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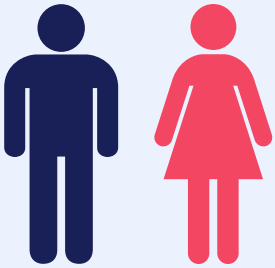
COPD ConnEx Demonstration Program

A successful first stage

Results of the 30 Ontario participants who have completed the demonstration program.

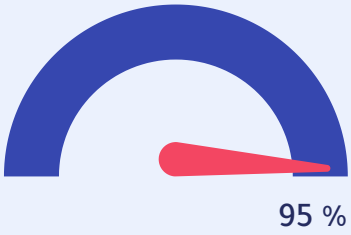
Sex



40% 60%

Average age

Attendance Rate



*For more information on demographics, refer to Appendix I

General Improvement | COPD Assessment Test (CAT)

The CAT score indicates the severity of the impact of COPD on an individual's life. The higher the total, the greater the impact. Based on our preliminary results, from week 0 to 12, the total CAT score decreased by an average of 4.10 points (N=30, p=<0.001), thus indicating a reduction of the impact of COPD on the participants' lives.

Mean in change (week 12 - week 0) (95% CI)

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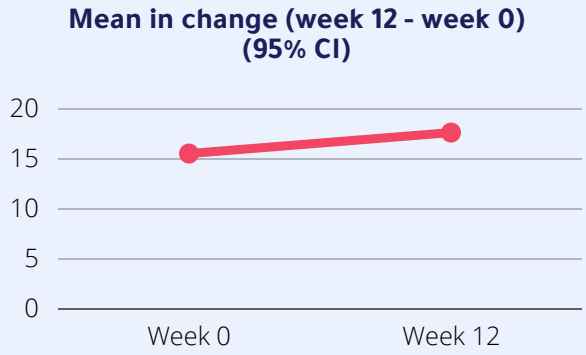
Living Well with COPD™
Chronic Obstructive Pulmonary Disease
A plan of action for life

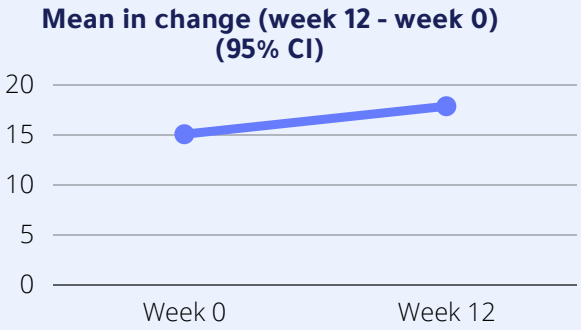
lung health starts now
lung health foundation

Individual Physical Assessment Results

1 Minute Sit-to-Stand (1-Min STS)

The purpose of the 1-Min STS is to assess exercise capacity and leg muscle strength. It is reliable, valid and responsive in patients with COPD. An improvement of at least three repetitions is consistent with physical benefits. From week 0 to week 12, our results indicated an average increase in total repetitions of 1.87 (N=29, p=0.055)**.



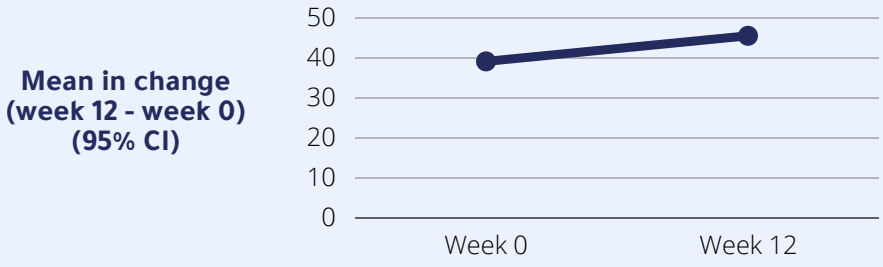


Arm Curl Test

The arm curl test measures upper body strength and endurance by counting the total number of controlled arm curls that can be performed in 30 seconds. From week 0 to week 12, our results showed an average increase of 2.77 curls (N=30, p=0.016), indicating a significant increase in functional fitness.

Lower Extremity Functional Scale (LEFS)

The LEFS is a measurement of the level of disability a person experiences on a daily basis related to lower extremity function. A higher total score indicates good results of the "Treatment", a lower total score, therefore indicating a greater disability. From week 0 to week 12, our results showed an average increase in total LEFS score of 6.4 points (N=30, p=0.002).

