

So, you want to buy an e-bike

Know the “nots”

- Using an e-bike is not cheating
- They are not complicated to use or maintain
- You are not too old (or too young) for an e-bike
- All e-bikes are not the same
- All e-bikes are not “legal” on all roads and trails

E-bike Classes

There are three classes of e-bikes

	Class 1	Class 2	Class 3
Pedal Assist	Yes	Yes	Yes
Throttle	No	Yes	No/Yes
Max Speed	20 MPH	20 MPH	25/28 MPH
	Allowed most places	Usually allowed Can make starting easier, especially on hills	<u>Only</u> allowed in NYC. Some bikes can be changed from Cl 3 to Cl 1

- There are many illegal powered bikes on the road today
- E-bikes are not allowed everywhere

Types of e-bikes

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Road bike

- Turned down handle bar
- Probably lighter

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Hybrid bike

- Straight handle bar
- Slightly wider tire
- Slightly more upright

More types of e-bikes

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Commuter, Cruiser (Town & Country) bike

- Straight higher handle bar
- Slightly wider tire
- More upright
- Probably step-thru

Mountain bike

- Straight handle bar
- Wide, more aggressive tire
- Shocks

Also fat tire, cargo, foldable bikes

What do you ride now? Do you want the same experience?

Components to Consider

- Motor—up to 750 watts (1 HP) is legal
 - More normal 250-350 watts
- Motor placement
 - Hub drive or mid-drive
 - Torque or cadence sensor
 - Torque control is more realistic

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Rear Hub Drive	Mid-Drive
Tougher to remove back wheel	More expensive
Poorer weight balance	Better weight distribution
Can pedal if motor fails	Smoother ride
Less maintenance	More complex, more maintenance
Been around longer	Lighter and smaller motor
No drive train	More efficient
Tougher on spokes	Better gear ratio range
Can overheat on longer hills	Better on steeper hills

An experienced cyclist who encounters a lot of hills will prefer Mid-Drive

Components to Consider, continued

- Battery
 - Size and range—250 to 350 watt hours; 50 to 80 miles
 - Life of the battery
 - Removable or not
 - How and where will you charge it?
 - Where will you store it (bike and/or battery)?
- Displays
 - Is there a display?
 - What does the bike display show?
 - Can the bike be controlled by a cell phone app?
- Everything else you would normally consider when buying a bike
 - Brakes—disc or rim
 - Material—aluminum, steel, carbon fiber
 - Weight—36 to 50 lbs. Can you lift and control it?

Where Should I Buy the e-bike?

- Visit your local bicycle shop
- Visit several bicycle shops
 - Different stores carry different brands
- Buy online
- Buy online and pick up at a local bike shop
- Brands
 - Specialized, Trek, Giant, Velotric, Aventon, many others

Ride it before you buy it

What Else Is There to Consider?

- Price--\$1,000 to \$5,000 and up
- Range—50 to 80 miles, depending on season and use
- Weight—30 to 75 lbs.
- UL Listing
 - UL 2849 evaluates the entire electrical system (battery, motor, charger)
 - UL 2271 certifies the battery only
- Frame type
 - Step through is something to consider as we age
- What are you riding now?

More Stuff to Consider

- Bike rack
 - You will need a hitch rack for your car
- Can you switch power levels without stopping?
- Can you lift it and control it?
- Where are you allowed to ride it?
 - It is illegal to ride an e-bike if under 16 years old
 - You cannot legally ride an e-bike on roads with a speed limit over 30 MPH
 - Towns often set the e-bike laws so rules vary by town
 - You cannot ride an e-bike on the sidewalk in some towns and cities
 - E-bikes must have a Class sticker
- One more thing: know the rules of the road