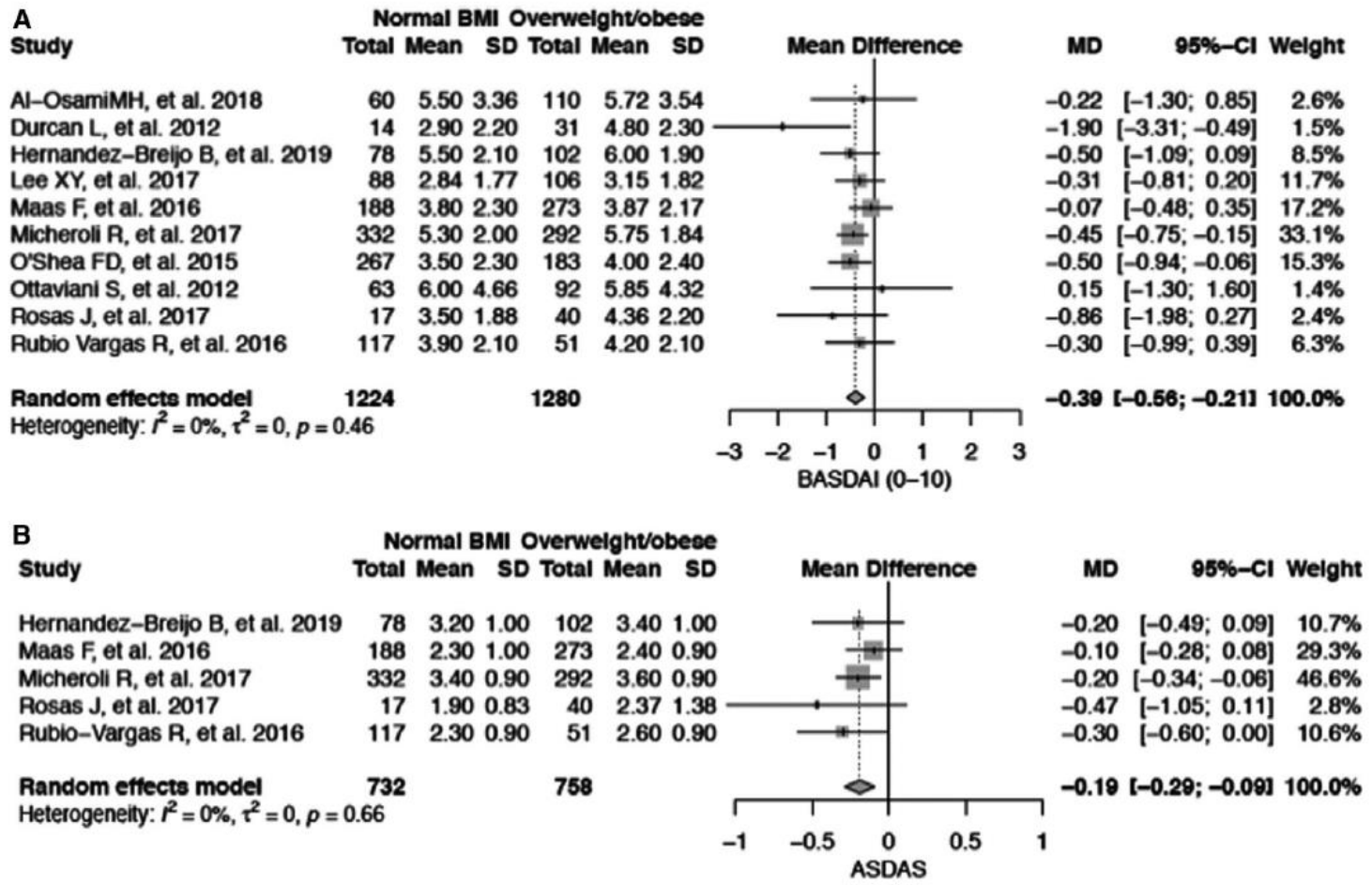
Konstantinos D. Vassilakis[1], Charalampos Papagoras[2], Nikolaos Fytanidis[2], Sousana Gazi[3], Evangelia Mole[3], Michael Krikelis[3], Paraskevi V. Voulgari[4], Evripidis Kaltsonoudis[4], Nikolaos Koletsos[4], Dimitrios Boumpas[5], Pelagia Katsimpri[5], Dimitrios Katsifis-Nezis[5], Theodoros Dimitroulas[6], Nikolaos Kougkas[6], Maria Boutel[6], Petros P. Sfikakis[1], Maria G. Tektonidou[1], Chrysoula Gialouri[1], Dimitrios Bogdanos[7], Theodora Simopoulou[7], Christos Koutsianas[8], Evgenia Mavrea[8], Gkikas Katsifis[9], Konstantinos Kottas[9], Maria Konsta[10], Matthoula Tziafalia[10], Evangelia Kataxaki[11], Eleni Kalavri[12], Kalliopi Klavdianou[12], Eleftheria P. Grika[13], Charalampos Sfontouris[13], Dimitrios Daoussis[14], George Iliopoulos[14], Ilias Bournazos[15], Dimitrios Karokis[15], Konstantinos Georganas[15], Dimos Patrikos[15], Dimitrios Vassilopoulos[8], George E. Fragoulis[1,16,*]

- Further multivariable binomial regression showed that D2T patients, compared with the non-D2T group, were more likely to have extensive psoriasis, defined as BSA >3% (OR 5.05, 95% CI 2.22–11.47, P<0.0001) at diagnosis. In addition, it was shown that D2T patients displayed more frequently a **greater BMI** (OR 1.07, 95% CI 1.01–1.13, P¼0.023) and IBD ever (OR 1.22, 95% CI 1.25– 31.06, P¼0.026).

*Rheumatology (Oxford). 2024 Sep 1;63(9):2427-2432*

# Do Obesity and Overweight Influence Disease Activity Measures in Axial Spondyloarthritis? A Systematic Review and Meta-Analysis

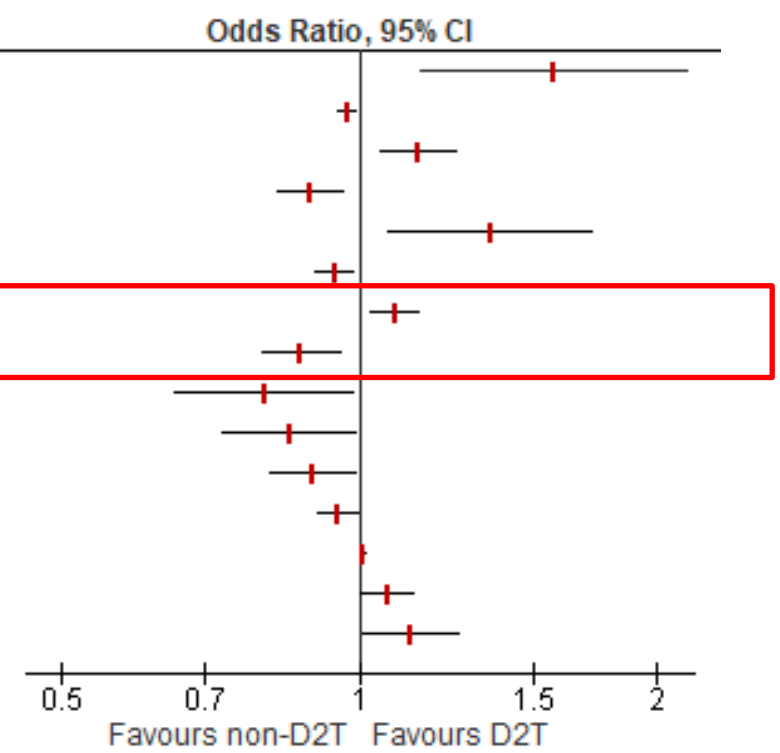
Augusta Ortolan, Mariagrazia Lorenzin, Mara Felicetti, and Roberta Ramonda




