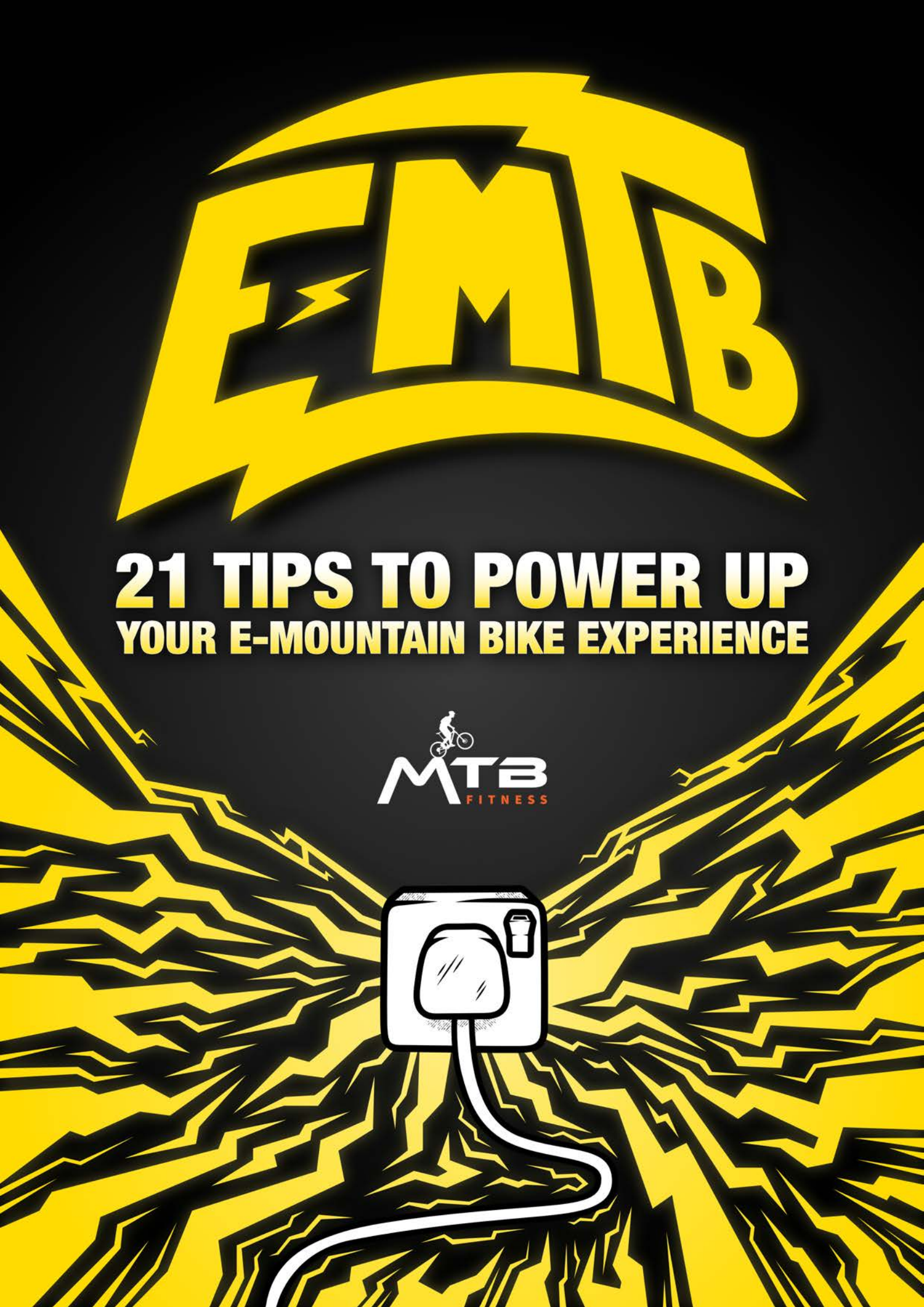
E-MTB

21 TIPS TO POWER UP YOUR E-MOUNTAIN BIKE EXPERIENCE

MTB FITNESS



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“My biggest struggle with riding an e-mtb is cramp...in my face from grinning SO MUCH!”

- An MTB Fitness Follower

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Introduction

The freedom. The adventure. The peace. The flow. The quiet at the top of a climb…in contrast to the 'whoops' and 'hollers' on the descents with your friends. The mix of pure fear and then the absolute thrill of overcoming it. The self confidence that comes from building your fitness, improving your skills and overcoming the adversity that a mountain bike ride brings. Mountain biking isn't a 'hobby' it's far far more than that. It's an obsession, an addiction and a lifestyle. You don't mountain bike…you *are* a mountain biker. It becomes your identity and who you are. We are so lucky to enjoy the best sport on earth.

E-Mountain Bikes are a fantastic extension of this. They allow you to ride further, in a shorter space of time. They allow you to continue riding when a physical ailment may stop you. They allow you to have as much fun on the climbs and traverses as you do on the downs. They make the inaccessible accessible and often the un-rideable, perfectly do-able.

