

E-Bike Education for Youth and Adults: the Why and the How

Introduction

Kevin Baross, San Diego County Bicycle
Coalition

WHAT ARE YOUR GOALS?

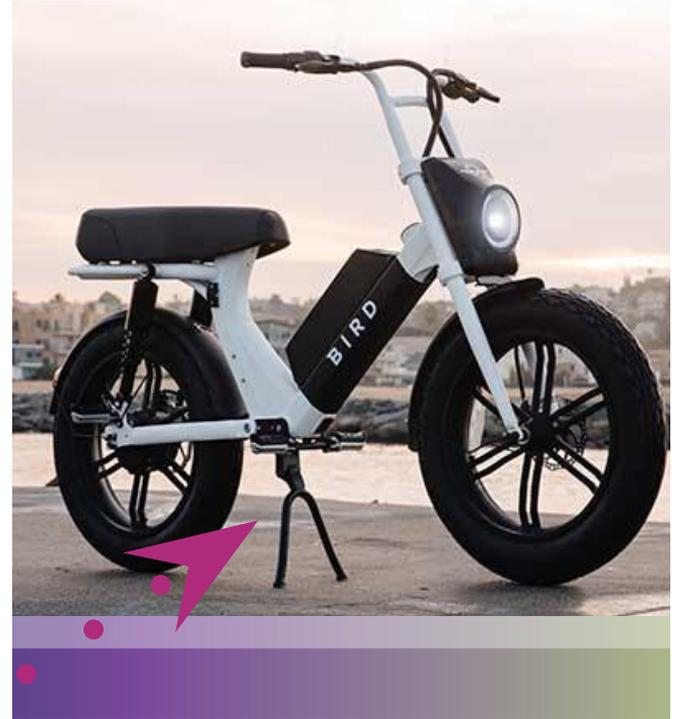
- Recognizing the e-bike as a viable form of transportation?
- Shorter pick up and drop off lines?
- More bikes in the bike racks?
- Fewer crashes?
- More helmets?
- Safer kids?
- Fun?



CLASSES & Differences

Three Major Classes:

1. Pedal assisted power. Power maxes out at 20mph.
2. Power controlled by a throttle. Power won't go faster than 20 mph.
3. Pedal power. Max assisted speed of 28mph. Age limit of 16 and up. Helmets required for all users all the time. No matter the age.



No Pedals = Not an E-bike

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POWER & Throttle

EXPECTED SPEED

Speed limits vs relative speed. Always be aware.

"ALWAYS ON" IS A WASTE

Use it to get up to relative speed. You can overheat the engine pretty easily.

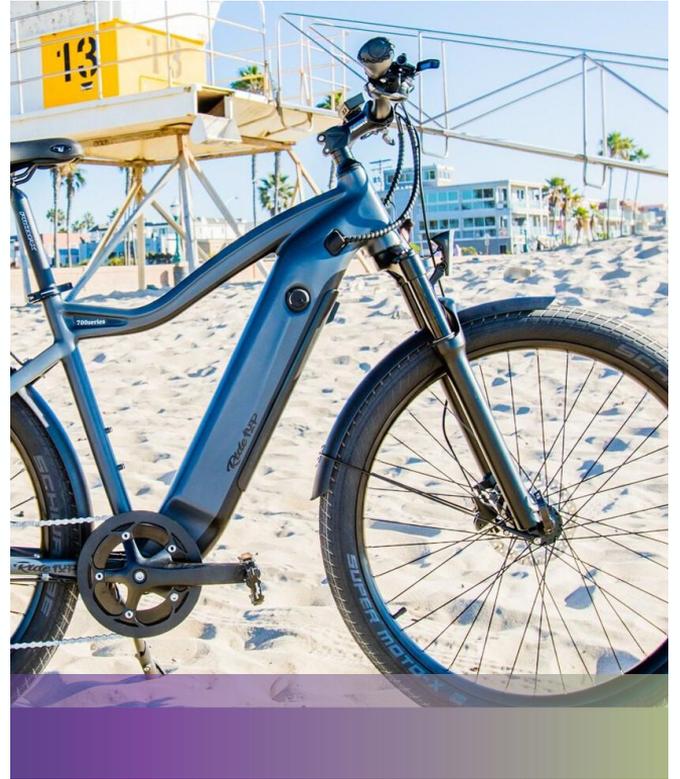
FASTEST WAY TO DRAIN A BATTERY

Keep it gradual. No one drives a car with the gas pedal pushed all the way to the floor.



