



CLINICAL TRIAL DATA 2018 - 2019

IN ASSOCIATION WITH NATIONAL STAR COLLEGE

WORLD FIRST MAGNETIC PELVIC BELT

UNIQUE SINGLE HANDED PRODUCT

Currently there are no single-handed magnetic wheelchair lap belts on the worldwide market. In the UK alone it is estimated that 75,000 wheelchair users only have the use of one hand and rely on third-party support to attach and release their lap belt, making Soloc the only product that can cater to this group of the disabled community.

The family of Soloc belts can be easily fitted to virtually any wheelchair requiring no specific fitting requirements. The product comes with home fitting instructions making fitting a simple process for family and carers.

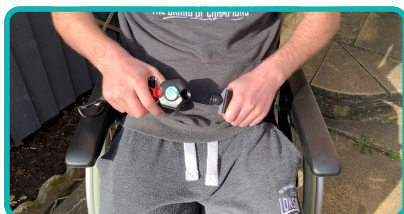
The Soloc wheelchair seat belt has been designed and developed to fulfil a pressing and previously unmet need for most wheelchair users, providing greater convenience and independence. As with automobiles, all wheelchairs are generally fitted with seat belts (manufactured to conventional industry standards) these actually fail to meet the needs of many wheelchair users. E.g. wheelchair users that are hemiplegic and do not have the manual dexterity to fasten and release their existing seat belts independently, the Soloc buckle overcomes this problem.

Leslie, Wheelchair Services Technician

A GROUP OF MODELS FOR ALL USERS

SOLOC UNO

For users that find it difficult to connect a standard buckle through limited mobility and dexterity, such as those suffering from Arthritis or hand tremors.



SOLOC SOLO

For users who have only the use of one hand. The unique design allows the belt to be connected and released with one hand creating greater autonomy.



SOLOC FREEDOM

For users with very limited functional hand or arm control to be able to use a lap belt without needing to use their hands. Easy to connect. easy to detach.



"In cases where the wheelchair user has the ability to "self-transfer" their seat belt can cause frustrations. Their ability to transfer independently from their wheelchair can be thwarted by difficulty unfastening their seat belt. Soloc has a user friendly release mechanism to help users transfer themselves. A particular benefit of the design is the unique presenter arm system. Conventional industry standard seat belts, lacking this, have an annoying tendency to drop down into the frame and wheels of the wheelchair, making it difficult for the wheelchair user to find and retrieve for securing/buckling."

Suzanne, Occupational Therapist

SOLOC USER SURVEYS

MEASURING USER EXPERIENCE

As part of our clinic trial process we used seven students to do a test against their existing lap belts and offer us a comparison. This survey was conducted on a group of students in both 2018 and 2019 using a list of baseline questions and follow up questions after several weeks hands-on experience with the Soloc buckle. We have then used a 1-10 scale to assess how independent the students felt with their standard belts and the Soloc belts, using this cumulative score as a direct resulting comparison between data sets.

BASELINE QUESTIONS

1. Are you able to perform any part of the belt connection/release process?
2. If the buckle was larger or smaller would this help?
3. Do you feel unsafe when your belt isn't connected?
4. Have you ever fallen out due to an unconnected belt?
5. Does it frustrate you to ask for assistance to undo your lap belt?
6. Would you feel more independent if you were able to do this on your own?

TABLE I	Q1. Connection	Q2. Buckle size	Q3. Safety
Student M (2018)	Could work but not easily	Would help if larger	Feels safer with belt on
Student S (2018)	Release but not engage	Would help if larger	Feels safer with belt on
Student C (2018)	Cannot use at all	Would help if larger	No difference
Student K (2018)	Struggles when rushing	Would make it less fiddly	Feels safer with belt on
Student B (2018)	Cannot use at all	Not able to use it	No difference
Student 1 (2019)	Release but not engage	Would help if larger	Feels safer with belt on
Student 2 (2019)	Cannot use at all	Not able to use it	Feels safer with belt on

TABLE II	Q4. Falling out	Q5. Frustration	Q6. Independence
Student M (2018)	No	Frustrates me having to ask	Yes
Student S (2018)	No	Frustrates me having to ask	Yes
Student C (2018)	No	Frustrates me having to ask	Yes
Student K (2018)	No	Frustrates me having to ask	Yes
Student B (2018)	No	Sometimes, but not too bothered	Yes
Student 1 (2019)	No	Frustrates me having to ask	Yes
Student 2 (2019)	Yes	Frustrates me having to ask	Yes

FOLLOW UP QUESTIONS

1. How much of the connection/release process can you do with the Soloc belt?
2. Do you feel more independent having the belt?
3. How has the Soloc belt changed your daily life?
4. Is the Soloc belt comfortable?
5. Do you feel safer in your wheelchair with Soloc connected?
6. Are there any suggestions which you think could make the belt better?

TABLE I	Q1. Connection	Q2. Independence	Q3. Lifestyle
Student M (2018)	Can use on my own	Yes - more	Can do more myself
Student S (2018)	Can use on my own	Yes - much more	Stopped asking for help
Student C (2018)	Release but not engage	Yes - more	Can remove belt myself
Student K (2018)	Can use on my own	Yes - much more	Easier for me to use
Student B (2018)	Release but not engage	Not really	Easier for me to use
Student 1 (2019)	Can use with marginal help	Yes - more	Easier with one hand
Student 2 (2019)	Release but not engage	Yes - more	Can use on my own now

TABLE II	Q4. Comfort	Q5. Safety	Q6. Suggestions
Student M (2018)	Yes	No change	Colour code adjuster tab
Student S (2018)	Yes	No change	Great just the way it is
Student C (2018)	Yes	Yes feels safer	None
Student K (2018)	Yes	safe and secure	None
Student B (2018)	Yes	No change	None
Student 1 (2019)	Yes	Easier to tighten, feels safer	Takes time to get used to it
Student 2 (2019)	Yes	No change	Add more padding

INDEPENDENCE SCORES

TABLE I	Standard Belt	Soloc Belt	Improvement
Student M (2018)	4 / 10	7 / 10	+ 3
Student S (2018)	4 / 10	9 / 10	+ 5
Student C (2018)	2 / 10	10 / 10	+ 8
Student K (2018)	4 / 10	9 / 10	+ 5
Student B (2018)	0 / 10	4 / 10	+ 4
Student 1 (2019)	4 / 10	8 / 10	+ 4
Student 2 (2019)	0 / 10	7 / 10	+ 7
Overall Score	18 / 70	54 / 70	+ 36

TRIAL CONCLUSION

THE BENEFITS TO SOLOC USERS

As can be seen from the table above, all users who tested the belt felt they had gained some level of independence through its use. Most interesting is the users that had zero independence with their previous lap belts, before then being able to complete some part of the buckling process through their own movements with Soloc. Our questionnaire also showed that aside from independence was a renewed sense of safety and comfort while using the Soloc belt compared to their previous standard variant.

Part of this renewed independence can be reflected in a reduction of required third party care. During these test users would transfer from their chair between 8 and 11 times a day - a process that with the introduction of Soloc required no intervention from a carer. A single product positively impacting the lives of users, families, friends and carers.

To find out more on the development, functionality and unique uses of the Soloc magnetic wheelchair belt buckle simply visit www.soloc.org.