Supplementary Table 1.

Characteristics of patients who a) were potentially eligible, b) were invited in E-boks*, c) were invited and did not complete questionnaire, and d) completed questionnaire

Patient characteristics		a) Potentially eligible for inclusion[§] N=36,152	b) Had access to E-boks* and received invitation N=32,766	c) Had access to E-boks and did not complete questionnaire N=19,977	d) Completed questionnaire N=12,789
Gender, n (%)	Female	23167 (64)	20651 (63)	12285 (61)	8366 (65)
Age, years, n (%)	≤39	4878 (13)	4840 (15)	3844 (19)	996 (8)
	40-59	12574 (35)	12281 (37)	7845 (39)	4436 (35)
	60-79	16115 (45)	14226 (43)	7427 (37)	6799 (53)
	≥80	2585 (7)	1419 (4)	861 (4)	558 (4)
Diagnosis, n (%)	RA	21754 (60)	18985 (58)	10817 (54)	8168 (64)
	PsA	6112 (17)	5766 (18)	3698 (19)	2068 (16)
	AxSpA	5718 (16)	5573 (17)	3815 (19)	1758 (14)
	Other	2568 (7)	2442 (7)	1647 (8)	795 (6)

[§]Patients in DANBIO with at least one visit during the previous year; * E-boks: secure electronic communication between authorities and individual citizens.

Abbreviations: AxSpA: axial spondyloarthritis; IQR: interquartile range; PsA: psoriatic arthritis; RA: rheumatoid arthritis

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Supplementary Table 2. Data completeness

Included patients with available baseline data shown as percentages, %
Stratified by diagnosis. N=12,789

	Rheumatoid arthritis N=8,168	Psoriatic arthritis N=2,068	Axial spondyloarthritis N=1,758	Other N=795
Gender	100	100	100	100
Age, years	100	100	100	100
Information captured from the COVID-19 questionnaire: Self-reported characteristics				
Lives alone	100	100	100	100
Highest education	99	100	99	100
Occupational status	100	100	100	100
Comorbidities	94	93	92	92
PASS	99	99	99	99
HAQ	100	100	99	99
Patient global, VAS, mm	100	99	100	100
EQ-5D	97	97	98	93
Information captured from DANBIO: Patient- and disease characteristics				
Rheumatic diagnosis	100	100	100	100
Smoking status	99	99	99	95
Year of diagnosis	94	89	92	70
Current medication	100	100	100	100
Abbreviations:, EQ-5D: European Quality of life, 5 dimensions; HAQ: health assessment questionnaire; PASS: patient acceptable symptom state; VAS: visual analogue scale				

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Supplemental material

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Supplementary Table 3. Contacts and care for rheumatic disease, impact of the COVID-19 pandemic up until June 2020.

Percentages are shown according to all patients included (N=12,789) unless otherwise stated