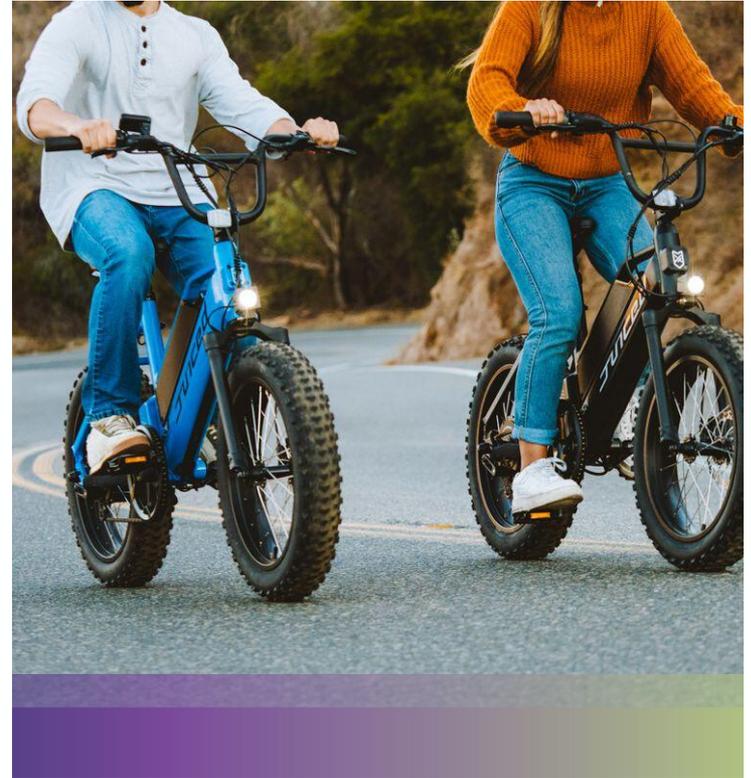
WHERE TO RIDE: YOU'RE DRIVING A BIKE

- Riding in bike lanes is required as long as the bike lane is clear and safe to ride in.
- Some trails do not allow e-bikes so check trail markings before you ride.
- Type 3 e-bikes can't use bike paths. They're too fast.
- Predictability. Ride where others expect to see you.
- Sidewalks are for walking. Crosswalks are for walking.
- The rules of the road apply to all users of the road.



WHERE TO RIDE: YOU'RE DRIVING A BIKE

- Do you want to play with a toy, or do you want to drive a vehicle?
- Do you want people to see you, or do you want to be invisible?
- How can we teach car drivers to be more aware?
- Who are the roads for?



HELMETS

MORE STYLES THAN EVER



1. Makes you look super cool.

I mean, this one is obvious.



2. Makes your head safer.

Ever drop a watermelon on the ground?



3. It's the law.

Helmet laws are real laws. You can get a ticket.

Kristine Schindler, Community Advocate and
LCI

E-Bike Education for Youth and Adults: The Why and the How

> Kristine Schindler



School Education and Outreach

- **Walk, Ride, and Roll Assembly:** A helmet-fitting demonstration and basics about walking and biking safely to school
- **Bike Rodeo:** On-bike activity focusing on the importance of seeing, being seen, and always remaining in control while riding a bike
- **All About E-Bikes:** Covers road rules for bikes with a focus on e-bikes: regulations and tips on how and where to ride safely and legally
- **Bike-Friendly Driver Class:** Covers road rules so that bikes and new or soon-to-be drivers ride safely and legally
- **Biking Together:** An evening class for families that covers e-bikes, road rules, roundabouts, street signs, signals, and more



SANDAG Walk, Ride, and Roll offers free bike education classes to K-12 schools and youth organizations in the San Diego region.

