

Recovery and Symptom Trajectories up to Two Years After SARS-CoV-2 Infection

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Study design Zurich SARS-CoV-2 Cohort Study (ZSAC)





Blood sampling



Questionnaires

Study registration \rightarrow <u>https://doi.org/10.1186/ISRCTN14990068</u>



Outcome assessment in ZSAC



3 types of patient-reported outcomes Every 6 months

1. Recovery question

Asked participants if they had recovered compared with their usual health status before infection

2. Symptoms

- 23 symptoms (severity and if related to COVID-19)
- Validated instruments (e.g. Fatigue Assessment Scale, mMRC dyspnea, DASS)

3. Health status





WHO case definition & prevalence estimates

- After confirmed or likely infection with SARS-CoV-2
- 3 months after infection and ≥2 months with symptoms
- (No other diagnosis)
- Fatigue, shortness of breath, cognitive impairment, among other other symptoms *
- Symptoms may be constant, fluctuate or relapse







https://www.who.int/publications/i/item/WHO-2019-nCoV-Post COVID-19 condition-Clinical case definition-2021.1



Prognosis up to 2 years after infection





Prognosis up to 2 years after infection, in natural frequencies







Moderate impairment of health status





Variable course of Long Covid over two years Improved Worsened Alternating course No change



Ballouz et al. British Medical Journal 2023;381:e074425 | <u>https://doi.org/10.1136/bmj-2022-074425</u>



Importance of anchoring symptoms due to Long COVID

Symptoms related to Covid-19 or not



Excess of symptoms due to SARS-CoV-2



Ballouz et al. British Medical Journal 2023;381:e074425 | <u>https://doi.org/10.1136/bmj-2022-074425</u>



Ability to work as compared to before infection



E Current work ability

Kerksieck, Ballouz et al., Lancet Regional Health Europe, in press. <u>https://doi.org/10.1016/j.lanepe.2023.100671</u>



Swiss Insurance Medicine

Versicherungsmedizin Schweiz Aédecine d'assurance suisse

edicina assicurativa svizzera

Long Covid EPOCA tool – key to bring standardized assessments to clinic

Baseline demographic & clinical	Occupational & insurer status	Functioning status	Current health status
			General/internal
Sociodemographics	Occupation/employment	 Ability to self-care Post-Covid Functional Scale (PCFS) 	SymptomsCurrent treatments
Medical comorbiditiesSmoking	Mental/physical demandsPerceived work restrictions		Feeling thermometerPerceived recovery
• BMI	Return to work expectations		Physical
 Details on acute COVID-19 infection 	Work ability scaleInsurer status		Fatigue Severity Scale (FSS)1-min sit to stand (STS)
			Respiratory
			 Chronic Respiratory Questionnaire (CRQ)
			Cognitive/Psych
			DemTectWHO-5 Wellbeing Index
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EPOCA app available as of late summer 2023







Take home messages

Prognosis of Long Covid

- 1. Recovery is slow, in particular for persons with moderate and severe impairment
- 2. Around 70% of persons are mildly affected, with little impact on workability, but 30% have substantially reduced health status and workability

Operationalization of Long Covid definition

- 1. Important to use combination of patient reported outcomes, e.g. recovery question, specific symptom related to Long COVID, validated instruments and health status (EQ 5D)
- 2. Repeated assessments needed due to highly variable prognosis of Long Covid
- 3. Modular approach for assessment possible, which facilitates use in clinical practice and thus beyond research