*Arthritis Care Res (Hoboken). 2021 Dec;73(12):1815-1825*

# Difficult-to-Manage and Treatment-Refractory Axial Spondyloarthritis: Insights from the Greek AxSpA Registry

| Subgroup | log[Odds Ratio] | SE | Odds Ratio, 95% CI |
|---|---|---|---|
| Unemployment: Yes | 0.4515 | 0.1563 | 1.57 [1.16, 2.13] |
| Unemployment: No | -0.0282 | 0.0097 | 0.97 [0.95, 0.99] |
| Current smoking: Yes | 0.1373 | 0.0452 | 1.15 [1.05, 1.25] |
| Current smoking: No | -0.1138 | 0.0374 | 0.89 [0.83, 0.96] |
| Depression: Yes | 0.303 | 0.1212 | 1.35 [1.07, 1.72] |
| Depression: No | -0.0571 | 0.0229 | 0.94 [0.90, 0.99] |
| BMI over 25kg/m2: Yes | 0.0822 | 0.0279 | 1.09 [1.03, 1.15] |
| BMI over 25kg/m2: No | -0.1356 | 0.046 | 0.87 [0.80, 0.96] |
| BASDAI less than 4.3 | -0.2206 | 0.1052 | 0.80 [0.65, 0.99] |
| BASDAI 4.3 - 4.5 | -0.1638 | 0.0781 | 0.85 [0.73, 0.99] |
| BASDAI 4.6 - 4.9 | -0.107 | 0.0511 | 0.90 [0.81, 0.99] |
| BASDAI 5.0 - 5.4 | -0.0502 | 0.0239 | 0.95 [0.91, 1.00] |
| BASDAI 5.5 - 6.0 | 0.0066 | 0.0031 | 1.01 [1.00, 1.01] |
| BASDAI 6.1 - 6.8 | 0.0633 | 0.0302 | 1.07 [1.00, 1.13] |
| BASDAI over 6.8 | 0.1201 | 0.0573 | 1.13 [1.01, 1.26] |



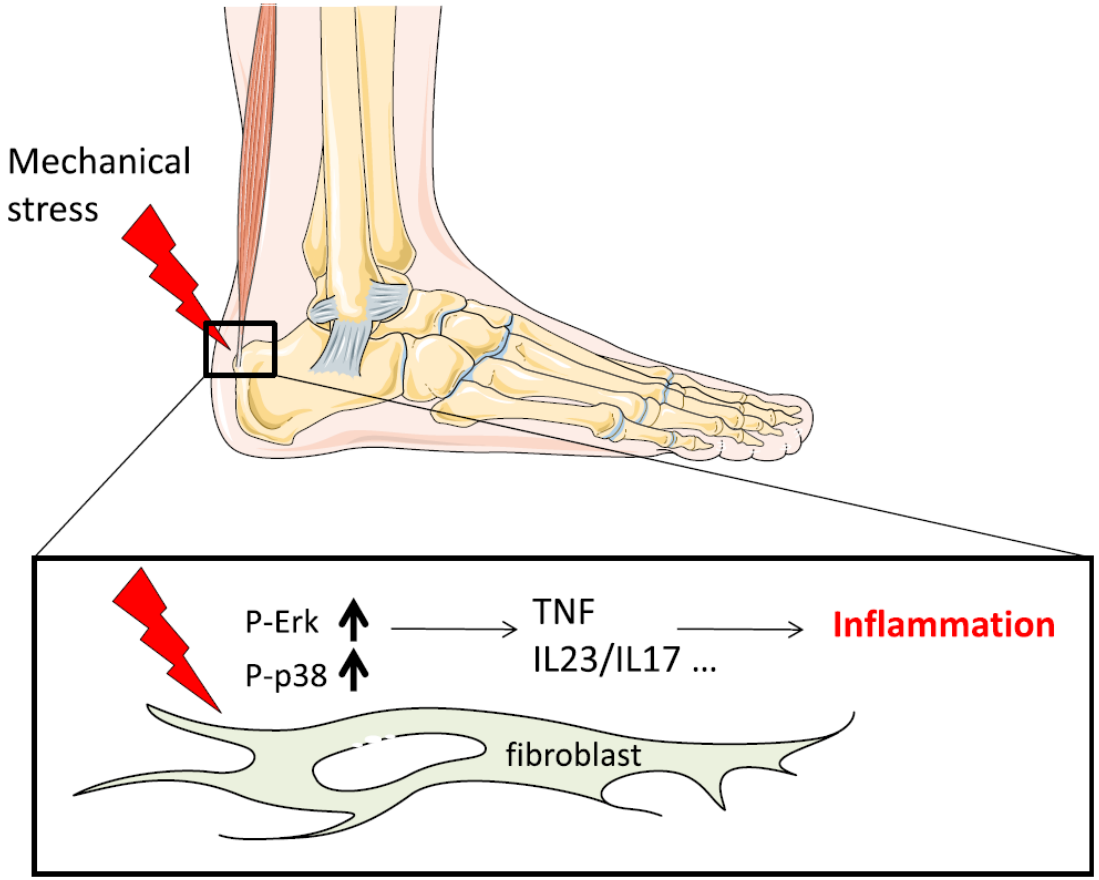

*Kougkas N… Papagoras C. Under review*

# Η παχυσαρκία συνεισφέρει και μέσω μηχανικών οδών στις ΣπΑ

EXTENDED REPORT

## Proof of concept: enthesitis and new bone formation in spondyloarthritis are driven by mechanical strain and stromal cells

Peggy Jacques,[1] Stijn Lambrecht,[1] Eveline Verheugen,[1] Elin Pauwels,[2] George Kollias,[3] Maria Armaka,[3] Marleen Verhoye,[4] Annemie Van der Linden,[4] Rik Achten,[5] Rik J Lories,[6] Dirk Elewaut[1]




*Best Pract Res Clin Rheumatol. 2014 Oct;28(5):703-10*

Review

# The role of obesity on inflammation and damage in spondyloarthritis: a systematic literature review on body mass index and imaging

S. Bakirci[1], J. Dabague[2], L. Eder[3], D. McGonagle[4], S.Z. Aydin[1,5]

- A **higher BMI** was closely related with **new bone formation** including syndesmophytes, enthesophytes and also a higher mSASSS
- Fewer studies looked at the effect of BMI on the peripheral enthesis which found a moderately positive correlation between the Madrid Sonographic Enthesitis Index for enthesitis on US and BMI

*Clin Exp Rheumatol. 2020 Jan-Feb;38(1):144-148*

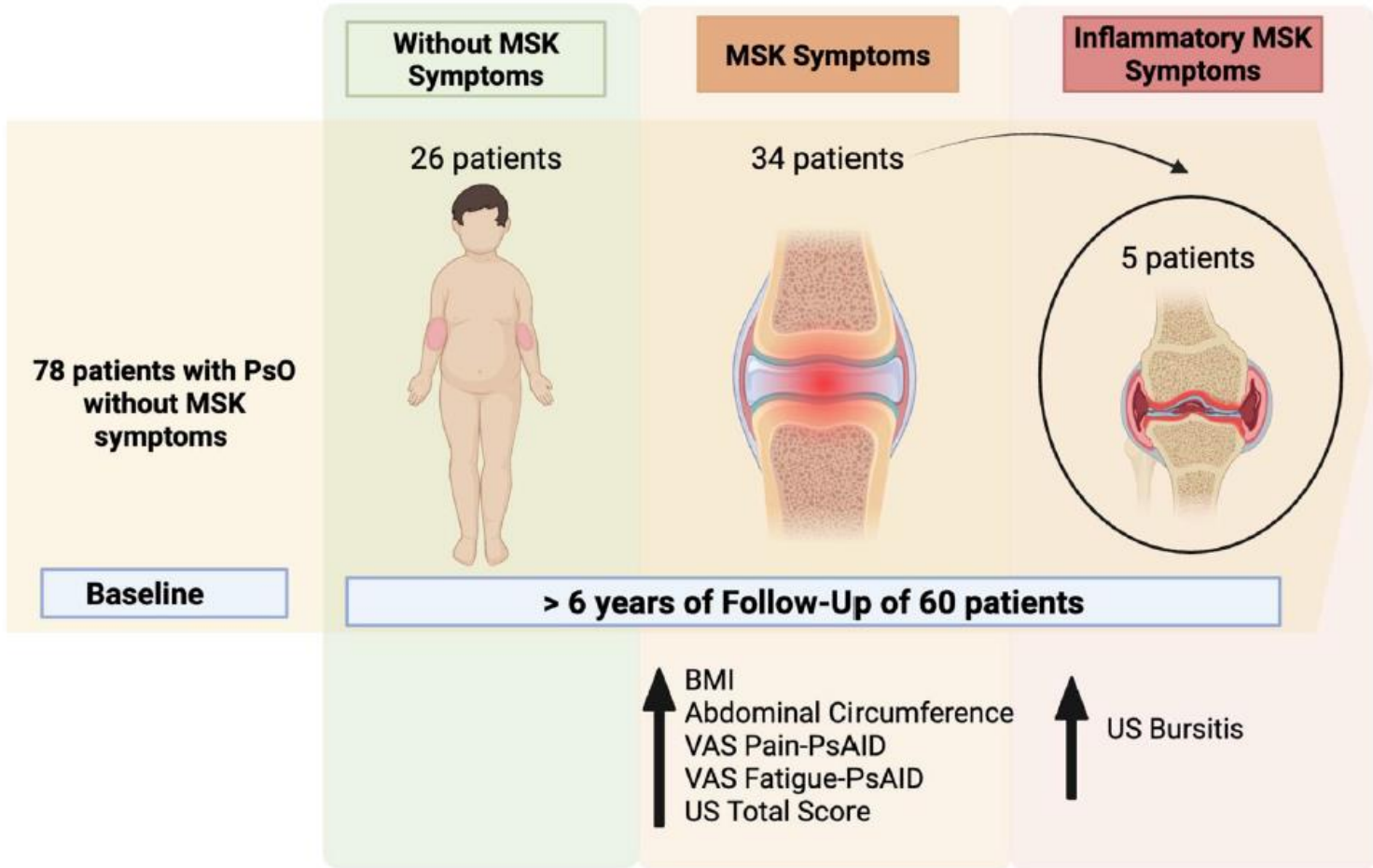
*Rheumatology*, 2025, **00**, 1–8
https://doi.org/10.1093/rheumatology/keaf307
Advance access publication 4 June 2025
**Original Article**