All About E-Bikes Webinar
Learn where to ride, how to ride, classes of e-bikes, and much more.

Tuesday, February 13 at noon
Online



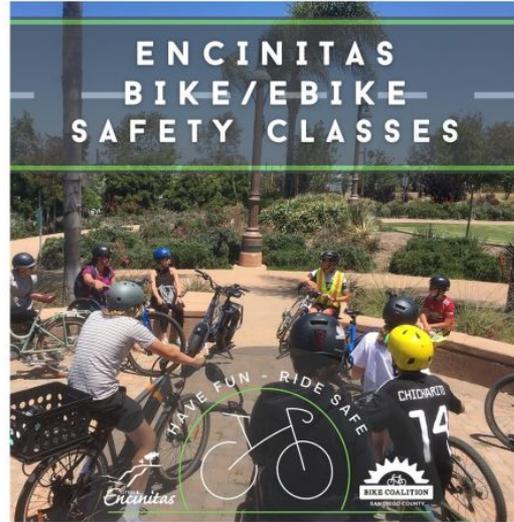
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Other Education Offered in San Diego



3 hr class session
6 hr road session



1 hr class
1 hr drills
1 hr ride

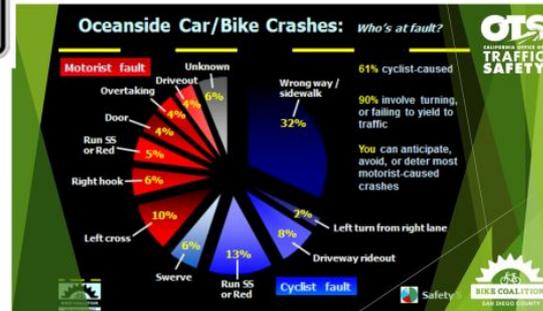
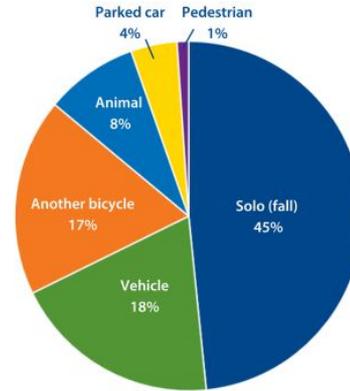
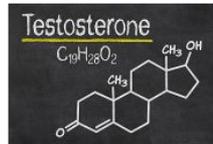


Promote via:
Social media
City webpage
Parks & Rec Brochure
Schools
Word of Mouth



City Cycling Education > Points Covered

- Crash statistics
- Rules of the Road
 - First come, first serve rule
 - Arrive same time, on right = right of way
 - Pass on left
- E-Bike Basics
 - Relative speed
 - Throttle - Pedal
 - Passengers
 - Vehicle vs Toy
- New CA Rules for 2023 and 2024
- Ride Right
- Door Zone
- Lane Positioning
 - Right hook, left cross
 - Left turn options
- Traffic control devices
 - Take a breath
 - Head on a swivel
- Visibility + Communication
- Route decisions + multi-modal options
- Road Types, including sharrows and roundabouts
- ABC Quick Check
- Helmet use, fitting, and replacement
- Tripping traffic signals



Education > Other Local Paths

E-bike Rules

SAFER STREETS TOGETHER

Category	Speed Limit	Max Power	Max Weight	Max Motor	Max Speed
Class 1	20 mph	750 Watts	200 lbs	250 W	20 mph
Class 2	20 mph	750 Watts	200 lbs	500 W	20 mph
Class 3	28 mph	750 Watts	200 lbs	750 W	28 mph

All e-bikes

- Must have a headlight, taillight, and reflectors
- Must have a bell or horn
- Must have a speedometer
- Must have a battery level indicator
- Must have a kickstand
- Must have a chain guard
- Must have a fender
- Must have a rearview mirror
- Must have a seat
- Must have a seat post
- Must have a seat clamp
- Must have a seat post clamp
- Must have a seat post cap
- Must have a seat post cap cover
- Must have a seat post cap cover cap
- Must have a seat post cap cover cap cover

Bicycle Safety

Check the A-B-C's (air, brakes and chain)

- Tires have enough air:** Check tire pressure regularly.
- Brakes are working:** Check brake pads and cables.
- Chain is smooth:** Check chain tension and lubrication.