If you are reading this guide it's because you love your e-mtb and you want to learn how to make the most of it. You want to learn to improve as a rider both physically and mentally. In essence, you want to 'power-up' so you can really maximise your time on your e-mountain bike.

In this guide, I'm going to share with you 21 tips to help you do just that.

My name's Matt Mooney. I've been a Personal Trainer since 2011 and an obsessed mountain biker since my early teens. I now run MTB Fitness full time, an online business that helps mountain bikers like you improve every aspect of your fitness, nutrition and mindset so you can enjoy our awesome sport to the max. Over the past few years I've helped tens of thousands of customers through my products and have a following of over 700,000 mountain bikers on social media spanning the world.

I can't wait to share what I know with you. I'm incredibly passionate about mountain biking, just like you and I can't wait to help you squeeze the absolute most from your e-mountain bike.

Thanks so much for reading and thanks for the support. If you have any questions while reading this guide, email me anytime to matt@mtb.fitness

Matt

THE MENTAL SIDE

"I've missed more than 9,000 shots in my career. I've lost almost 300 games, 26 times I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life...and that is why I succeed."

- Michael Jordan

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1 - Dealing With Hate From Other Mountain Bikers

E-Bikes are a fantastic invention. They help you get out and do double or triple the distance in the same time frame. They help people who otherwise wouldn't be able to, to get out and enjoy this amazing sport. They help people who don't have the time to ride as often as they would like to still go out and ride with their mates. They allow downhillers or enduro racers to practise far more descents in a short time frame, with more energy. They turn the climbs from a slog into a joy and make any traverse almost as fun as a down! They also allow less fit people who want to build up, to do so in a much more manageable way, almost like giving extra lower gears to the granny ring from which to build on. They bring more money to the mountain bike world, which only benefits our trails, our biking businesses and allows more money to go into the development of new tech which everyone gets to enjoy.

I fully appreciate not everyone wants to ride an e-mountain bike. Not everyone wants to ride a road bike…or a gravel bike…or a BMX either. The great news is they don't have to. We live in a world where you get to choose what you ride. Sadly however, there are a vocal minority who love to hurl abuse at e-mountain bikers and just don't 'get it'.

"It's cheating!"

"Where do you hang your purse?!"

"Can't be bothered putting in effort then?"

"It's just a motorbike"

Most of the insults just make the person throwing them look un-educated on what an e-bike actually is, stuck in the 40s (I wasn't aware sexist or homophobic slurs were still a thing) or just like a child throwing their toys out of the pram.

The thing is though, words can hurt. I love the quote "In a world where you can be anything, be kind". Sadly, some don't live by these words.

The important thing though isn't for me to persuade you these people are wrong. I'd be preaching to the converted there. You have an e-bike. You know they are awesome. No - I wanted to start this guide off with this because I think it's imperative that you ride your e-bike whenever you like, wherever your like, with your head held high and with zero urge to 'apologise' for riding an e-bike. It's important you know you are just as much

a ‘proper’ mountain biker as someone who rides a £10k super-bike or a £200 entry level rigid bike. Some reading this already know this and I hope this doesn’t patronise. For others, it’s something they really need to hear.

So, how should you deal with the e-bike haters? Whether it’s online, on the trails or simply in casual conversation? Well everyone is different. I think banter between friends is awesome - I love it and I always joke around with my friends, but I’ve earned the right to do that over years of friendship (and they give back as good as I give). What I’m referring to here isn’t banter or healthy debate…it’s the stranger that leaves a nasty comment on social media. Or the nasty comment on the trails by another rider. How should you deal with that? Well, let me tell you a short story…

In 2022 I raced Ard Rock, an Enduro race in N. Yorkshire, England where you cover 6,000ft of elevation and just under 30 miles. There's a pub after stage 3, before a big transition up to stage 4. It's a tradition for many to have a beer or two mid-race. When we hit it, I was very much in the mood for a coffee, so I headed inside and braved the 20 person deep queue.

After chatting to a lovely guy in the queue about my old 12 Week Programme (it had helped him lose 4 Stone/56 pounds! You can now follow my MTB Fit app instead) I got to the front. There were two tills next to each other.

At the one on the left of me there was a guy, roughly 30 years old. He was wearing Fox riding pants, a bright flowery shirt that was wide open and a thick chain around his neck.

He ordered a few beers. My turn to order.

“Hiya - 2 cans of coke and a black coffee please”

The flowery shirt dude turns to me, looks me dead in the eye and says with a totally straight face “What the hell are you ordering that for? Are you some kind of pussy!”

I just smiled at first, thinking it was some kind of ‘lads lads lads’ joke. Nope, he was serious.

“Erm…no…I just like coffee. I’d choose a coffee over a beer anytime” I answered, to which he shook his head.

