

It's About the Bike: What We Learned About eBikes from the 50+ Cycling Survey, Year 4

Project 2157.2
April 2023

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This article was developed from responses to the 50+ Cycling Survey, Year 4. The information was originally developed for the U.S. Consumer Product Safety Commission based on a conversation about bicycles as a consumer product.

Ebikes are popular and are becoming more commonplace among all age groups, including older adults. *About 17% of people responding to the 50+ Cycling Survey, Year 4, own an ebike, many purchasing one in the past year. The purchase satisfied various needs, primarily aimed at continuing to cycle. Just over a quarter (26.4%) of those who do not own an ebike do not expect to get one. Of these, however, 10.5% admit that a physical condition limiting their ability to ride a regular pedal bike would motivate an ebike purchase. In reviewing the reasons for owning or not owning an ebike, we identified the following take-aways.*



eBikes of all types are popular with older adults, including two-wheels (both for one rider and for tandems) trikes, and cargo bikes; and for body position of sitting up, mountain bike position, and recumbent.



Speed offered by ebikes provides a sense of safety when cycling with motor vehicles. Speed offers benefits in some circumstances; however, it is an issue on trails and will be increasingly so as popularity increases. Like speed with cars, speed with ebikes likely means increased crashes.



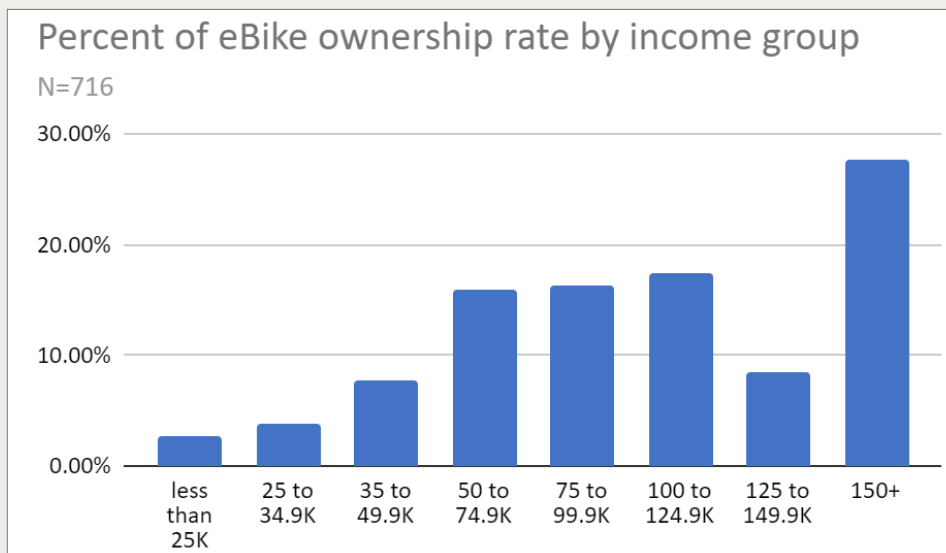
Concerns expressed by those who do not own an ebike are battery life, incidents of catching on fires, weight, and the desire for more sophisticated technology such as regenerative batteries while cycling. Other respondents are confident (and perhaps defiant) about never owning an ebike.