Gear up

- Front and rear lights on at night.
- Well-fitting helmet.
- Gloves with grips when it's cold.

On the road

- Obey all traffic signs and signals.
- Remove distractions.
- Stay alert of your surroundings.



Bike and e-bike safety class

SAFER TOGETHER CARLSBAD

Monday, July 10

Pick the time and location that work for you

Available times: 8 - 9 a.m. or 1 - 2 p.m.

Available locations: Poinsettia Elementary or Sage Creek High School

Learn from Carlsbad Police Officers:

- Tips for being safe on your bike or e-bike
- Rules of the road for bicyclists and drivers
- Carlsbad-specific e-bike laws

Certificates for school bike permit programs will be provided upon course completion. No registration needed.

www.carlsbadca.gov/SaferStreets



Bicycle Friendly Driver Series

Bike Skills 101

Bike Education Classes



ENCOURAGEMENT...Planting Seeds



WALK & ROLL
TO SCHOOL DAY

One day can be the start of a new and/or life-long healthy habit



CALIFORNIA
BICYCLE
SUMMIT **2024**

Build and Educate Advocates for Active Transportation and Safer Streets

- Reporting road hazards and areas for improvements
- Sharing praise with elected officials and staff
- Asking for more educational opportunities
- Going to community workshops
- Going to City Council and Mobility & Traffic Safety Commission meetings
- Building relationships and reaching out to City staff and Mayor + Councilmembers
- Support and share info for public awareness campaigns
- And on and on



Youth Education: Key points not to miss

- > Young riders - fun and freedom
- > Teens - how best to teach ??? Our reality - peer pressure and decision making
- > Parents in the mix > learn + reinforce
- > Coming out of class - more confidence, sense of responsibility, knowledge AND embrace bikes as a life-long love
- > What else ???