Question	Answering options	Reply, n (%)
Did you in March or April 2020 contact the clinic in one of the following ways (>1 answer allowed), n (%)	Phone	5257 (41)
	E-mail	473 (4)
	Video-consultation	20 (0)
	Consultation in clinic	2852 (22)
	Other*	894 (7)
	No	4501 (35)
	Missing/no answer	145 (1)
Did you within the last 30 days contact the clinic in one of the following ways (>1 answer allowed), n (%)	Phone	3281 (26)
	E-mail	368 (3)
	Video-consultation	8 (0)
	Consultation in clinic	1876 (15)
	Other	616 (5)
	No	7050 (55)
	Missing/no answer	306 (2)
Did the Corona pandemic cause cancelling/delay of a scheduled appointment related to your arthritis (until March 2020), n (%)	Yes	3932 (31)
	No	7827 (61)
	Do not know	1002 (8)
	Missing/no answer	28 (0)
If yes to cancelling/delay (n=3932), which appointment (>1 answer allowed)$^\$$, n (%)	Physician	2618 (67)
	Nurse	786 (20)
	Medical infusion therapy	87 (2)
	Medication hand-out at dept of rheumatology	352 (9)
	X-ray etc.	342 (9)
	Medical aids	16 (0)
	Blood sampling	649 (17)
	Surgery	72 (2)
	Physiotherapy	687 (17)
	Occupational therapist	30 (1)
	Other	934 (24)
My access to counselling with my rheumatologist became (until March 2020), n (%)	Better	108 (1)
	Unchanged	6060 (47)
	Worse	857 (7)
	Do not know	3100 (24)
	Not relevant	2611 (20)
	Missing	53 (0)
My options for treatment of my rheumatic disease became (until March 2020), n (%)	Better	78 (1)
	Unchanged	6637 (52)
	Worse	905 (7)
	Do not know	2661 (21)
	Not relevant	2382 (19)
	Missing	126 (0)
Have you required additional information regarding your arthritis during the corona-lock down?	Yes*	4856 (38)
	No	7640 (60)
	Do not know	268 (2)
	Missing/no answer	25 (0)

$^\$$Percentage of 'yes' to cancelling/delay of scheduled appointment, summed percentages exceed 100% because >1 answer was allowed per patient

* If yes, who did you contact (>1 answer allowed): rheumatology clinic (N=2408/4856, 50%), other hospital department (133, 3%), general practitioner (1262, 26%), Danish Arthritis Association (1588, 33%), COVID-19 hotline (569, 12%), Other (1473, 30%)

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Supplementary Table 4. Self-isolation strategies, March 2020.
Percentages are shown according to all patients included (N=12,789) unless otherwise stated

Question	Answering options	Reply, n (%)
How would you describe your situation? n (%)	Life went on as usual	761 (6)
	Life went on with slight changes	4347 (34)
	Life went on with major changes	4784 (37)
	Isolation at hospital or other	30 (0)
	Self-isolation (at home)	2765 (22)
	Other	69 (1)
	Missing	33 (0)
How many persons were you typically in contact with per day (>2 m distance)? n (%)	None	1807 (14)
	1-5	8881 (70)
	6-10	1090 (9)
	11-20	553 (4)
	21-50	292 (2)
	>50	132 (1)
	Missing	34 (0)
How many persons were you typically in face-to-face contact with per day (<2 m distance)? n (%)	None	3365 (26)
	1-5	8542 (67)
	6-10	474 (4)
	11-20	196 (2)
	21-50	81 (1)
	>50	53 (0)
	Missing	78 (1)
Did you leave the home for shopping? n (%)	Yes	9039 (71)
	No	3688 (29)
	Do not know	31 (0)
	Missing	31 (0)
If yes to above (n=9039), how often did you leave home for shopping? n (%)	Several times a day	152 (2)
	Once a day	1104 (12)
	Several times a week	3748 (41)
	Once a week	3652 (40)
	Less than weekly	381 (4)
	Missing/not relevant	2 (0)
Did you change your physical shopping habits? n (%)	Yes, shopped less frequently	5745 (45)
	Yes, shopped more frequently	817 (6)
	Shopped on-line	1055 (8)
	Others shopped for me	2690 (21)
	No	2313 (18)
	Do not know	137 (1)
	Missing	32 (0)
Did you use public transportation? n (%)	Yes	470 (4)
	No	12255 (96)
	Do not know	32 (0)
	Missing	32 (0)
If you used public transportation (n=470), how often? n (%)	Several times a day	69 (15)
	Once a day	32 (7)
	Several times a week	89 (19)
	Once a week	88 (19)
	Less than weekly	190 (41)
	Missing	2 (0)

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Supplementary Table 5. Self-perceived impact of the COVID-19 situation, March and June 2020
Total N=12,789