British Society for Rheumatology RHEUMATOLOGY OXFORD

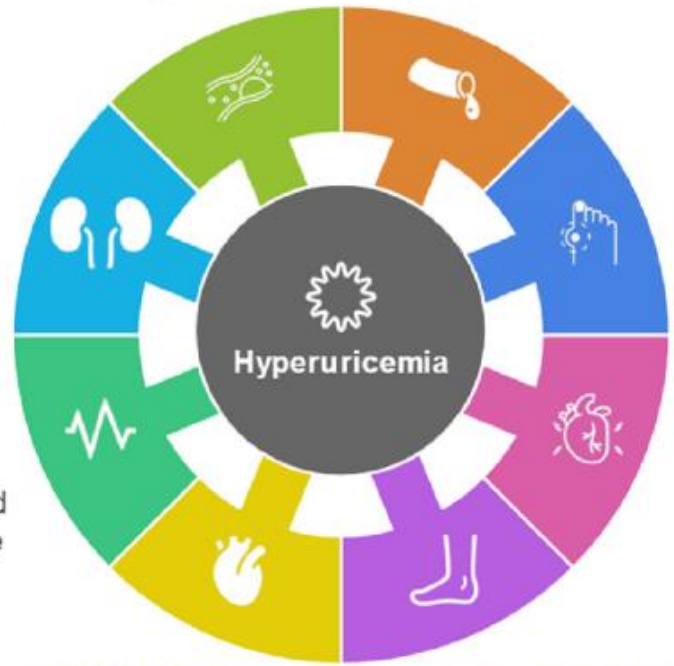
Clinical science

# Clinical and ultrasound features of a cohort of psoriasis patients without musculoskeletal symptoms: a prospective and multicentre study

**Ana Belén Azuaga[1,2], Andrea Cuervo[3], Delia Reina[4], Paula Estrada-Alarcón[4], Lourdes Mateo[5],**



# Υπερουριχαιμία




**Dyslipidemia**

**Hypertension**

Asymptomatic hyperuricemia predicts the development of hypertension and dyslipidemia .

**Chronic kidney disease**

Hyperuricemia is strongly associated with chronic kidney disease. However, it remains controversial whether uric acid -lowering therapies can prevent the decline in kidney function.

**Gout**

Gout is known to be a risk factor for cardiovascular disease. The cardiovascular risk associated with the onset of gout is particularly high within the first 60 or 120 days.

**Arrhythmia**

Hyperuricemia is associated with an increased incidence of atrial fibrillation.

**Coronary Heart Disease**

Hyperuricemia is associated with an increase in major adverse cardiovascular events.

**Heart Failure**

Hyperuricemia is a common complication in heart failure. However, there remains a lack of clear evidence indicating that uric acid-lowering therapies can prevent heart failure.

**Peripheral Artery Disease**

Higher genetically predicted uric acid levels were linked to increased risks of peripheral artery disease.

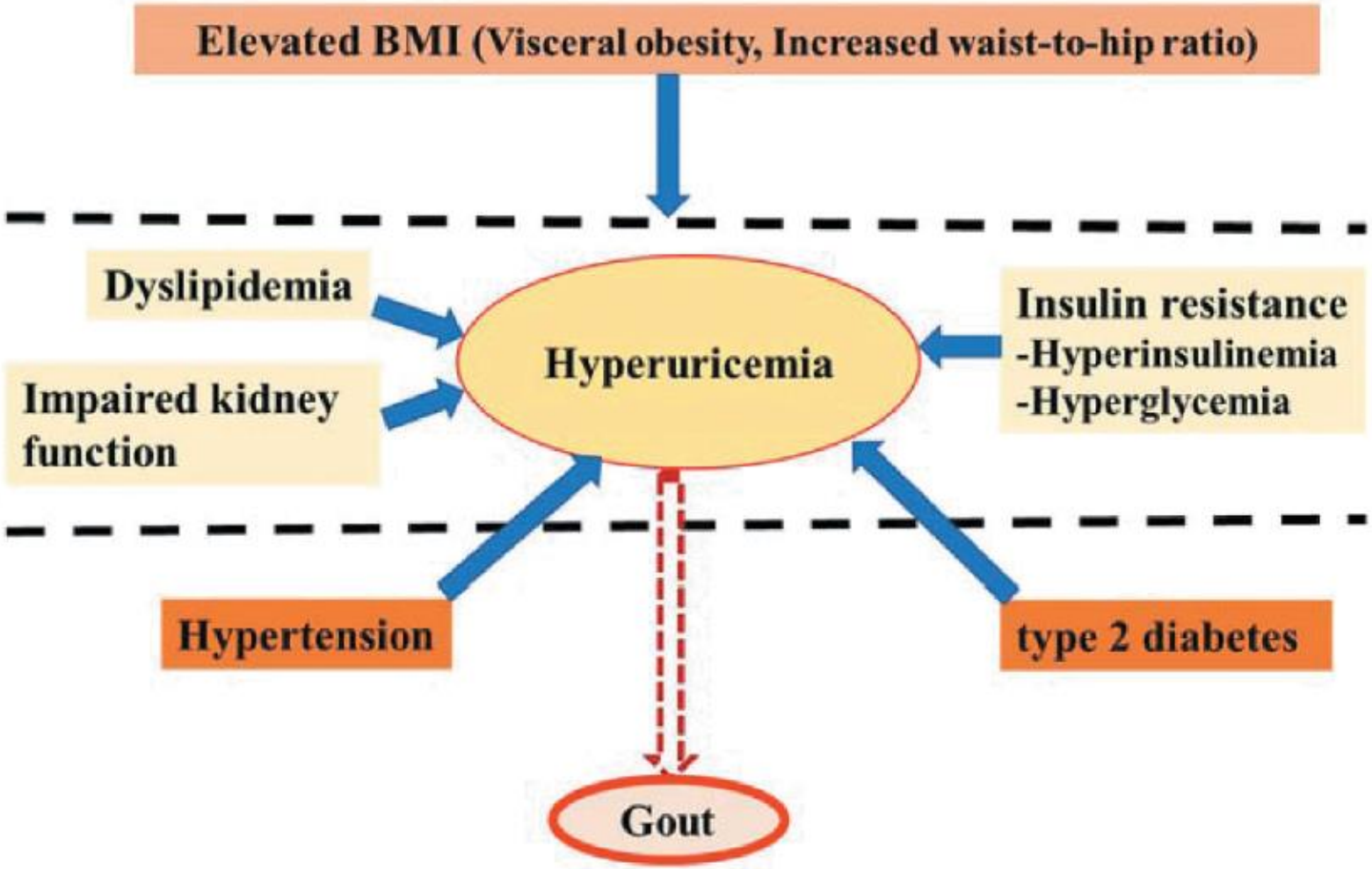
*Nutr Metab Cardiovasc Dis. 2025 Mar;35(3):103796*