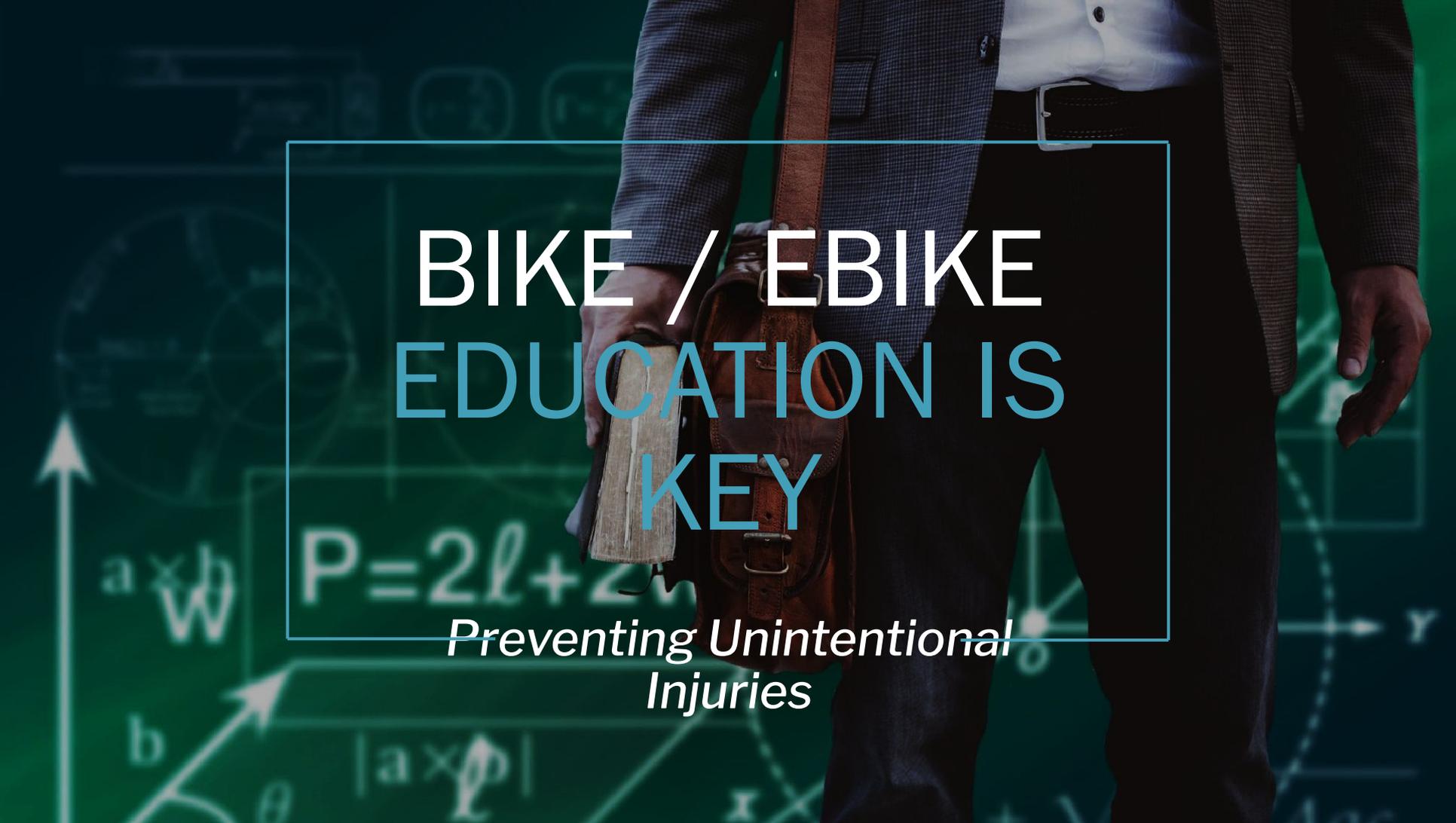
We are still in the process of learning ourselves and tweaking as we go !!!



CALIFORNIA
BICYCLE
SUMMIT



Pualani Vasquez, Injury Prevention
Community Outreach Coordinator
Scripps Mercy Hospital - Trauma Service

A person in a grey suit jacket and white shirt is shown from the waist down, holding a brown leather satchel and a stack of books. The background is a green chalkboard with various mathematical formulas and diagrams, including a coordinate system with axes labeled 'a' and 'b', and the formula $P=2l+2w$.

BIKE / EBIKE EDUCATION IS KEY

*Preventing Unintentional
Injuries*

Trauma Injury Prevention (IP)

Pualani Vazquez

Trauma Injury Prevention &
Community Outreach Coordinator
Scripps Mercy Hospital San Diego

