

A Shiny New E-Bike this Holiday Season *The Latest Cycling Trend*

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Was there a new bicycle under your tree this year? Bicycles usually top the wish lists of holiday hopefuls for both young and young at heart, and electric bikes or e-bikes are becoming increasingly popular. In the United States an average of 15 - 20 million bicycles are sold each year, compared to roughly 17 million passenger cars sold. And, according to the NPD Group in April 2019, sales for bikes grew 75 percent to \$1 billion, compared to the previous year. Comparatively, Deloitte has energetically projected that the number of e-bikes sold will reach 130 million between 2020 and 2023.

With a new shiny toy to play with, learning how the wheels turn will make for a smoother ride. Although at first glance e-bikes may look like traditional bicycles, they have battery-operated motors to assist the rider in travel. E-bikes are not all the same and their properties vary. Use of e-bikes may represent a higher liability exposure than traditional manually pedal-operated bicycles.

Although the terms are sometimes incorrectly used interchangeably, e-bikes and pedelecs, or pedal electric cycles, are not the same. While both have motors to assist the rider, pedelecs do not have a throttle – the motor only works to assist when pedaling. E-bikes have a throttle, and the rider has the option to ride without pedaling, ride while pedaling with motor assisting, or ride with pedaling only.

E-bikes can be an attractive gift for commuters as they provide a boost to make cycling easier and eliminate sweating. The motor also helps provide extra power to carry change of clothes, laptop, and other items. E-bikes can reach speeds of 20 mph or more, or about twice that of traditional

bicycles. A rider can go faster than 20 mph, but the motor will not be assisting the rider. During the pandemic, people who were hesitant to use public transportation turned to e-bikes as an alternative. A typical e-bike charge will last from 25-75 miles, depending on usage. E-bikes are also popular with urban delivery services.

E-bikes are powered by lithium batteries, which are highly combustible, but fires can be avoided with proper care. Most batteries must be charged separately – operation of the motorized bike will not recharge the battery. Batteries are usually removable, and the charger can be used in a standard power outlet.

A three-tier e-bike classification system to distinguish between models has been used and defined with nearly the same language in 26 states (Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Louisiana, Maine, Maryland, Michigan, New Hampshire, New York, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin, and Wyoming). They've also established comparable safety and operational requirements for e-bikes.

Class 1: Pedaled (Pedal-Assist) – these bicycles are equipped with an electric motor that only activates when the rider is pedaling to provide pedal-assisted speeds of up to 20 mph before the motor disengages. These bikes don't require the rider to have a driver's license. Many models allow the rider to select the level of assistance that is provided when pedaling. This allows the rider to decide if they would like to do most of the work or not. Since they are slow and



do not pose a significant risk to others, they can basically be ridden anywhere a traditional bike is allowed.

Class 2: Throttle Assist – these bicycles are equipped with an electric motor and come standard with pedal-assisted plus throttle-only assisted which allows the bike to propel on its own without the rider pedaling. Both options provide motor-assisted speeds of up to 20 mph before the motor disengages. A driver's license is not required.

Class 3: Speed Pedaled (Pedal-Assist 28 mph) – these e-bikes are equipped with a pedal-assisted mode, although some versions do come with a throttle. They are the most powerful and fastest legal motor-assisted bicycle on the market and must be equipped with a speedometer. The electric motor only activates when the rider is pedaling. These bikes require the rider(s) to wear a helmet, though a driver's license is not required. They provide pedal-assisted speeds of up to 28 mph before the motor disengages.

Regulation of the operation of motorized bicycles is still evolving. Some states do have restrictions on the maximum speed and power, the minimum age of the rider, and whether or not a helmet is required.

All e-bikes have sensors that monitor the speed to determine when to instruct the motor to turn the motor-assistance on or off. With pedelecs, the motor measures how hard the rider is pedaling and supplements



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that effort. Throttle-controlled e-bikes are similar to motorcycles. The throttle is usually mounted on the handlebar and activated by twisting. Throttle-controlled e-bikes may or may not have a pedal-assist option.

Standard homeowners policies offer very limited coverage for damage to, theft of, or liability for operation of an e-bike that could be considered a motorized vehicle.

Since in most jurisdictions no license is required to operate an e-bike, they are not required to be registered, and they have less than four wheels, a typical automobile insurance policy will not provide coverage. In fact, e-bikes can be attractive transportation for those who do not have a driver's license.

Another concern is theft, and the theft of e-bikes is also on the rise. The New York Times reported that 328 e-bikes were reported stolen in the city in 2020. In some cases, it is just the battery that is taken. Locking the e-bike, removing the battery and keeping the e-bike inside whenever possible can help to reduce the possibility of theft. Some e-bikes have GPS systems that may help track the location of the stolen e-bike.

Insurance for e-bikes is becoming more common. Coverage is available for damage or theft of the e-bike itself, medical payments for injuries to the rider, and liability for injury to or damage to property of others. Coverage generally applies to owned e-bikes only, so separate consideration as far as coverage is needed when renting an e-bike.

Even before the pandemic in 2020, sales and popularity of e-bikes were surging. Worldwide sales are estimated to reach 40 million units in 2023 alone, or about \$20 billion in revenue. E-bike owners may be unaware that they need to purchase specialty insurance coverage. There will undoubtedly be a need for education to help those who own and rent e-bikes understand the exposures and risks, as well as the vital responsibilities in battery maintenance.

E-bikes make great gifts and help to make cycling and commuting easier in addition to being a benefit to the environment. With any type of new technology comes exposures and considerations. Understanding the needed safety precautions and insurance options available will only help to increase the enjoyment of the ride for both cyclists and

the insurance industry. As we pedal or cruise into the new year, it is important to ensure cyclists are properly protected.



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