# Serum uric acid levels and multiple health outcomes: umbrella review of evidence from observational studies, randomised controlled trials, and Mendelian randomisation studies

Xue Li,[1] Xiangrui Meng,[1] Maria Timofeeva,[2] Ioanna Tzoulaki,[3] Konstantinos K Tsilidis,[3,4] P A Ioannidis,[5,6,7] Harry Campbell,[1] Evropi Theodoratou[1,2]

*Of the 136 health outcomes related to SUA level that were examined in metaanalyses of observational studies, meta-analyses of randomised controlled trials, and Mendelian randomisation studies, convincing evidence of a clear association exists only for* ***gout*** *and* ***nephrolithiasis***

*BMJ 2017;357:j2376*

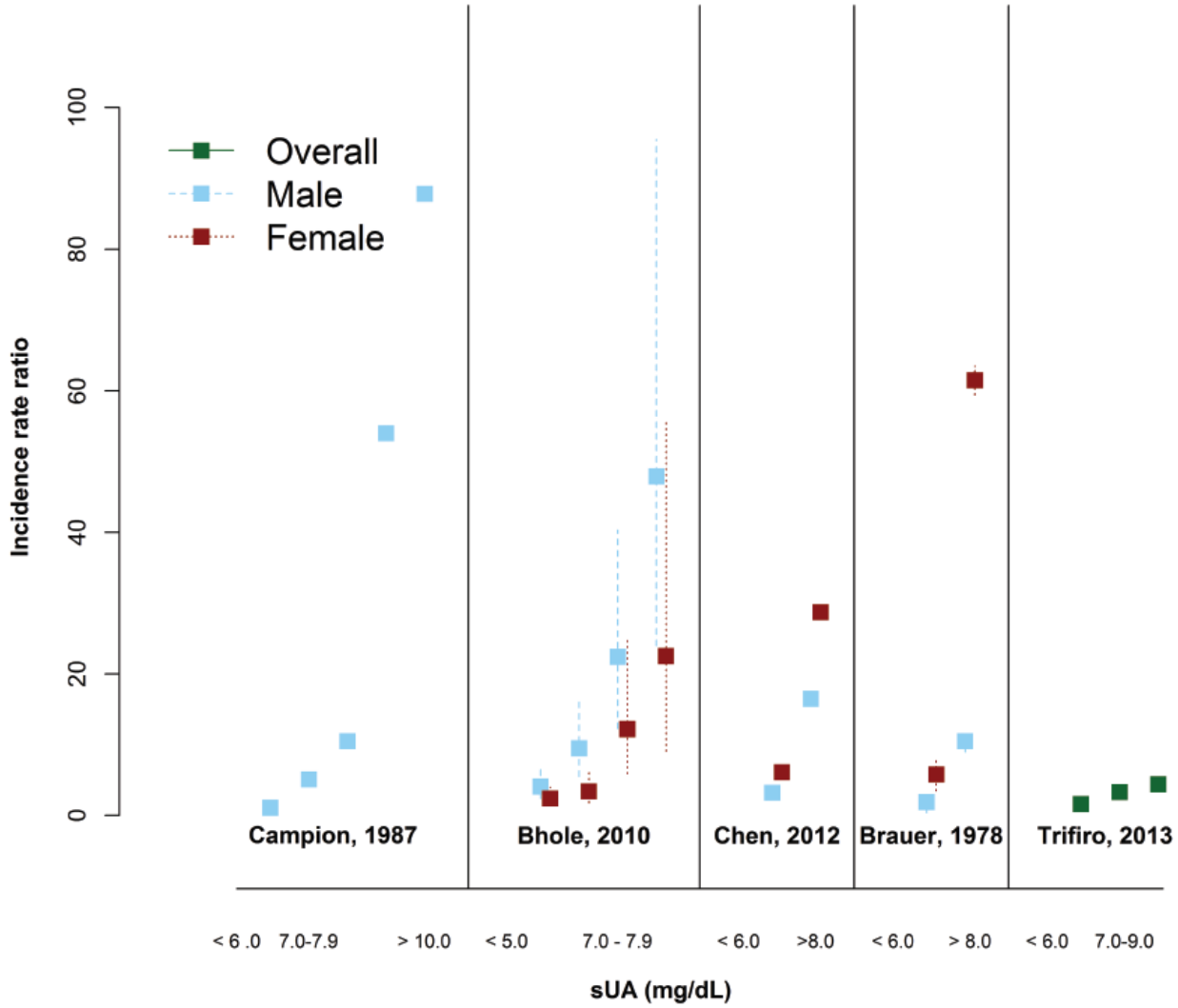



*Food Rev Int. 2023; 39(1):261-277*

# Υπερουριχαιμία & ουρική αρθρίτιδα

Serum Uric Acid and the Risk of Incident and Recurrent Gout: A Systematic Review

Aki Shiozawa, Shelagh M. Szabo, Anna Bolzani, Antoinette Cheung, and Hyon K. Choi

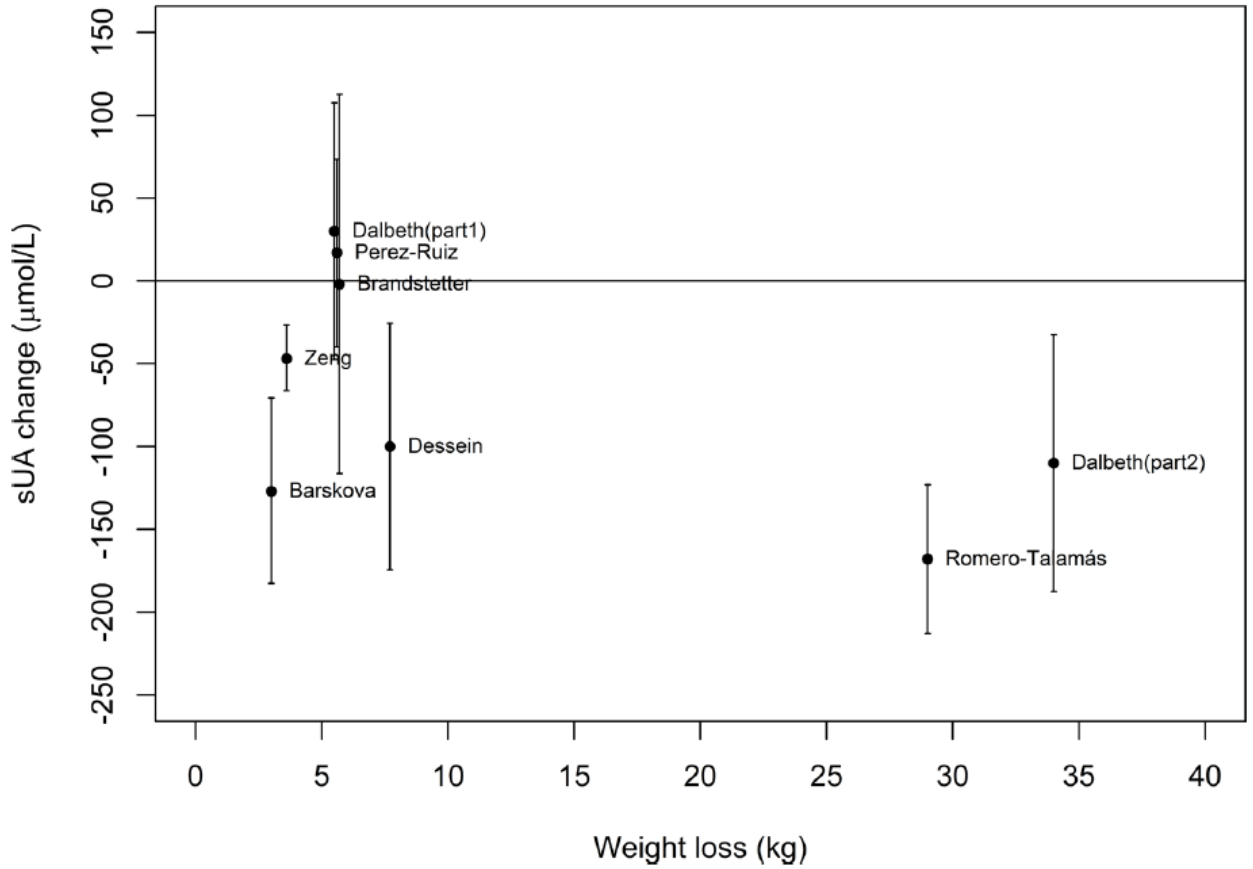



*J Rheumatol 2017;44:388–96; doi:10.3899*

# Απώλεια βάρους & επίπεδα ουρικού

## Weight loss for overweight and obese individuals with gout: a systematic review of longitudinal studies

Sabrina M Nielsen,[1] Else M Bartels,[1] Marius Henriksen,[1,2] Eva E Wæhrens,[1,3] Henrik Gudbergsen,[1] Henning Bliddal,[1] Arne Astrup,[4] Filip K Knop,[5,6,7] Loreto Carmona,[8] William J Taylor,[9] Jasvinder A Singh,[10] Fernando Perez-Ruiz,[11] Lars E Kristensen,[1] Robin Christensen[1]




