

Supplementary Table S1. The prevalence and age-standardized rate of gout in 1990 and 2019

	1990		2019	
	Prevalence No. × 10 ⁵ (95% UI)	ASR per 100,000 No. (95% UI)	Prevalence No. × 10 ⁵ (95% UI)	ASR per 100,000 No. (95% UI)
Global	220.6 (175.2 to 273.7)	533 (425.3 to 657.9)	538.7 (663.4 to 433.8)	652.2 (528.6 to 798.6)
SDI rank:				
High SDI	71.1 (56.7 to 88.4)	711.8 (565 to 888)	171.3 (206.2 to 141.9)	1041 (862.8 to 1244.9)
High-middle SDI	53.8 (42.9 to 67.1)	492.6 (393.9 to 611.4)	124 (155 to 98.2)	624.8 (495.9 to 778.1)
Middle SDI	58.5 (46.5 to 72.6)	507.1 (405.3 to 632.9)	155 (194 to 122.8)	597.2 (476.1 to 740.1)
Low-middle SDI	26.6 (21.1 to 33.1)	403 (324.2 to 502.2)	63.6 (79.7 to 50.6)	439.2 (351 to 550.3)
Low SDI	10.5 (8.3 to 13.1)	406.4 (324 to 512.7)	24.7 (30.7 to 19.6)	424.7 (339.1 to 532.1)
21 GBD regions:				
Andean Latin America	0.5 (0.4 to 0.7)	231.9 (184.9 to 287.9)	1.7 (2.1 to 1.4)	292.1 (233.5 to 359)
Australasia	2.4 (1.9 to 3)	1033.1 (829.4 to 1276.6)	6.5 (8.2 to 5.2)	1422 (1138.7 to 1776.6)
Caribbean	0.6 (0.5 to 0.7)	209.9 (166.4 to 259.5)	1.3 (1.6 to 1)	247.1 (196.6 to 305.3)
Central Asia	1.8 (1.4 to 2.2)	366.5 (290.5 to 458.2)	3.3 (4.2 to 2.6)	413.8 (329.2 to 516.8)
Central Europe	4.1 (3.3 to 5.2)	286.3 (228 to 359.9)	6.2 (7.9 to 4.9)	324.8 (259.2 to 405.1)
Central Latin America	1.6 (1.3 to 2.1)	160.5 (126.4 to 199.3)	4.5 (5.7 to 3.6)	183.8 (145.3 to 229.1)
Central Sub-Saharan Africa	1.1 (0.9 to 1.4)	453.5 (361.1 to 570.2)	2.8 (3.5 to 2.2)	460.2 (364.8 to 573.3)
East Asia	61.3 (48.6 to 76)	629.7 (503.3 to 781.8)	168 (211.1 to 133.2)	807.4 (646.5 to 998.2)
Eastern Europe	10.1 (8 to 12.6)	370.4 (294.2 to 463)	13.6 (17.2 to 10.8)	423.7 (338.5 to 531.2)
Eastern Sub-Saharan Africa	3.8 (3 to 4.7)	456.3 (362.2 to 572.5)	9.1 (11.2 to 7.1)	484 (384.5 to 605)
High-income Asia Pacific	13.2 (10.4 to 16.6)	648.7 (513.8 to 806.6)	26.2 (33 to 20.8)	715.2 (568.6 to 894.5)
High-income North America	32 (25.4 to 39.8)	961.5 (760.6 to 1199.4)	95.4 (111.6 to 81.2)	1722.4 (1471.5 to 1999.1)
North Africa and Middle East	8.6 (6.8 to 10.7)	454.6 (363.3 to 569)	24.6 (30.5 to 19.4)	509.1 (406 to 633.9)
Oceania	0.2 (0.2 to 0.3)	676.5 (538.8 to 842.3)	0.6 (0.8 to 0.5)	732 (577.9 to 918.1)
South Asia	23.1 (18.3 to 28.9)	370 (297.2 to 462.1)	58.2 (73.1 to 46.2)	393.3 (315.2 to 494)
Southeast Asia	16 (12.8 to 19.8)	551.8 (443.1 to 682.1)	42.5 (53 to 33.6)	646.3 (512.9 to 802.9)
Southern Latin America	3.5 (2.7 to 4.3)	743.6 (586.6 to 931)	7.4 (9.2 to 5.9)	914 (724.7 to 1135.3)
Southern Sub-Saharan Africa	1.6 (1.3 to 2)	540.1 (428.8 to 675.4)	3.5 (4.4 to 2.8)	574 (453.2 to 715.4)
Tropical Latin America	2.2 (1.7 to 2.7)	210.7 (167.6 to 260.9)	6.3 (7.8 to 5)	256 (202.7 to 316.3)
Western Europe	28.6 (22.4 to 36.2)	533.5 (419.8 to 672.7)	47.4 (59.6 to 37.1)	606.5 (476.1 to 764.1)
Western Sub-Saharan Africa	4.4 (3.5 to 5.5)	457 (363.4 to 570.3)	9.7 (12.2 to 7.7)	447.6 (358.3 to 558.3)

ASR – age-standardized rate, UI – uncertainty interval.