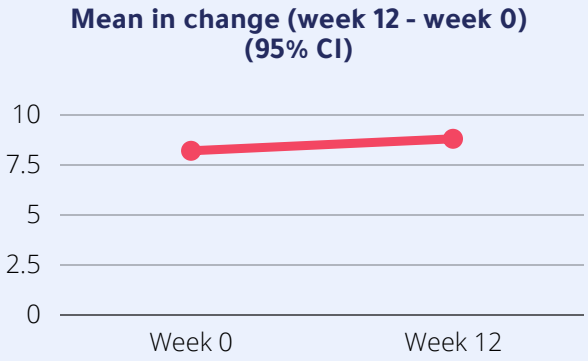


**Given the limited number of participants' data being analyzed for this report and the 12-week timeframe, we do not expect to have large amounts of statistically significant research. However, it is important to note that for a population with a chronic condition, such as COPD, maintaining or increasing positive results of a physical, mental or subjective assessment is very meaningful.

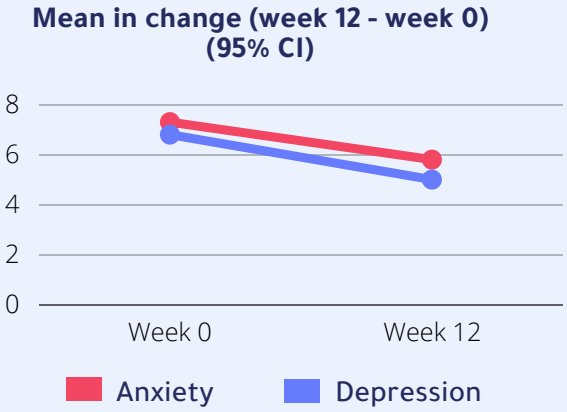
Individual Physical Assessment Results

Short Physical Performance Battery (SPPB)

The SPPB evaluates lower extremity function and mobility in older adults by assessing balance, gait speed, and sit-to-stands. Over the course of 10 weeks (week 2 initial assessment to week 12), our results indicated an average increase in final SPPB score of 0.63 (N=30, p=0.024).



Psychological Questionnaire Results



Hospital Anxiety and Depression Scale (HADS)

The HADS questionnaire is used to detect states of anxiety and depression and provides separate total scores for both anxiety and depression, where a score of 0-7 is "Normal", 8-10 is "Borderline abnormal", and 11-21 is "Abnormal". From week 0 to week 12, our results showed an average decrease in both anxiety and depression of 1.50 (N=30, p=0.018) and 1.83 (N=30, p=<0.001) respectively, with all scores remaining in the "Normal" category.

Program Success Survey

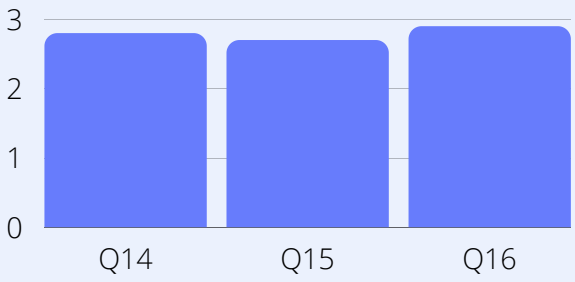
At the end of our 12-week program, we asked the participants the following questions to better understand how they felt about the COPD ConnEx program as well as the impact it had on them. We had positive results across the board!

"On a scale of - 3 (Strongly Disagree) to + 3 (Strongly Agree)..."

Q14 - Would you now feel more comfortable receiving or partaking in online help and services?

Q15 - Were you happy with the structure of the program?

Q16 - Are you more likely to incorporate a healthier routine in your life now that you have been a part of the program?



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Program Success Survey | Week 6 vs Week 12

"On a scale of - 3 (Strongly Disagree) to + 3 (Strongly Agree)..."

Q4 - Have the exercises helped you feel more confident becoming more physically active?

From week 6 to week 12, participants felt more confident in becoming physically active

Q7 - Do you feel adequately supported (so far (week 6)) by the program?

Participants always felt very supported by the program

Q9 - Have you found the exercises are being (week 6) / were explained well and therefore easy to carry out independently?

Participants always felt the exercises were explained to them properly and they were able to carry them out on their own

Q10 - Do you think this program is helping (week 6) / has helped you feel stronger, physically and mentally?