*Ann Rheum Dis. 2017 Nov;76(11):1870-1882*

# Αντιρρευματικά φάρμακα & παχυσαρκία

# Φάρμακα ΣΔ/παχυσαρκίας και μυοσκελετικά νοσήματα

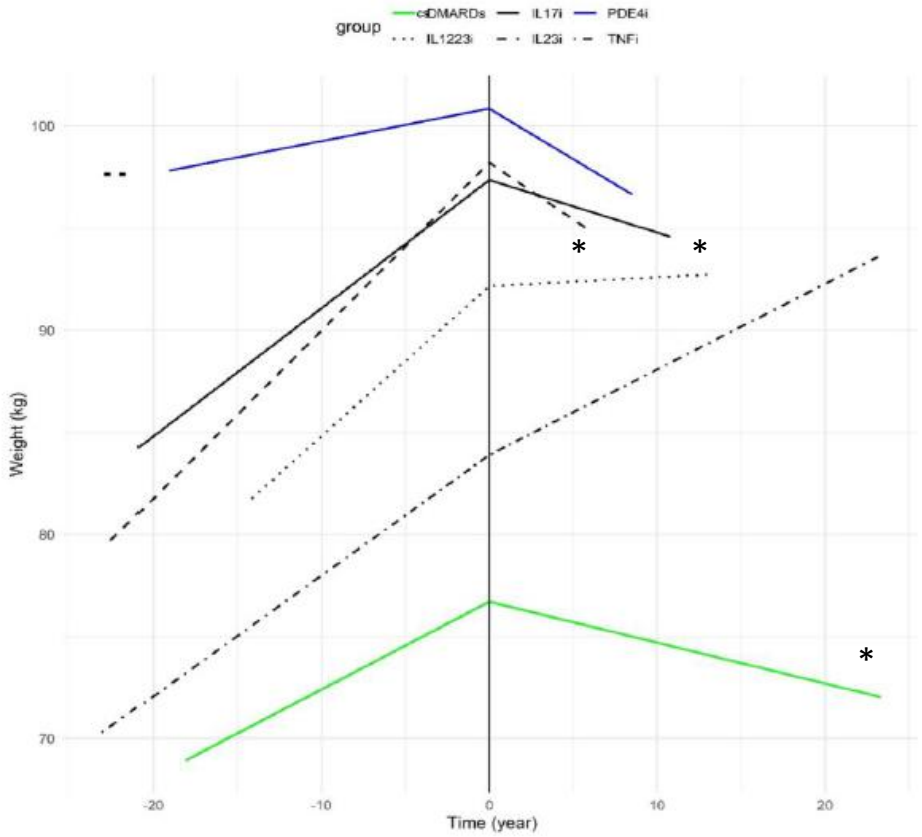
*Rheumatology*, 2025, **64**, 5074–5080
https://doi.org/10.1093/rheumatology/keaf277
Advance access publication 23 May 2025
**Original Article**

British Society for Rheumatology RHEUMATOLOGY OXFORD

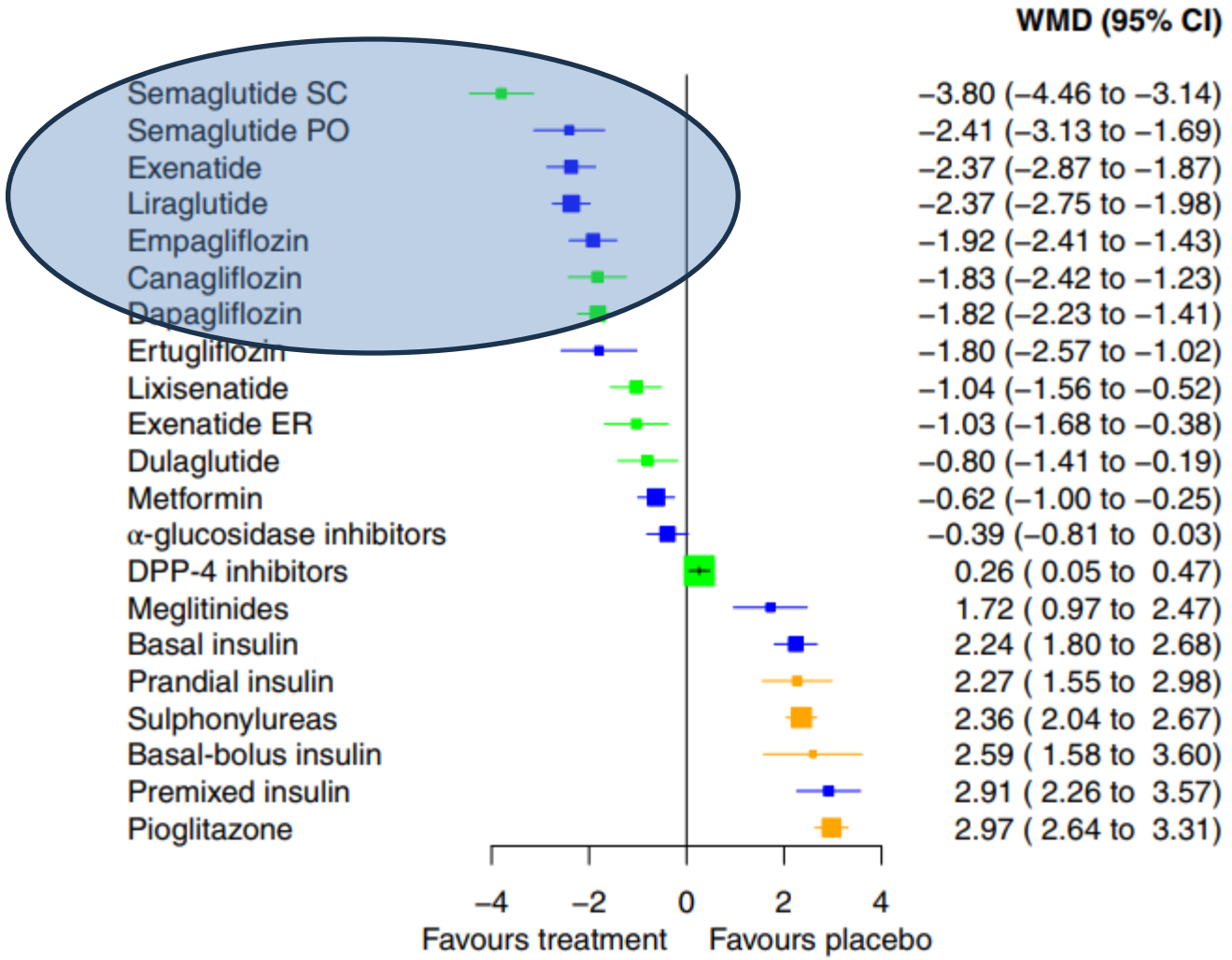
Clinical science

# Exploring the impact of conventional and targeted DMARDs on body weight in patients with PsA

**Pankti Mehta [1,2,3], Fadi Kharouf [1,2], Virginia Carrizo Abarza[1,2], Shangyi Gao[1], Richard J. Cook [4], Denis Poddubnyy[1,2,3], Dafna D. Gladman [1,2,3], Vinod Chandran[1,2,3,5,*]**