Supplementary Table SII. The global age-standardized DALY rate of gout among different sexes in 1990 and 2019

Gender	1990		2019	
	DALY cases No. × 10 ⁵ (95% UI)	ASR per 100,000 No. (95% UI)	DALY cases No. × 10 ⁵ (95% UI)	ASR per 100,000 No. (95% UI)
Both sexes	1.4 (0.6 to 2.9)	3.49 (1.49 to 6.69)	5.3 (2.6 to 9.4)	6.39 (3.15 to 11.39)
Male	1.1 (0.4 to 2.2)	5.45 (2.10 to 11.14)	4.1 (1.9 to 7.6)	10.28 (4.77 to 18.96)
Female	0.4 (0.2 to 0.7)	1.72 (0.77 to 3.15)	1.2 (0.6 to 2.1)	2.77 (1.37 to 4.78)

DALY – disability-adjusted life-year, ASR – age-standardized rate, UI – uncertainty interval.

Supplementary Table SIII. Annualized rate of change in age-standardized rates for gout attributable to high BMI for both sexes in 204 countries and territories, 1990 to 2019

Region	Rate change in age-standardized DALY rate, 1990-2019 (95% UI)
Afghanistan	0.8 (0.4 to 1.7)
Albania	1.2 (0.7 to 2.3)
Algeria	1.9 (0.9 to 6.3)
American Samoa	2.3 (1 to 8.6)
Andorra	1.8 (1 to 4.5)
Angola	2.6 (1.1 to 8.8)
Antigua and Barbuda	0.2 (0.1 to 0.5)
Argentina	0.5 (0.2 to 1.2)
Armenia	0.2 (0 to 0.4)
Australia	0.9 (0.5 to 1.7)
Austria	0.5 (0.2 to 1.1)
Azerbaijan	0.9 (0.4 to 2.1)
Bahamas	0.3 (0.1 to 0.6)
Bahrain	2.4 (1.2 to 7.4)
Bangladesh	2.7 (1.3 to 9)
Barbados	0.4 (0.3 to 0.7)
Belarus	2.3 (1.2 to 5.7)
Belgium	0.4 (0.2 to 0.8)
Belize	0.5 (0.3 to 1)
Benin	0.1 (0 to 0.3)
Bermuda	1.9 (1.1 to 5)
Bhutan	0.4 (0.2 to 0.9)
Bolivia (Plurinational State of)	1 (0.4 to 3.3)
Bosnia and Herzegovina	0.2 (0 to 0.5)
Botswana	0.2 (0 to 0.4)
Brazil	0.3 (0.1 to 0.6)
Brunei Darussalam	0.5 (0.2 to 1.1)
Bulgaria	0.8 (0.4 to 1.9)
Burkina Faso	0.6 (0.3 to 1)
Burundi	0.6 (0.3 to 1.3)
Cabo Verde	0.3 (0.1 to 0.5)
Cambodia	0.4 (0.2 to 0.8)
Cameroon	0.4 (0.2 to 0.7)
Canada	0.4 (0.2 to 0.7)
Central African Republic	0.7 (0.3 to 1.2)
Chad	0.4 (0.1 to 0.7)
Chile	0.2 (0 to 0.4)
China	1.2 (0.7 to 2.2)
Colombia	0.4 (0.2 to 0.8)
Comoros	0.2 (0 to 0.4)
Congo	0.4 (0.2 to 0.8)
Cook Islands	0.7 (0.3 to 1.2)
Costa Rica	0.2 (0.2 to 0.5)
Croatia	0.3 (0.1 to 0.6)

Supplementary Table SIII. Cont.