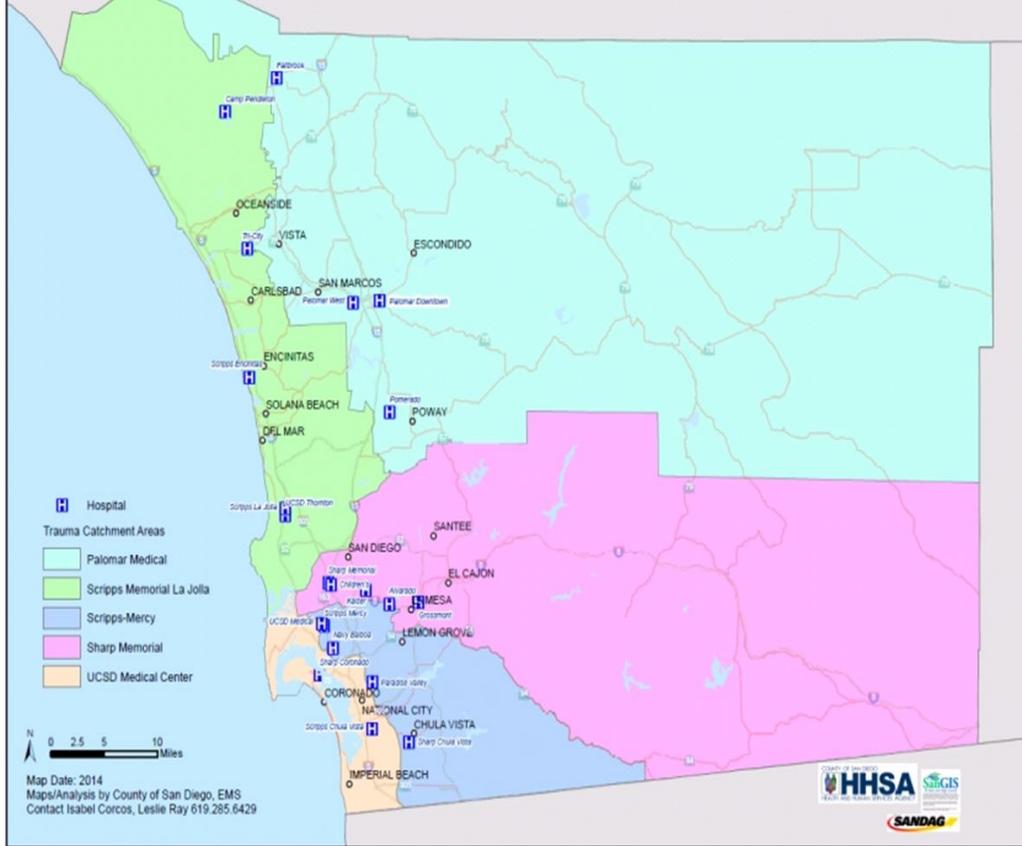
Vazquez.Pualani@ScrippsHealth.org

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InjuryPrevention@ScrippsHealth.org

- 
- Injury Trends
 - Bikes vs. Ebikes
 - Ebike Trends
 - Applying a Safe Systems Approach