# Επίδραση αντιδιαβητικών φαρμάκων στο σωματικό βάρος




*Tsapas A et al. Diabetes Obes Metab 2021;23:2116-2124.*

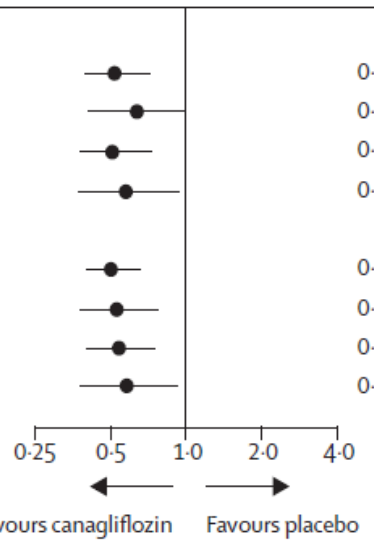
# SGLT-2 αναστολείς

## The effects of canagliflozin on gout in type 2 diabetes: a post-hoc analysis of the CANVAS Program

*JingWei Li, Sunil V Badve, Zien Zhou, Anthony Rodgers, Richard Day, Richard Oh, Mary Lee, Vlado Perkovic, Dick de Zeeuw, Kenneth W Mahaffey, Greg Fulcher, David R Matthews, Bruce Neal*

***6.7% reduction in serum urate***

| | Number of participants with an event | Participants with an event per 1000 patient-years | | Hazard ratio (95% CI) | Nominal p value |
|---|---|---|---|---|---|
| | | Canagliflozin | Placebo | | |
| **First event*** | | | | | |
| Gout or commencement of a drug for gout | 182 | 4·1 | 6·6 | 0·53 (0·40–0·71) | <0·0001 |
| Gout | 80 | 2·0 | 2·6 | 0·64 (0·41–0·99) | 0·046 |
| Commencement of a drug for gout | 147 | 3·3 | 5·4 | 0·52 (0·38–0·72) | <0·0001 |
| Hyperuricaemia | 75 | 1·8 | 2·5 | 0·59 (0·37–0·93) | 0·023 |
| **First and recurrent events†** | | | | | |
| Gout or commencement of a drug for gout | 256 | 5·6 | 9·0 | 0·51 (0·40–0·66) | <0·0001 |
| Gout | 125 | 2·8 | 4·3 | 0·54 (0·38–0·76) | 0·0010 |
| Commencement of a drug for gout | 171 | 3·8 | 5·9 | 0·55 (0·40–0·74) | <0·0001 |
| Hyperuricaemia | 79 | 1·9 | 2·6 | 0·59 (0·38–0·91) | 0·018 |




*Lancet Rheumatol. 2019;1: e220–28*

International Journal of Clinical Pharmacy (2025) 47:1162–1176
https://doi.org/10.1007/s11096-025-01950-y

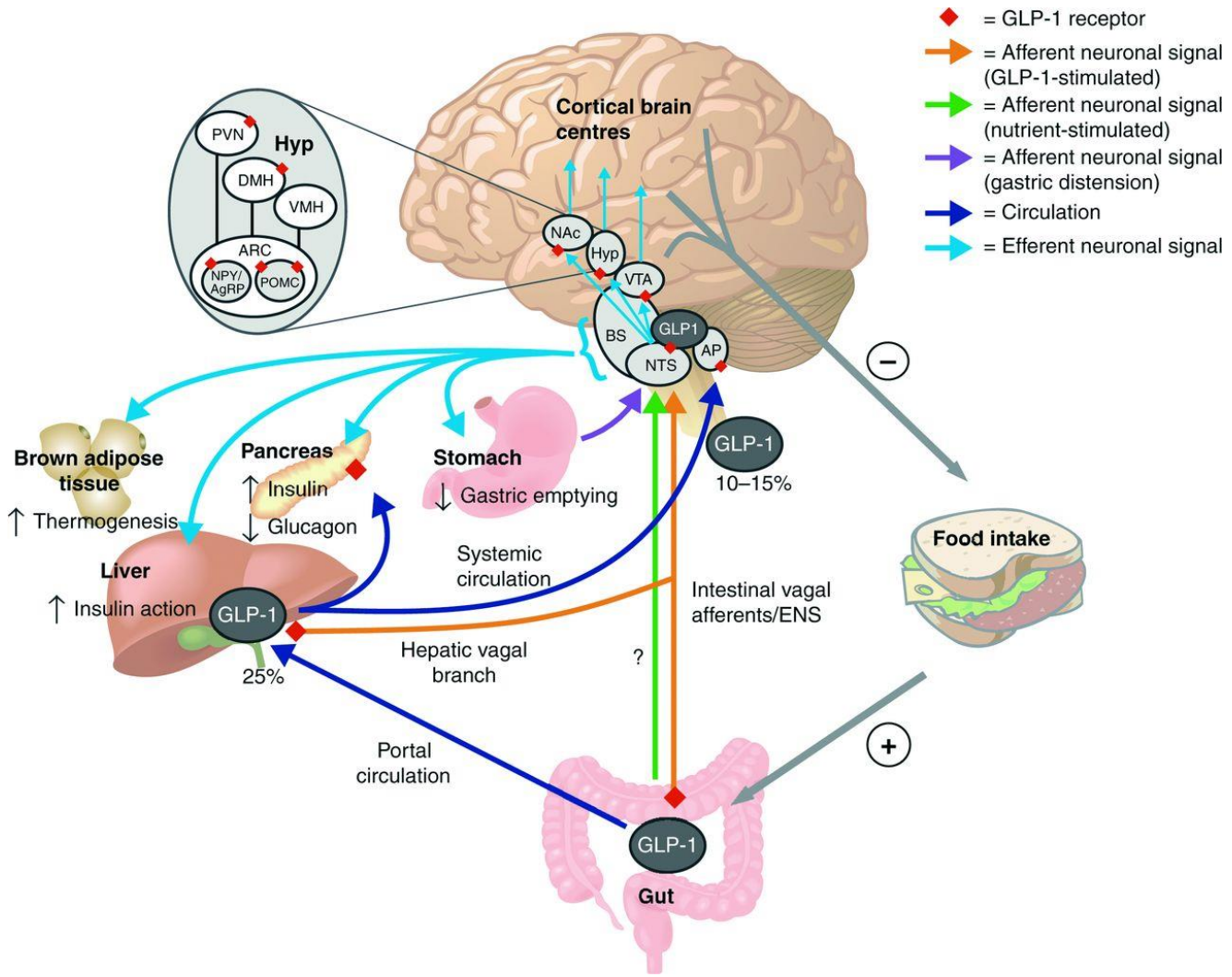
REVIEW ARTICLE

# Effects of sodium-glucose cotransporter-2 inhibitors on serum urate levels and gout in patients with and without type 2 diabetes: a systematic review and network meta-analysis