Question	Completely agree	Mostly agree	Neither nor	Mostly disagree	Completely disagree	Do not know	Missing$
			Reply, n				
The early stage of the pandemic before Easter, March 2020, n (%)							
I considered myself at high risk of COVID-infection	6527 (51)	3032 (24)	1368 (11)	540 (4)	767 (6)	520 (4)	35 (-)
I considered some of my close relatives at high risk	5873 (46)	2510 (20)	1502 (12)	605 (5)	1364 (11)	875 (7)	60 (-)
I was very worried to get COVID-19 infection	5435 (43)	3464 (27)	1896 (15)	933 (7)	823 (6)	203 (2)	35 (-)
I worried more about COVID-19 than about my rheumatic disease	3167 (25)	2885 (23)	3185 (25)	1027 (8)	2162 (17)	319 (3)	44 (-)
My worry about COVID-19 caused me to cancel health-contacts/appointments for arthritis*	1226 (10)	690 (5)	2031 (16)	528 (4)	7179 (56)	1062 (8)	73 (-)
I tried to keep social distance (avoided groups of persons)	10800 (85)	1458 (11)	278 (2)	106 (1)	79 (1)	50 (0)	18 (-)
I stayed home and avoided others as much as possible	8032 (63)	2985 (23)	655 (5)	444 (3)	592 (5)	41 (0)	40 (-)
I used gloves during e.g. social activities, shopping	5107 (40)	2107 (17)	1376 (11)	642 (5)	3214 (25)	264 (2)	79 (-)
I used hand-disinfection during e.g. social activities, shopping	11423 (90)	871 (7)	160 (1)	69 (1)	138 (1)	74 (1)	54 (-)
I used facial mask during social activities	575 (5)	428 (3)	1446 (11)	448 (4)	9422 (74)	354 (3)	116 (-)
I did nothing specific to protect myself	657 (5)	1039 (8)	799 (6)	1677 (13)	8334 (66)	194 (2)	89 (-)
My arthritis caused me to self-isolate myself more than others my age	3624 (28)	2584 (20)	2281 (18)	783 (6)	2926 (23)	554 (4)	37 (-)
My arthritis caused me to worry more about my health than others the same age	3797 (30)	3120 (25)	2090 (16)	862 (7)	2336 (18)	518 (4)	66 (-)
Current stage of the pandemic (the last 7 days), June 2020, n (%)							
I consider myself at high risk of COVID-infection	4280 (34)	3578 (29)	2048 (16)	889 (7)	1253 (10)	383 (3)	358 (-)
I worry about re-opening of the society	1222 (10)	3599 (29)	2976 (24)	1794 (14)	2486 (20)	343 (3)	369 (-)
I am very worried to get COVID-19 infection	2324 (19)	3320 (27)	2787 (22)	1851 (15)	1877 (15)	274 (2)	356 (-)
I worry more about COVID-19 than about my rheumatic disease	1243 (10)	2083 (17)	3664 (30)	1484 (12)	3589 (29)	323 (3)	403 (-)
My worry about COVID-19 cause me to cancel health-contacts/appointments for arthritis**	510 (4)	620 (5)	1755 (14)	867 (7)	7886 (64)	765 (6)	386 (-)
I try to keep social distance (avoid groups of persons)	5634 (45)	4231 (34)	1224 (10)	795 (6)	469 (4)	71 (1)	365 (-)
I stay home and avoid others as much as possible	1937 (16)	4124 (33)	2151 (17)	1947 (16)	2180 (18)	67 (1)	383 (-)
I use gloves during e.g. social activities, shopping	2896 (23)	2063 (17)	1410 (11)	921 (7)	4863 (39)	208 (2)	428 (-)
I use hand-disinfection during e.g. social activities, shopping	10492 (85)	1424 (11)	173 (1)	90 (1)	161 (1)	49 (0)	400 (-)
I use facial mask during social activities	360 (3)	444 (4)	1338 (11)	529 (4)	9356 (76)	300 (2)	462 (-)
I do nothing specific to protect myself	657 (5)	1446 (12)	1151 (9)	2580 (21)	6368 (52)	158 (1)	427 (-)
My arthritis causes me to self-isolate more than others my age	1924 (16)	2761 (22)	2536 (21)	1109 (9)	3451 (28)	586 (5)	422 (-)
My arthritis causes me to worry more	2326 (19)	3271 (27)	2296 (19)	1103 (9)	2666 (22)	652 (5)	475 (-)

