

Supplementary table Summary of findings from studies of children and adolescents with persistent symptoms after SARS-CoV-2 infection

| Study | Study details | | | | | | | | Participants* | | | | | | | Frequency of persisting symptoms° | | | | | | | | | | | | |
|--|------------------------------------|----------------------------------|-------------|--------------------------|-----------------------------------|------------------------------------|----------------|---|--------------------------------------|--------|----------------------|------------------------|------------------------|-----|--------------------------------|-----------------------------------|---------|-------------------|----------------------------|----------------|-----------------------|-------------------------|-------|-------------------------|----------------------------|----------------------------|---|--|
| Author Study type (level of evidence) Country | Time of evaluation after infection | Questionnaire or phone interview | Study visit | Total number of children | Children with persistent symptoms | Children with SARS-CoV-2 infection | Other controls | Proportion of children with persistent symptoms | Age | Female | Laboratory confirmed | Initially asymptomatic | Initially hospitalised | ICU | Pre-existing medical condition | Headache | Fatigue | Sleep disturbance | Concentration difficulties | Abdominal pain | Myalgia or arthralgia | Congested or runny nose | Cough | Chest pain or tightness | Loss of appetite or weight | Disturbed smell or anosmia | Rash | Other symptoms° and important findings |
| Studies with controls | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blankenburg <i>et al</i> ⁶⁰ CS (2C) Germany | Random | ✓ | ✓ | 1533 | nr | 178 | 1327 | nr | Median 15y r 10-38y IQR 14-16y | 56% | 100% | nr | nr | nr | nr | 109 | 71 | 112 | 144 | 82 | 62 | 3 | nr | nr | nr | nr | nr | Memory loss (91, 51%), listlessness (139, 78%), feeling sad (103, 58%), feeling angry (119, 67%), feeling tense (155, 87%) No difference in symptoms between seropositive and seronegative children Positive correlation between increasing age and most symptoms and between female sex and neurocognitive and pain symptoms |
| Miller <i>et al</i> ⁶⁶ PCS (2B) UK | >4w | ✓ | - | 4678 | 8 | 174 | 4504 | 5% | ≤17y | nr | 100% | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | Children with an infection more likely to have persistent symptoms (8/174 (5%) vs 72/4504 (2%) reported ≥1 symptom >4w) Positive correlation between increasing age, female sex, pre-existing medical condition and symptoms | |
| Molteni <i>et al</i> ⁶⁵ PCS (2B) UK | >4w >8w | ✓ | - | 3468 | 77 | 1734 | 1734 | 4% | Median 13y IQR 10-15y | 50% | 100% | nr | 2% | nr | 12% | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | nr | Seropositive children slightly more likely to have persistent symptoms than seronegative (77/1734 (4%) vs 15/1734 (1%) reported ≥1 symptom >4w) 25/1379 (2%) of seropositive children reported ≥1 symptom >12w Positive correlation between increasing age and symptoms | |

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| Radtko <i>et al</i> ^{β4} | >4w | ✓ | - | 1355 | 4 | 109 | 1246 | 4% | Median 11y | 53% | 100% | nr | nr | nr | nr | 5 | 7 | 3 | nr | 3 | nr | 3 | 2 | nr | nr | nr | nr | No difference in symptoms between seropositive and -negative children (10/109 (9%) vs 121/1246 (10%) reported ≥1 symptom >4w, 4/109 (4%) vs 28/1246 (2%) ≥1 symptom >12w) |
| PCS (2B) | | | | | | | | | | | | | | | 5% | 6% | 3% | | 3% | nr | 3% | 2% | | | | | | |
| Switzerland | >12w | | | | | | | | | | | | | | nr | 3 | 2 | 2 | 1 | nr | 1 | nr | 1 | nr | nr | nr | | |
| | | | | | | | | | | | | | | | | 3% | 2% | 2% | 1% | | 1% | | 1% | | | | | |
| Stephenson <i>et al</i> ^{β7} | >12w | ✓ | | 6804 | 2038 | 3065 | 3739 | 66% | r 11-17y | 64% | 100% | 65% | nr | nr | nr | 710 | 1,196 | nr | nr | 119 | 165 | nr | 98 | 216 | 296 | 414 | 83 | |
| PCS (2B) | | | | | | | | | | | | | | | 23% | 39% | | | 4% | 5% | | 3% | 7% | 10% | 14% | 3% | Dyspnoea (717, 23%), dizziness or light-headedness (419, 14%), chills (269, 9%), sore throat (291, 10%), confusion, disorientation or drowsiness (198, 7%), earache or ringing in ears (191, 6%), eye-soreness (182, 6%), diarrhoea (92, 3%), hoarse voice (56, 2%), fever (50, 2%) | |
| UK | | | | | | | | | | | | | | | | | | | | | | | | | | | Similar symptoms in infected and uninfected children, but higher prevalence in infected children | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | Infected children had more had similar symptoms to uninfected but with a higher prevalence, especially for multiple symptoms | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | No difference in mental health or well-being between infected and uninfected children (40% of infected children reported feeling worried vs 39% uninfected) | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | Positive correlation between female sex, increasing age, worse pre-infection physical and mental health and higher number of symptoms | |