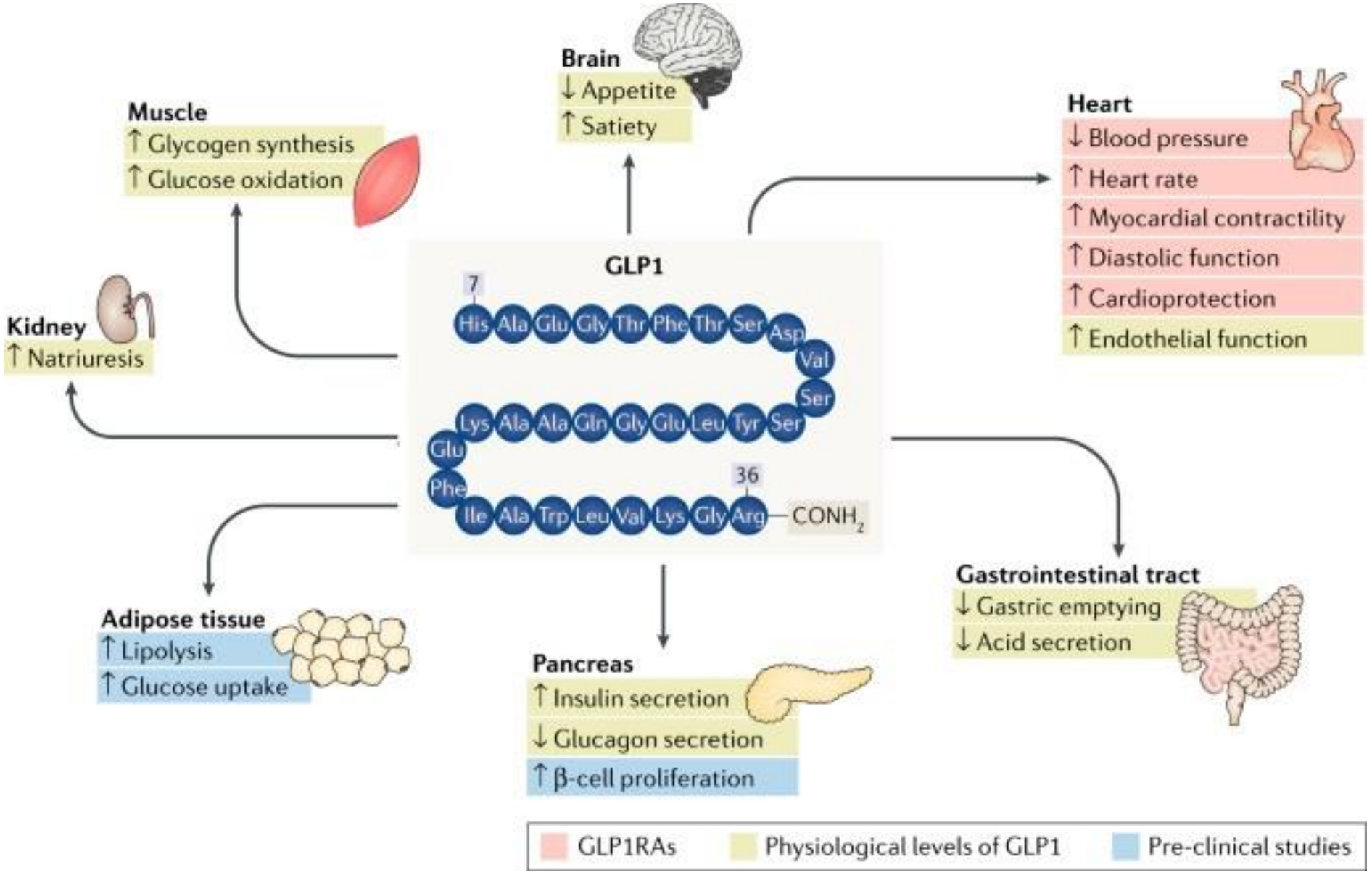
Qiaozhi Hu[1,2] · Shiwen Yang[3] · Bofei Zhang[4] · Na Su[1,4]

- A total of 57 trials were included.
- **All SGLT-2 inhibitors reduced sUA levels**. These inhibitors demonstrated a spectrum of sUA-lowering effects, with empagliflozin and dapagliflozin exhibiting particularly robust efficacy
- Although there was a potential reduction in the incidence of gout associated with SGLT-2 inhibitors, the difference was not statistically significant.

# Ρόλος του ενδογενούς GLP-1 στη ρύθμιση πρόσληψης ενέργειας




*Nauck MA et al. Mol Metab. 2021:46:101102.*




*Andersen A et al. Nat Rev Endocrinol. 2018;14:390-403*

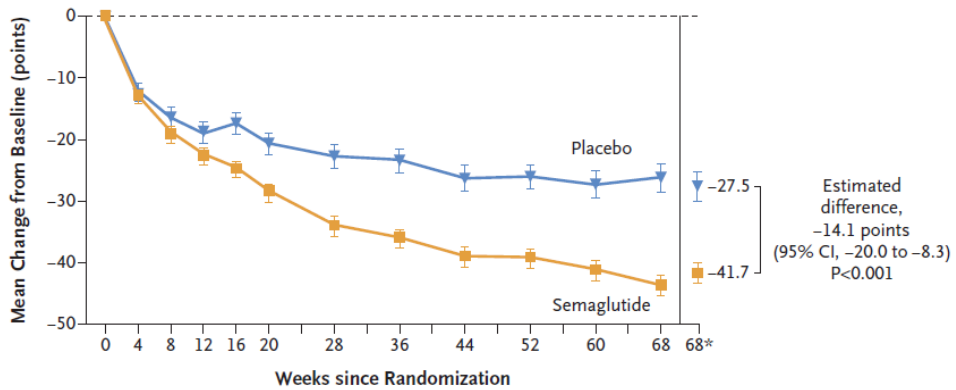
The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 OCTOBER 31, 2024 VOL. 391 NO. 17

# Once-Weekly Semaglutide in Persons with Obesity and Knee Osteoarthritis

H. Bliddal, H. Bays, S. Czernichow, J. Uddén Hemmingsson, J. Hjelmesæth, T. Hoffmann Morville, A. Koroleva, J. Skov Neergaard, P. Vélez Sánchez, S. Wharton, A. Wizert, and L.E. Kristensen, for the STEP 9 Study Group*

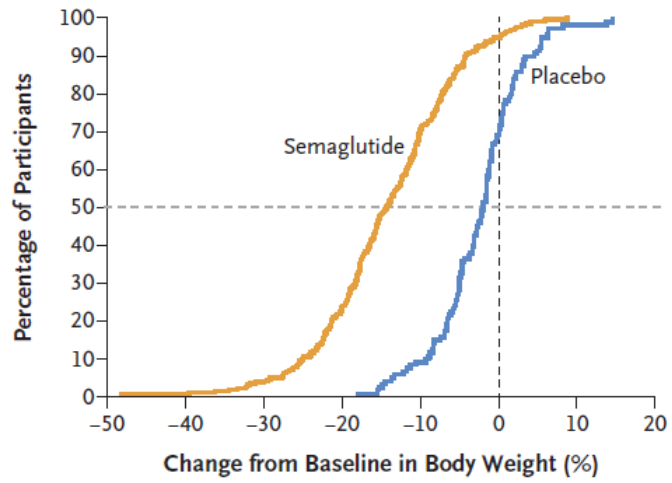
**C** Change in WOMAC Pain Score



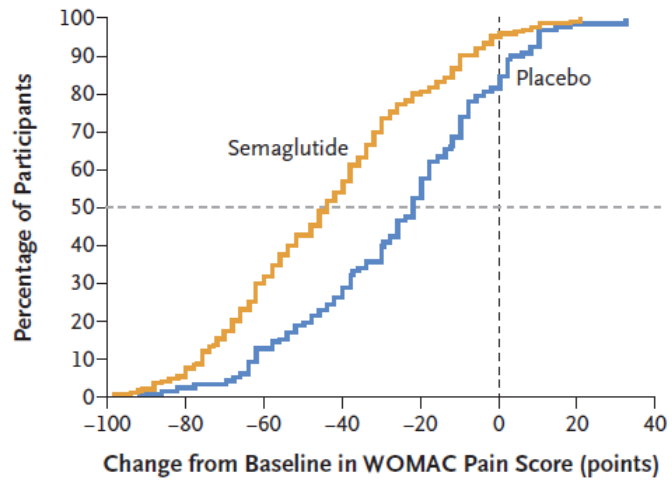

No. of Participants

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Placebo | 136 | 132 | 129 | 126 | 126 | 128 | 126 | 117 | 116 | 118 | 111 | 117 | 136 |
| Semaglutide | 271 | 262 | 260 | 256 | 257 | 256 | 251 | 250 | 245 | 245 | 239 | 245 | 271 |

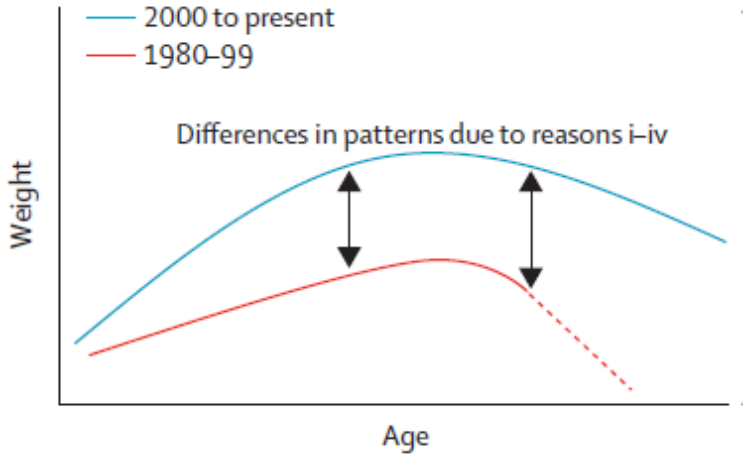
**B** Cumulative Frequency of Change from Baseline in Body Weight