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about my health than others the same age							

*If agree, which appointments did you cancel: Physician (277), Nurse (136), Medical infusion therapy (80), Medication hand-out at dept of rheumatology (238), X-ray etc. (82), Medical aids (7), Blood sampling (595), Surgery (19), Physiotherapy (622), Occupational therapy (16), Other (942)

** If agree, which appointments did you cancel: Physician (150), Nurse (64), Medical infusion therapy (27), Medication hand-out at dept of rheumatology (86), X-ray etc. (38), Medical aids (11), Blood sampling (218), Surgery (18), Physiotherapy (491), Occupational therapy (21), Other (684)

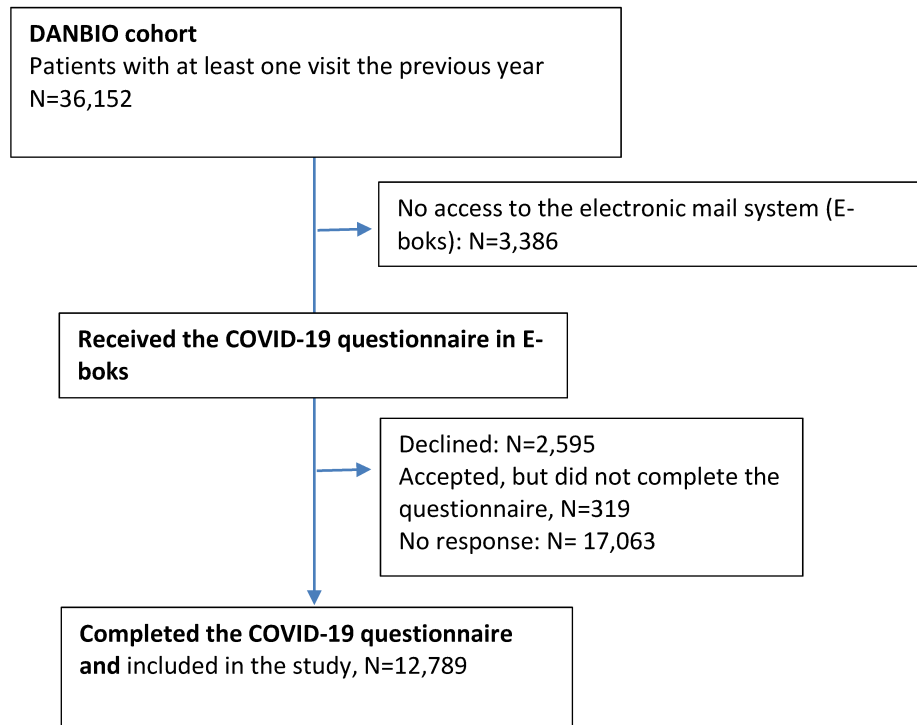\$Percentages shown do not include missing

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Supplementary table 6. Factors associated with anxiety and self-isolation, June 2020
Results of multivariable logistic regression analyses