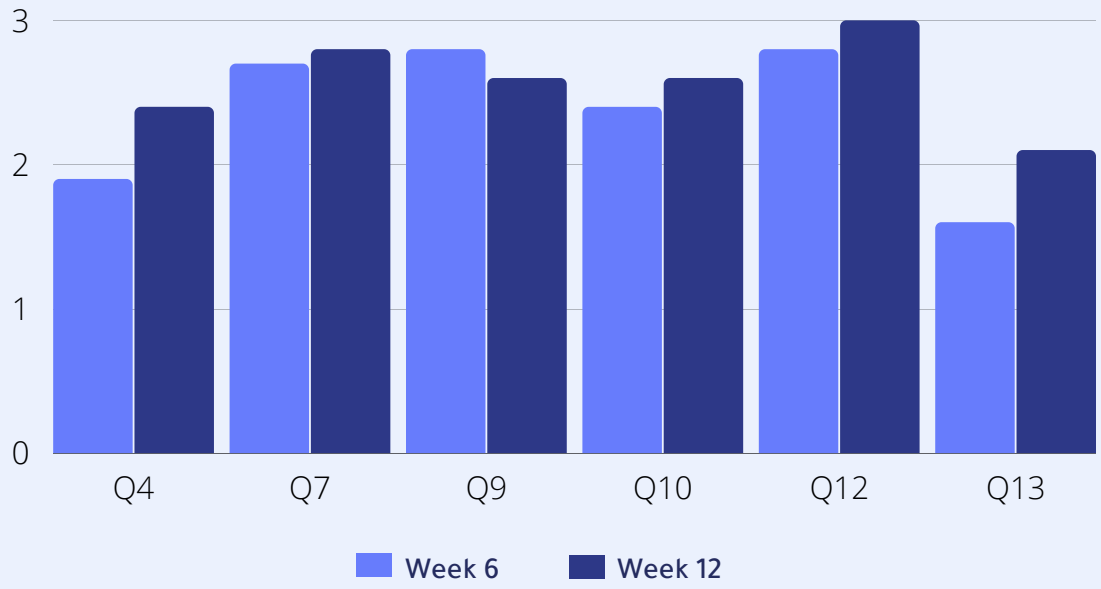
From week 6 to week 12, participants felt mentally and physically stronger

Q12 - Are you satisfied with the quality of instruction given to you in the program?

Participants were all extremely satisfied with their instructor

Q13 - Do you think your health is improving (week 6) / has improved during this program?

Participants felt their health was slightly improving and didn't feel like it was deteriorating (important!)



Here's a bit more about what our participants had to say...

With the help of my COPD ConnEx Kinesiologist, I have learned many new skills to incorporate into all areas of my life. I am more effective and efficient when exercising or doing household chores. I am now able to budget my limited energy more wisely, so I don't feel so exhausted all the time. I am stronger physically and more confident in my ability to manage my basic needs. - Heather

"It gave me a new outlook on exercising because before the word exercise wasn't in my vocabulary. I feel like I am stronger than I was before, I have an easier time lifting groceries and things around the house. I really enjoyed doing the program remotely and in the comfort of my house. I could fit it into my schedule without too much interruption into my daily life. My kinesiologist was excellent, and I liked seeing her weekly."
- Suzanne

"I managed to do things that I never thought I would be able to do with my breathing problem. I didn't think I would be able to do some of the exercises I completed in this program. I learned a lot of things about myself in this program. I learned that I need to slow down, and I have to focus on my breathing. This has helped me control my anxiety, I know how to deal with things better and not get stressed out. I would recommend this to anyone. This is the best thing anyone can do for themselves. I didn't know how to use Zoom before the program, I've learned a lot since and I like the fact I was able to do the program at home." - Faith

Appendix I

Table 1. Baseline characteristics of the participants

	N	Total
Sex, n(%)		
Male	30	12 (40.0)
Female	30	18 (60.0)
Age (year)	30	70.4 ± 9.1
Weight (Kg)	22	77.8 ± 20.2
Height (cm)	22	169.3 ± 10.0
BMI (kg/m2)	22	27.1 ± 6.0
Primary Diagnosis, n(%)		
COPD	30	29 (96.7)
Asthma	30	1 (3.3)
Smoking status, n(%)		
Former	30	25 (83.3)
Current	30	4 (13.3)
Never	30	1 (3.3)
Smoking packing years	28	32.2 ± 14.4
Any Comorbidities, n(%)	30	27 (90.0)
FEV1, L	26	1.4 ± 0.6
FEV1, predicted%	24	51.4 ± 20.1
FVC, L	23	2.5 ± 1.1
FVC, predicted%	20	78.3 ± 22.9
FEV1/FVC, %	23	52.2 ± 15.1
GOLD_Stage, n(%)		
Mild	30	3 (10.0)
Moderate	30	11 (36.7)
Severe/very severe	30	13 (43.3)
BORG_Scale_Onboarding	30	1.9 ± 1.9
MRC (scale 0-4), median (Q1, Q3)	30	3.0 (2.0, 3.0)
MRC>=2, n(%)	30	27 (90.0)
Home_supplemental_O2, n(%)	30	13 (43.3)
History_Falls_Dizziness, n(%)	30	11 (36.7)
Walking_Aids, n(%)	30	13 (43.3)
Previously_Active, n(%)	30	24 (80.0)
Sedentary before program, n(%)	30	15 (50.0)
Active before program, n(%)	30	16 (53.3)

Data are presented as mean ± sd unless otherwise specified;