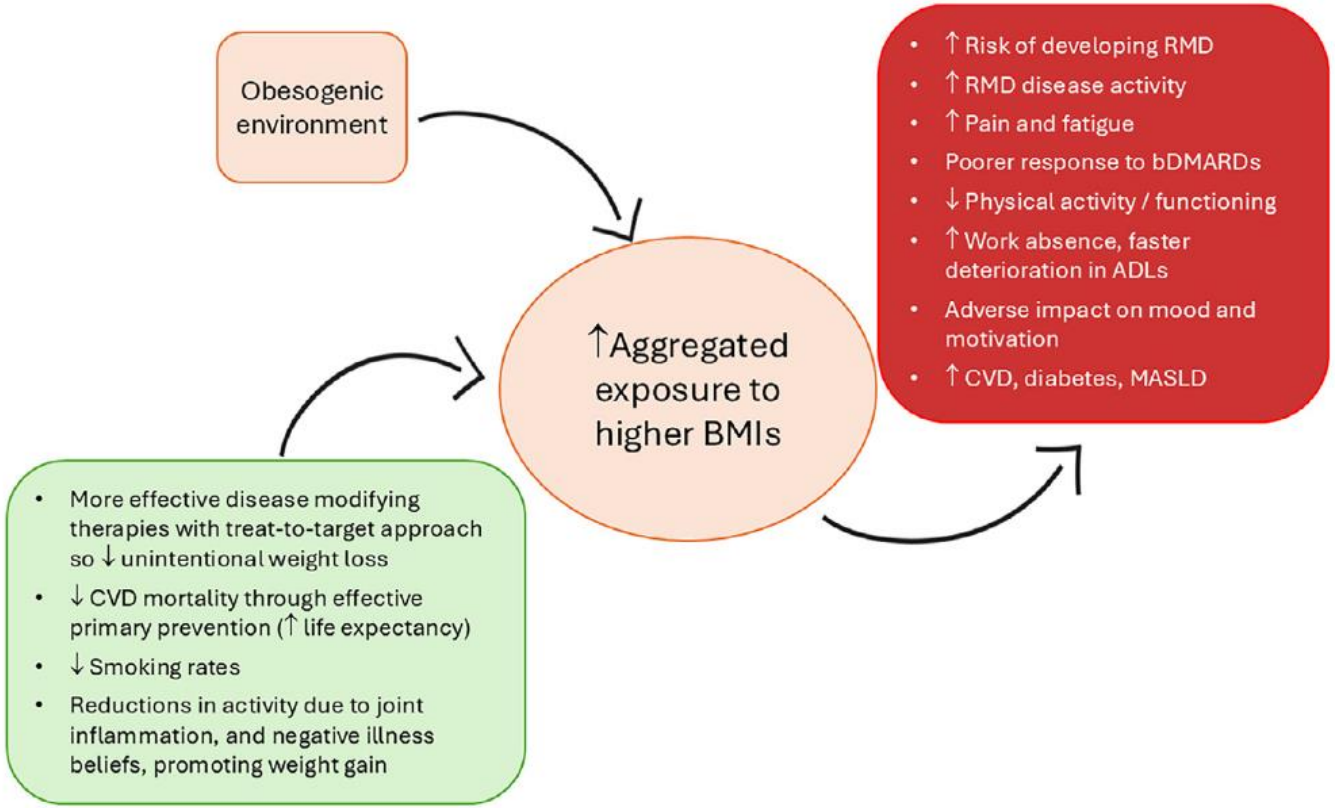



**D** Cumulative Frequency of Change from Baseline in WOMAC Pain Score



# Αναμενόμενη αύξηση της παχυσαρκίας σε ασθενείς με χρόνια νοσήματα




*Lancet Diabetes Endocrinol. 2023; 11: 58–62*
*Ann Rheum Dis. 2025;84:894–898*

# Προσφέρει όφελος η αντιμετώπιση της παχυσαρκίας στους ασθενείς με ρευματικές παθήσεις;

Clinical and epidemiological research

EXTENDED REPORT

## Weight loss and achievement of minimal disease activity in patients with psoriatic arthritis starting treatment with tumour necrosis factor α blockers

Matteo Nicola Dario Di Minno,[1] Rosario Peluso,[2] Salvatore Iervolino,[3] Anna Russolillo,[1] Roberta Lupoli,[1] Raffaele Scarpa,[2] on behalf of the CaRRDs Study Group

*Ann Rheum Dis 2014;73:1157–1162*

Klingberg *et al. Arthritis Research & Therapy* (2019) 21:17
https://doi.org/10.1186/s13075-019-1810-5

Arthritis Research & Therapy

RESEARCH ARTICLE Open Access

## Weight loss improves disease activity in patients with psoriatic arthritis and obesity: an interventional study

Eva Klingberg[1*], Annelie Bilberg[2], Sofia Björkman[3], Martin Hedberg[4], Lennart Jacobsson[1], Helena Forsblad-d'Elia[1,5], Hans Carlsten[1], Björn Eliasson[6] and Ingrid Larsson[3]

# Υπάρχει ανάγκη για στοχευμένες μελέτες με τη χρήση και των νέων φαρμάκων

Ann Rheum Dis 84 (2025) 894–898

Contents lists available at ScienceDirect

Annals of the Rheumatic Diseases

journal homepage: https://www.sciencedirect.com/journal/annals-of-the-rheumatic-dis

Viewpoint

## Obesity substantially impacts rheumatic and musculoskeletal diseases: time to act

Naveed Sattar[1,*], Lindsey J Sattar[2], Iain B McInnes[3], Stefan Siebert[4], Lyn D Ferguson[1]

Joint Bone Spine 92 (2025) 105904

Contents lists available at ScienceDirect

Joint Bone Spine

journal homepage: www.elsevier.com

Review

## Weighing in on obesity and psoriatic arthritis – Time to move beyond association to robust randomised trials

Stefan Siebert[a,*], Naveed Sattar[b], Lyn D. Ferguson[b]

**Table 2**
Current licenced weight loss therapies, mechanism of action, mean weight loss, and whether trial evidence is available for use in PsA.

| Weight loss therapy | Dose, route of administration, frequency | Mechanism of action | Mean percentage weight loss | Trial evidence in PsA |
|---|---|---|---|---|
| Semaglutide | 2.4 mg subcutaneous injection once weekly | GLP-1 receptor agonist | Up to 15–17% at 68 weeks | Nil to date |
| Liraglutide | 3 mg subcutaneous injection once daily | GLP-1 receptor agonist | 6–8% | Nil to date |
| Tirzepatide | 15 mg subcutaneous injection once weekly | Dual GIP/GLP-1 receptor agonist | Up to 21% at around 72 weeks | RCT currently underway (TOGETHER PsA) to assess tirzepatide, alongside IL-17A inhibitor, on PsA disease outcomes and weight loss |
| Low-calorie diet | ~850 kcal/day total diet replacement for 3 months with dietetic, physical activity and behaviour change support | Low calorie diet restriction | 10% | Two trials (1 RCT and 1 uncontrolled) suggest dietary weight loss of ≥ 5% associated with increased proportion of people achieving MDA |

GIP: glucose-dependent insulinotropic polypeptide; GLP-1: glucagon-like peptide-1; kcal: kilocalorie; MDA: minimal disease activity; PsA: psoriatic arthritis; RCT: randomised controlled trial.

*Joint Bone Spine. 2025; 92:105904*

# Συμπεράσματα

- Το μεταβολικό σύνδρομο είναι συχνό στις φλεγμονώδεις ρευματικές παθήσεις
- Η παχυσαρκία αποτελεί παράγοντα κινδύνου για την εκδήλωση ΨΑ & ΡΑ
- Η παχυσαρκία σχετίζεται με πτωχότερες ρευματολογικές εκβάσεις
- Η υπερουριχαιμία σχετίζεται με το μεταβολικό σύνδρομο, τροφοδοτείται από αυτό και, σε ορισμένες περιπτώσεις, συμβάλλει στη συνολική κλινική επιδείνωση των ασθενών με ΜΣ
- Η απώλεια βάρους διαγράφεται ως κλειδί για τη βελτίωση της υγείας των ανθρώπων και –ενδεχομένως- και αυτών με ρευματικές παθήσεις
- Απαιτούνται μελέτες για την εκτίμηση της συμβολής της θεραπείας της παχυσαρκίας στις ρευματολογικές και τις μακροχρόνιες καρδιαγγειακές εκβάσεις

Ευχαριστώ