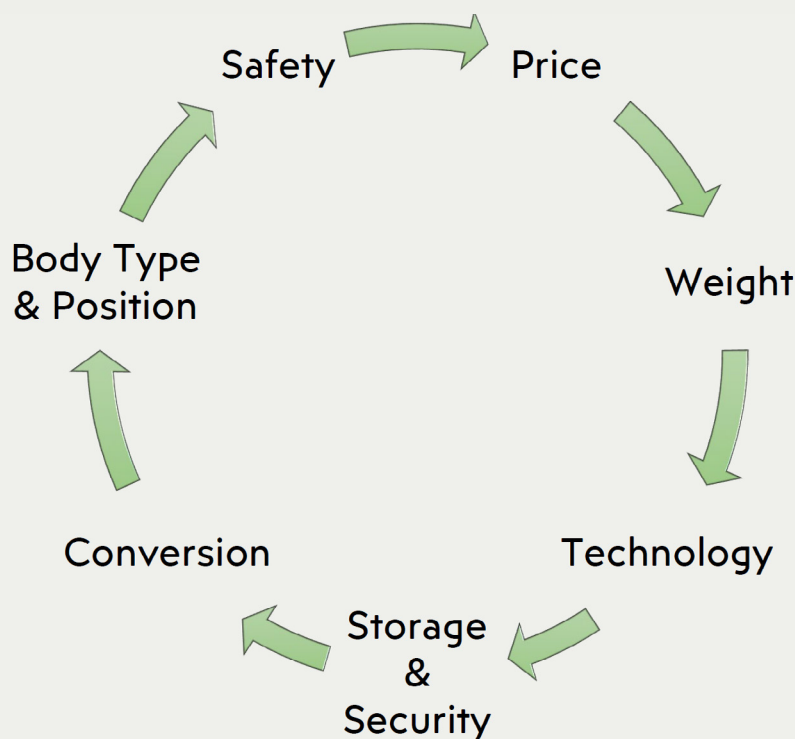
An ebike's weight can affect a person's agility on it. Several who fell mentioned the weight. The weight also affects the bike's transportability.



Price of ebikes effects ability of an older adult to purchase it. When acquired as a gift or at a discount, price is not a factor. But overall, ebike ownership rates are higher among those with higher income.



Survey responses provide insights on ebikes and older adults. In addition to these take-aways, survey question responses were mined for specific reactions to ebikes by those who own them and those who do not. Seven topics emerged from these responses.



The table below presents 63 open-ended question responses to four different survey questions, organized by topic. The topic reflected in each response is indicated by the corresponding darkened cell. Responses are grouped by topic, although some responses reflect more than one topic.

Comments by topic and question*	Price	Weight	Technology	Storage, Security	Safety	Type, body position	Conversion
After the price goes down.	Dark						
Price reduction.	Dark						
Tax incentives.	Dark						
Too expensive.	Dark						
When I receive a tax break for riding/ owning one.	Dark						
When pricing levels off.	Dark						
When the batteries become standardized to make buying a new battery easier and cheaper.	Dark		Dark				
When the cost and weight go down, battery life goes up.	Dark	Dark	Dark				
When the e-bikes become lighter and less expensive.	Dark	Dark					
My employer subsidized the purchase.	Dark						
Found a cheap ebike to try.	Dark						
Great bargain. Local shopping.	Dark						
Great price and my spouse purchased.	Dark						
Weight of bike and storage concerns.		Dark		Dark			
When bikes get light enough for me to lift it onto rack.		Dark					
When I have a secure location to park it that does not involve carrying upstairs.		Dark		Dark			
When I move to a place that doesn't require carrying my bike up/down 15 stairs, or when ebikes become much lighter.		Dark		Dark			
When they are light enough to carry upstairs. I live in a walk-up.		Dark					
Fell over mounting my new e-bike last year and landed on my knee.		Dark					
My ebike is heavy and if I stop too quickly, I have fallen a few times, including the last one.		Dark					
Trying to place my 6-year-old grandson in child seat on the back of my electric bike and was unable to balance bike and fell over on bike.		Dark					
It has taken a while to adjust to the weight of the e-bike and how it affects stopping. I have fallen a few times getting used to stopping.		Dark					
New e-bike which was heavier than my previous bike and unevenly weighted.		Dark					
Fatigue and a heavy ebike.		Dark					
E bike was too heavy. Got lighter ones.		Dark					
I believe it to be the extra weight of the ebike I've been riding.		Dark					
We tow a lot of weight on our electric cargo 2-person bike. All kinds of things happen when we are on that bike, most just due to weight and navigating the streets.		Dark				Dark	