Studies without controls

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|---|-------------|---|---|----|----|----|---|-----|-----------|-----|------|----|-----|----|----|-----|-----|-----|----|----|-----|----|-----|-----|-----|-----|--|--|
| Ashkenazi-Hoffnung <i>et al</i> ^{β9} | Median 112d | ✓ | ✓ | 90 | 90 | 90 | 0 | nr | Mean 12y | 41% | 100% | 0 | 12% | nr | nr | 26 | 64 | 30 | 8 | nr | 41 | nr | 9 | 28 | 17 | 23 | nr | Impairment in daily activities (53, 59%), dyspnoea (45, 50%), paraesthesia (36, 29%), hair loss (24, 27%), gastrointestinal symptoms (18, 20%), dizziness (17, 19%), memory impairment (16, 18%), vasomotor complaints (13, 14%), tremor (12, 1%), palpitations (8, 9%), tic exacerbation (2, 2%) and tinnitus (1, 1%) |
| PCS (2B) | | | | | | | | | SD 5y | | | | | | | 29% | 71% | 33% | 9% | | 56% | | 10% | 31% | 19% | 26% | | Changes on chest radiograph (12, 13%), abnormal spirometry (5, 6%), abnormal exercise challenge test (3, 6%), air trapping by plethysmography (15, 17%), abnormal electrocardiograph (2, 2%), abnormal cardiac MRI (81, 1%) |
| Israel | r 33-410d | | | | | | | | | | | | | | | | | | | | | | | | | | Positive correlation between increasing age and fatigue, dyspnoea, myalgia | |
| Blomberg <i>et al</i> ^{β3} | >5m | ✓ | ✓ | 16 | 2 | 16 | 0 | 13% | Median 8y | 56% | 100% | nr | 0 | 0 | nr | nr | nr | nr | nr | 1 | nr | nr | nr | nr | nr | 2 | nr | |

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| PCS (2B) Norway | | | | | | | | | IQR 6-12y | | | | | | | | | | | 6% | | | | | 13% | | | |
| Brackel <i>et al</i> ² | Random | ✓ | - | 89 | 89 | 89 | 0 | nr | Median 13y | nr | nr | nr | nr | nr | nr | 34 | 77 | nr | 40 | 1 | 25 | nr | nr | 31 | 2 | nr | 6 | Dyspnoea (49, 55%), diarrhoea (21, 24%) memory loss (12,13%), palpitations (16, 18%), dizziness (3, 3%), brain fog (2%), fever (2, 2%) |
| CS (2C) Netherlands | | | | | | | | | r 2-18y IQR 9-15y | | | | | | 38% | 87% | | 45% | 6% | 28% | | | 25% | 2% | | 7% | Mild or severe limitation in daily functioning (75, 84%) | |
| Buonsenso <i>et al</i> ¹ | >4w | ✓ | - | 510 | 510 | 510 | 0 | nr | Mean 10y SD 3.8y | 56% | 28% | 12% | 4% | nr | 56% | 410 | 410 | 287 | 309 | 387 | 309 | nr | 151 | nr | 253 | nr | 267 | Decreased physical activity (459, 90%), tiredness/weakness (444, 87%), change in energy levels (425, 83%), change in mood (300, 59%), post-exertional malaise (274, 54%), irritability (262, 51%), dizziness (245, 48%), nausea (233, 46%), sore throat (230, 45%), diarrhoea/vomiting (216, 42%), red eyes (206, 40%), palpitations (205, 40%), difficulty in doing everyday tasks (204, 40%), red/cracked lips (201, 39%), difficulty processing information (167, 33%), short term memory issues (167, 33%), fever (151, 30%), peeling skin on hands/feet (143, 28%), swollen neck glands (128, 25%), flu-like symptoms (121, 24%), swollen hands/feet (107, 21%), ulcers (79, 15%), twitches (55, 11%), word repetition (52, 10%), tics (47, 9%), stuttering (40, 8%), swearing (26, 5%), growling (24, 5%) |
| CS (2C) International UK (67%) USA (18%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buonsenso <i>et al</i> ⁶ | Mean 163d SD 114d | ✓ | - | 129 | 75 | 129 | 0 | 58% | Mean 11y SD 4.4y | 48% | 100% | 25% | 5% | 2% | nr | 13 | 14 | 24 | 13 | 3 | 13 | 16 | 7 | 8 | 10 | 6 | 9 | Constipation (8, 6%), palpitations (5, 4%), hypersomnia (4, 3%), diarrhoea (2, 2%), hair loss (2, 2%), skin peeling (1, 1%) |
| CS (2C) Italy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Osmanov <i>et al</i> ⁰ | >5m | ✓ | - | 518 | 126 | 518 | 0 | 24% | Median 10y r 2d-18y IQR 3-15.2y | 52% | 100% | nr | 100% | 3% | 45% | 17 | 53 | 26 | nr | 10 | 6 | 10 | 5 | 7 | 12 | 22 | 8 | Disturbed taste (16, 3%), decreased physical activity (24, 5%), hypersomnia (15, 3%), hyperhidrosis (13, 3%), diarrhoea (10, 2%), blurred vision (10, 2%), hair loss (9, 2%), constipation (8, 2%), difficulty breathing (7, 1%), nausea (6, 1%), dizziness (5, 1%), palpitations (5, 1%) Positive correlation between increasing age, allergic disease and symptoms |
| PCS (2B) Russia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Say <i>et al</i> ¹ | >4w >12w | ✓ | ✓ | 151 | 12 | 151 | 0 | 8% | Mean 4y Median 2y SD 3.5y IQR 1-7y | 42% | 100% | 36% | 8% | nr | nr | nr | nr | 4 | nr | nr | nr | nr | 7 | nr | nr | nr | nr | |
| PCS (2B) Australia | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Smane <i>et al</i> ² | Mean 101d | ✓ | ✓ | 30 | 9 | 30 | 0 | 30% | Mean 9y | 43% | 100% | 17% | 17% | 0 | 23% | 1 | nr | nr | nr | nr | 1 | nr | nr | nr | nr | 1 | nr | Fever (2, 7%), ageusia (1, 3%), microhaematuria (1, 3%) |