Region	Rate change in age-standardized DALY rate, 1990-2019 (95% UI)
Cuba	0.5 (0.2 to 0.9)
Cyprus	0.3 (0.1 to 0.6)
Czechia	0.5 (0.2 to 1.2)
Cote d'Ivoire	0.4 (0.2 to 0.7)
Democratic People's Republic of Korea	0.3 (0.1 to 0.7)
Democratic Republic of the Congo	0.5 (0.3 to 0.9)
Denmark	0.5 (0.2 to 0.8)
Djibouti	0.4 (0.2 to 0.7)
Dominica	0.5 (0.2 to 0.8)
Dominican Republic	0.4 (0.2 to 0.7)
Ecuador	0.4 (0.3 to 0.6)
Egypt	0.6 (0.3 to 0.9)
El Salvador	0.7 (0.3 to 1.3)
Equatorial Guinea	0.4 (0.1 to 0.7)
Eritrea	0.5 (0.2 to 0.9)
Estonia	0.4 (0.2 to 0.8)
Eswatini	0.5 (0.2 to 1)
Ethiopia	0.4 (0.2 to 0.8)
Fiji	0.6 (0.4 to 1.2)
Finland	0.4 (0.2 to 0.7)
France	1.3 (0.7 to 3.4)
Gabon	0.4 (0.2 to 0.7)
Gambia	0.8 (0.4 to 1.6)
Georgia	0.2 (0.1 to 0.5)
Germany	0.3 (0.1 to 0.5)
Ghana	0.3 (0.2 to 0.4)
Greece	0.4 (0.2 to 0.7)
Greenland	0.7 (0.3 to 1.2)
Grenada	0.6 (0.3 to 1)
Guam	0.8 (0.6 to 1.2)
Guatemala	0.4 (0.2 to 0.7)
Guinea	0.4 (0.2 to 0.7)
Guinea-Bissau	1.1 (0.6 to 2.8)
Guyana	0.8 (0.4 to 1.5)
Haiti	1.4 (1 to 2)
Honduras	0.8 (0.5 to 1.5)
Hungary	0.4 (0.2 to 0.8)
Iceland	0.4 (0.2 to 0.8)
India	1.1 (0.5 to 3)
Indonesia	0.7 (0.4 to 1.3)
Iran (Islamic Republic of)	0.5 (0.2 to 0.9)
Iraq	1.1 (0.6 to 2.2)
Ireland	0.6 (0.3 to 1.4)
Israel	1.1 (0.6 to 2.2)
Italy	0.5 (0.2 to 0.8)

Supplementary Table SIII. Cont.

Region	Rate change in age-standardized DALY rate, 1990-2019 (95% UI)
Jamaica	0.8 (0.4 to 1.7)
Japan	0.3 (0.2 to 0.6)
Jordan	0.6 (0.3 to 1.1)
Kazakhstan	0.5 (0.2 to 1)
Kenya	0.4 (0.2 to 0.6)
Kiribati	0.6 (0.3 to 1)
Kuwait	0.5 (0.3 to 1)
Kyrgyzstan	0.5 (0.2 to 0.9)
Lao People's Democratic Republic	0.5 (0.2 to 0.9)
Latvia	0.6 (0.3 to 1.3)
Lebanon	0.4 (0.1 to 0.7)
Lesotho	0.7 (0.4 to 1.1)
Liberia	0.8 (0.4 to 1.4)
Libya	0.4 (0.2 to 0.7)
Lithuania	0.2 (0 to 0.5)
Luxembourg	0.6 (0.4 to 1)
Madagascar	0.9 (0.6 to 1.6)
Malawi	1.7 (0.9 to 4.3)
Malaysia	0.1 (-0.1 to 0.4)
Maldives	1 (0.5 to 2)
Mali	0.8 (0.4 to 1.5)
Malta	1 (0.6 to 2.1)
Marshall Islands	1.2 (0.6 to 2.6)
Mauritania	1 (0.5 to 2.2)
Mauritius	0.5 (0.2 to 0.9)
Mexico	1.9 (1.1 to 4.1)
Micronesia (Federated States of)	1 (0.5 to 2.1)
Monaco	0.6 (0.2 to 1.1)
Mongolia	2 (0.8 to 7.5)
Montenegro	0.9 (0.5 to 1.8)
Morocco	0.8 (0.4 to 1.9)
Mozambique	0 (-0.2 to 0.2)
Myanmar	0.3 (0.1 to 0.6)
Namibia	0.8 (0.4 to 1.5)
Nauru	1.7 (0.9 to 3.4)
Nepal	0.5 (0.3 to 0.9)
Netherlands	0.7 (0.4 to 1.3)
New Zealand	0.4 (0.1 to 0.8)
Nicaragua	0.3 (0.1 to 0.6)
Niger	1.4 (0.8 to 3.2)
Nigeria	1.6 (0.8 to 5)
Niue	1.7 (0.7 to 6)
North Macedonia	0.7 (0.3 to 1.2)
Northern Mariana Islands	0.6 (0.3 to 1.2)
Norway	0.5 (0.2 to 1)

Supplementary Table SIII. Cont.