Trauma Catchment Areas, Hospitals & Cities, San Diego County



San Diego County Trauma Catchment System Catchment Areas

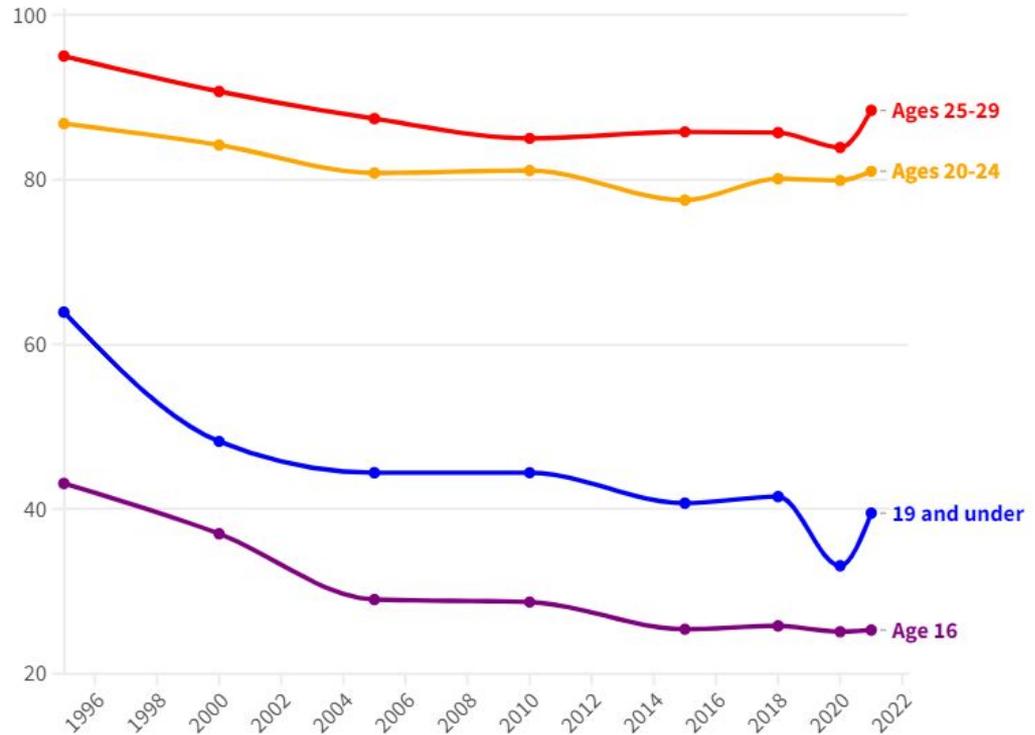
Electric Bicycles & Safety Concerns

- E-Bikes are heavier and maneuver differently
- E-Bikes can go really FAST
- Higher speeds = increase injury severity
- Novice e-bike riders may be at a higher risk of sustaining or causing an injury



Teens are driving less

Share of Americans with driver's licenses



Source: Federal Highway Administration

WHAT WOULD MAKE CYCLING SAFER?

ACCORDING TO PEOPLE
ON THE INTERNET

HELMETS

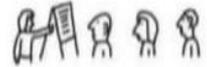


ACCORDING TO
ACTUAL STATISTICS

SEPARATING BIKES
AND TRAFFIC



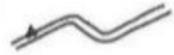
EDUCATING
DRIVERS



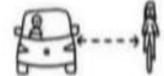
ENFORCING
SPEED LIMITS



DEDICATED TRAFFIC-
FREE ROUTES



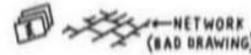
CLOSE PASS LAWS



DISQUALIFYING
REPEAT OFFENDERS



INVESTMENT IN
ACTIVE TRAVEL



GETTING PEOPLE
OFF THEIR SOFAS



HIERARCHY of CONTROLS

CONCEPT:



CONCEPT APPLIED TO STREETS:



NIOSH DIAGRAM REDRAWN AND AUGMENTED BY @QAGREENWAYS



Thank you!

Pualani Vazquez

Injury Prevention Community Outreach Coordinator

Scripps Mercy Hospital San Diego

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David Levinger, Sonoma County Bicycle
Coalition

eBike Education for Adults

David Levinger, LCI
Sonoma County Bicycle Coalition Instructor

Main Educational Concerns with eBikes

- Increased Speed & Corresponding Conflict Risks
(Right Hook, Left Hook, Drive Out)
- Increased Weight and Higher Center of Gravity
- Differences in handling
- Passengers
- Maintenance
- Batteries
- Parking, Transit & Security

**AND:
Novice Riders who Scare Everybody,
including themselves.**

Sonoma County eBike Education

2021 Sonoma Clean Power eBike Incentive Program

- \$1,000 vouchers for eBike rebates with approved vendors
- Additional items included free helmet
- Safety education encouraged and contracted with SCBC

4-hour Enhanced Smart Cycling eBike Class

- Bike hardware focus
- Unique characteristics and quirks of eBikes
- 1-hour Classroom Module
- Advanced bike handling skills
- On-street riding

Some Findings

- Most new eBike riders do not ride faster than acoustic riders
- Many new eBike riders have not ridden in decades and this is their first bicycle in years or decades
- Our in-person classes have high satisfaction rates, but low enrollment rates

Online e-Bike Education Options

- ABEA - Cycling Savvy
<https://cyclingsavvy.org/ebike-safety-resources/>
- League of American Bicyclists with People for Bikes
<https://www.ebikesmart.org>
- California Highway Patrol
<https://www.chp.ca.gov/Programs-Services/Services-Information/Bike-and-Ped-Safety>
- eBike Incentive Project – Pedal Ahead San Diego
<https://ebikeincentives.org/consumer-resources/>

Can eBikes Spur More Bike Education?

- Bike Ed is important and requires strong support and structure from pre-K to elementary to early teen to adulthood.
- Legislation should focus on achievement through regulatory mandates rather than through enforcement.
- eBike Ed for could be achieved as a module in mandatory driver education to great public benefit.