		I am very worried to get COVID-19 infection, June N=11,288*		My arthritis causes me to self-isolate myself more than others my age, June N=11,251*	
		Multivariable HR (95% CI)	p-value	Multivariable HR (95% CI)	p-value
Male gender		**0.67 (0.62-0.73)**	**<0.001**	**0.62 (0.57-0.68)**	**<0.001**
Age, years	≤39	1 (ref)		1 (ref)	
	40-59	1.13 (0.96-1.33)	0.1	0.93 (0.79-1.09)	0.4
	60-79	**1.35 (1.14-1.61)**	**0.001**	**0.71 (0.59-0.84)**	**<0.001**
	>=80	1.02 (0.78-1.31)	0.9	**0.49 (0.37-0.64)**	**<0.001**
Diagnosis	RA	1 (ref)		1 (ref)	
	PsA	0.95 (0.85-1.06)	0.4	1.04 (0.93-1.16)	0.5
	AxSpA	0.90 (0.79-1.03)	0.1	0.96 (0.84-1.10)	0.6
	Other	1.03 (0.87-1.22)	0.7	1.11 (0.93-1.32)	0.3
Lower education, yes		**1.17 (1.08-1.27)**	**<0.001**	**0.92 (0.85-1.00)**	**0.04**
Working, yes**		**0.87 (0.79-0.96)**	**0.005**	**0.78 (0.71-0.87)**	**<0.001**
Cohabitant, yes		1.05 (095-1.16)	0.3	0.91 (0.82-1.00)	0.06
Use of bDMARD, yes		**1.49 (1.31-1.70)**	**<0.001**	**2.06 (1.79-2.36)**	**<0.001**
Use of csDMARD, yes		1.00 (0.88-1.15)	0.9	**1.18 (1.02-1.36)**	**0.02**
PASS, yes,		1.02 (0.92-1.13)	0.7	**1.12 (1.01-1.25)**	**0.03**
Number of comorbidities	0	1 (ref)		1 (ref)	
	1	**1.28 (1.17-1.40)**	**<0.001**	**1.22 (1.10-1.34)**	**<0.001**
	>=2	**1.65 (1.49-1.83)**	**<0.001**	**1.44 (1.29-1.60)**	**<0.001**
Smoking status	Current	1 (ref)		1 (ref)	
	Previous	**0.80 (0.71-0.89)**	**<0.001**	**0.87 (0.77-0.98)**	**0.03**
	Never	**0.82 (0.74-0.91)**	**<0.001**	0.91 (0.82-1.02)	0.1
Q5D, anxiety		**0.15 (0.11-0.20)**	**<0.001**	**0.053 (0.039-0.072)**	**<0.001**
Statistically significant results are shown with bold types					
*Numbers show patients with available data for multivariable analyses					
**Status before corona lock-down					
Abbreviations: AxSpA: axial spondyloarthritis, bDMARD: biologic disease modifying agent, csDMARD: conventional synthetic DMARD, EQ-5D: European Quality of life, 5 dimensions, PsA: psoriatic arthritis, RA: rheumatoid arthritis					

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Supplementary Figure 1. Patient disposition

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┌─────────────────────────────────────────┐
│ DANBIO cohort                            │
│ Patients with at least one visit the     │
│ previous year                            │
│ N=36,152                                 │
└─────────────────────────────────────────┘
                │
                │      ┌──────────────────────────────────────┐
                ├─────▶│ No access to the electronic mail      │
                │      │ system (E-boks): N=3,386              │
                │      └──────────────────────────────────────┘
                │
┌─────────────────────────────────────────┐
│ Received the COVID-19 questionnaire in   │
│ E-boks                                   │
└─────────────────────────────────────────┘
                │
                │      ┌──────────────────────────────────────┐
                ├─────▶│ Declined: N=2,595                     │
                │      │ Accepted, but did not complete the    │
                │      │ questionnaire, N=319                  │
                │      │ No response: N= 17,063                │
                │      └──────────────────────────────────────┘
                │
                ▼
┌─────────────────────────────────────────┐
│ Completed the COVID-19 questionnaire     │
│ and included in the study, N=12,789      │
└─────────────────────────────────────────┘
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Supplemental material

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Supplementary Figure 2. Histogram showing the date of completing the COVID-19 questionnaire

X-axis: date (yyyymmdd), Y-axis: number of respondents. N=12,789

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