Region	Rate change in age-standardized DALY rate, 1990-2019 (95% UI)
Oman	0.9 (0.4 to 2)
Pakistan	0.9 (0.5 to 1.5)
Palau	1 (0.6 to 2.3)
Palestine	0.7 (0.4 to 1.6)
Panama	0.5 (0.2 to 0.9)
Papua New Guinea	0.7 (0.3 to 1.6)
Paraguay	0.7 (0.3 to 1.3)
Peru	0.7 (0.4 to 1.5)
Philippines	1.1 (0.5 to 2.5)
Poland	0.6 (0.3 to 1.2)
Portugal	0.4 (0.2 to 0.7)
Puerto Rico	0.6 (0.3 to 1.2)
Qatar	0.5 (0.2 to 0.9)
Republic of Korea	0.8 (0.4 to 1.6)
Republic of Moldova	1.1 (0.6 to 2.2)
Romania	1 (0.5 to 2.2)
Russian Federation	1.6 (0.8 to 3.7)
Rwanda	1.7 (0.8 to 4.6)
Saint Kitts and Nevis	0.9 (0.5 to 1.7)
Saint Lucia	2.6 (1.3 to 6.7)
Saint Vincent and the Grenadines	5.3 (2.4 to 19.3)
Samoa	0.4 (0.3 to 0.7)
San Marino	1.1 (0.7 to 2.3)
Sao Tome and Principe	1 (0.4 to 2.5)
Saudi Arabia	2.7 (1.2 to 10.6)
Senegal	0.5 (0.2 to 1.3)
Serbia	0.5 (0.2 to 1.3)
Seychelles	0.8 (0.4 to 1.9)
Sierra Leone	1.5 (0.8 to 4)
Singapore	0.8 (0.4 to 2.1)
Slovakia	2.4 (1.1 to 7.8)
Slovenia	1.7 (1 to 3.7)
Solomon Islands	1.7 (0.8 to 5.5)
Somalia	0.1 (-0.1 to 0.4)
South Africa	0.2 (0 to 0.5)
South Sudan	1 (0.5 to 2.4)
Spain	1.3 (0.6 to 3.5)
Sri Lanka	1.6 (0.7 to 4.4)
Sudan	1.6 (0.9 to 3.6)
Suriname	0.7 (0.4 to 1.6)
Sweden	0.6 (0.3 to 1.2)
Switzerland	0.6 (0.3 to 1.4)
Syrian Arab Republic	1.3 (0.7 to 3)
Taiwan (Province of China)	1.1 (0.6 to 2.6)
Tajikistan	2 (1 to 4.9)

Supplementary Table SIII. Cont.

Region	Rate change in age-standardized DALY rate, 1990-2019 (95% UI)
Thailand	0.9 (0.5 to 1.7)
Timor-Leste	1.4 (0.7 to 3.4)
Togo	0.6 (0.3 to 1.5)
Tokelau	0.9 (0.4 to 2.4)
Tonga	0.3 (0.2 to 0.6)
Trinidad and Tobago	0.1 (0 to 0.3)
Tunisia	0.6 (0.3 to 1.4)
Turkey	0.3 (0.1 to 0.6)
Turkmenistan	1.4 (0.7 to 3.2)
Tuvalu	0.4 (0.2 to 0.7)
Uganda	0.3 (0.1 to 0.6)
Ukraine	0.8 (0.5 to 1.7)
United Arab Emirates	0.9 (0.4 to 2.2)
United Kingdom	0.1 (0 to 0.3)
United Republic of Tanzania	0.3 (0.2 to 0.6)
United States of America	0.3 (0.1 to 0.5)
United States Virgin Islands	0.2 (0.1 to 0.5)
Uruguay	0.6 (0.3 to 0.9)
Uzbekistan	0.7 (0.3 to 1.6)
Vanuatu	0.8 (0.5 to 1.5)
Venezuela (Bolivarian Republic of)	0.6 (0.3 to 1.1)
Vietnam	0.5 (0.2 to 0.8)
Yemen	0.5 (0.2 to 0.9)
Zambia	1.5 (0.8 to 3.2)
Zimbabwe	0 (−0.1 to 0.1)

DALY – disability-adjusted life year, UI – uncertainty interval.