Comments by topic and question*	Price	Weight	Technology	Storage, Security	Safety	Type, body position	Conversion
Reaching over for a walk button at a stop light, my e-bike was too heavy and tipped.		■					
My ebike started up on its own (it was off!) while I was stopped and unclipping and rammed me into a cement bench resulting in a fractured tibial plateau. Never had surgery as it was Covid, but I did my PT diligently and was riding 4 months later, and now.			■				
Pedaling up a steep hill on an ebike and accidentally cutting the power. The bike stalled and down I went.			■				
Battery distance and weight of bike.		■	■				
Improved battery range.			■				
Product development.			■				
Safe parking and charging in my building.			■	■			
When battery lasts longer.			■				
When e-bike range gets better (longer).			■				
When ebikes perform better, no burnouts.			■				
When I can find one that comfortably holds two adults so I can bring my wife with me on rides.			■				
When I can get 100 miles per charge.			■				
When I get older, maybe. They are currently too heavy. I have low gears on my current bike(s) and can ride up any steep hills without e-assist.			■				
When I have a place to store it and plug it in easily.			■	■			
When I'm sure the battery will last for a long ride to the glacier.			■				
When it has a throttle.			■				
When tech improves and bikes get lighter.			■				
When they come up with an environmentally sound batteries.			■				
When they have regenerative braking.			■				
When I figure out secure storage at home.				■			
When I have a safe place to store it.				■			
When I have somewhere safe to store it.				■			
When I'm confident it won't get stolen.				■			
Feels safer if I need to get out fast.					■		
To keep up with car traffic when forced to ride in the road -- a safety reason!					■		
Safety / I ride a recumbent trike. I use the battery to help me get across major roads more quickly- minimize my time in traffic.					■	■	
E bike is our tandem trike. My single trike is not power assist.						■	
Easier riding of recumbent trike.						■	
I bought an ebike recently and may never go back to my road bike. It is faster with less effort and more comfortable to ride with suspension and a more upright position. I expect ebikes to explode in sales soon.						■	

Comments by topic and question*	Price	Weight	Technology	Storage, Security	Safety	Type, body position	Conversion
Class 1 and 3 ebikes are fine. Get the class 2 and 4 electric motorcycles (have a throttle and pedaling not required) off the trails.							
Ebikes with throttles should be prohibited on county trails as motorized vehicles.							
It was a conversion kit for an existing bike.							
Like to build my own ebikes.							
Added a motor to our tandem. Takes the bicker out of biking.							
Converted one of our bikes to Electric for my wife but I use it sometimes.							
When I can convert my older bike using a kit.							

Sources

1. [50+ Cycling Survey, Year 4](#)
2. Ebike image from [Freepik - Flaticon](#)

Acknowledgements

The author would like to thank everyone who responded to the survey; Danielle Arigoni and Melissa Stanton from AARP's Livable Communities program for distributing the survey; Christine Lee of Cal Media Consulting for report layout assistance; Tony Hull of Civil Streets and Kristin Gladwin from Florida State University for their review and guidance; and MTI staff, including Executive Director Karen Philbrick, PhD, Deputy Executive Director Hilary Nixon, PhD, Public Programs Coordinator Alverina Eka Weinardy, and Graphic Design Student Assistant Minhvy Tran.

About the Author

Carol Kachadoorian has a breadth of knowledge and expertise in transportation planning and operations, which began in Alexandria, VA, where she served as a transit analyst before leading the City's first Office of Transit Services. After several years working with a family design-build company and at a major university, Carol returned to the transportation industry with the Washington, DC region's transit agency. There, she worked in operations and communications before focusing on pedestrian and bicyclists access to transit. Carol's work with Toole Design from 2008 to 2020 focused on school- and community-based active transportation plans. She started dbITilde Collaborative in 2020, specializing in older adult mobility and wellness. She describes the motivation for this work this way: "At age 60, I began to consider what my professional and personal life would look like during the next 30+ years. Now in my late 60's, I am working to improve mobility for people as they age."

This report can be accessed at
transweb.sjsu.edu/research/2157_2



MTI is a University Transportation Center sponsored by the U.S. Department of Transportation's Office of the Assistant Secretary for Research and Technology and by Caltrans. The Institute is located within San José State University's Lucas Graduate School of Business.