“I take it you won’t be getting a coffee then?” I asked smiling. “No - because I’m not a complete pansy!” to which he took his beers and headed out the door.

Clearly he did NOT like coffee.

The guy was dead serious and very offended in my choice of tipple.

I went out and told my mates the story laughing. I thoroughly enjoyed that coffee.

In an ironic (or maybe not-so-ironic) turn of events, my friend saw the exact same guy fighting at the finish line a few hours later. Apparently he had cut a guy up on a corner on the final stage and sent him off the bike. The guy had broke his bike and had to wheel it over the line and had cut his arm up pretty bad. He was fuming and apparently the two were going at it, with spectators holding them back.

The lesson from my coffee shop encounter?

Pardon my french on this one…but it's to f**k anyone else's opinion and do what makes YOU happy.

People like to control others.

They like the world to do the same thing as them.

They can't control their negative emotions and so they let them spill over into anger and hate.

Their words and especially how they say it, says far more about them than it does you.

Only allow the opinions of those closest to you to affect you.

Those who matter, don't mind and those who mind, don't matter.

In the coffee shop I could have squared up to the guy, told him 'where to go' or 'offered him out'. Besides the fact that I am not a fighter, what would any of that achieved? It would have ruined my day and ride. In my opinion, it's much better to just let these things slide.

I have nothing to prove. Especially not to aggressive strangers.

Walk your own path. Do your thing. And ignore the idiots in the world. There are going to be haters in the world. There are going to be people who will always dislike e-bikes. There will always be idiots who give you abuse. Ignore them. You have nothing to prove. You bought your bike with your money and you are using your precious time to ride it. Whether it's because

you have a knee injury or simply because you want to ride it. Whether it's because you are overweight and using it to get fitter or because you are an amateur or pro racer using it as training. The reasons don't matter. They are your business and no-one else's. The only reason you need is because you want to ride it. The haters? Ignore them. Don't argue. Don't rise to it. Don't explain yourself and definitely don't change your behaviours for them. Stay in your lane and do your thing. In my opinion, it's the best way to deal with bullies and the idiots of the world.

"Never wrestle with a pig. You just get dirty and the pig enjoys it" - George Bernard Shaw

2 - Is It Cheating? Should You Feel Guilty?

I'm sure you hear and see this all the time. I know I do. "It's cheating!". It's the phrase that gets banded around over and over and over when it comes to e-bikes. Now I've already shared my views on how you should handle what *others* think about e-bikes…but this isn't about what others think. It's about what *you* think about whether it's 'cheating' or not. So…is it?

I think we both know the simple answer to that question. No. No, it's not cheating. The only time riding an e-bike could ever be defined as cheating would be if you were racing in an amateur or pro race in a non e-bike category and hiding the battery (it's been known). If this isn't the case, then it absolutely is categorically not cheating. You can't cheat at riding in the countryside, there are no rules. Besides…adding a motor is only one step ahead of all the technological advances since the early days of mountain biking like 29" wheels, 51 tooth cassettes, 170mm travel full suspension and dropper posts. Technology makes everyone's rides easier, motor or no motor.

There are millions of uses for e-bikes. You cover more distance in less time. Or you can cover the same distance with less stress on your muscles due to the added assistance and therefore stress your knees, back, hips etc. Or you can more easily manage your heart rate if you have a heart issue. Or you can keep up with your mates who have the time and want to ride more than you do. The list is endless.

E-bikes make the trails accessible to more people in a safer, more manageable and potentially more enjoyable way. The thought that riding an e-bike could be cheating is wrong by it's very definition. To 'cheat' you must have clearly defined, previously agreed to rules.

In the absence if these rules, it's not cheating. Should you feel a sense of guilt or shame for riding your e-bike though? When I was researching for this guide, I asked my followers like yourself, what their 'biggest struggle was' when it comes to riding an e-bike. I repeatedly saw variations of the theme of managing ego, feeling guilty for riding an e-bike or harbouring a sense of shame or embarrassment.

When it comes to these emotions, I think it's important to really assess why you might feel like this and where it's coming from. There are so many different reasons as to why you might feel like this and whether these emotions are giving you a gentle nudge that you need to improve…or that actually you need to accept that the aid an e-bike gives you is necessary.

I believe there are three camps with this :

1. The ‘just for fun and don’t care’ riders
2. The full time ‘forever’ e-bike riders
3. The ‘temporary tool’ riders

Let’s start with the first group. These people choose to ride e-bikes because they *want to* and that’s all the reason they need. A friend of mine rides an e-bike for the simple reason that he doesn’t like climbing. He has no underlying health condition and has the time to ride an unpowered bike if he wants to, but he simply prefers riding an e-bike. He doesn’t like climbing. He rode a non-powered bike for years and he now prefers the electric help. It’s made him love riding even more than he used to *and* he can ride 2-3 times as far and do 2-3 times the number of descents in the same time frame. He has no feelings of shame/embarrassment around riding an e-bike and to be absolutely clear - nor should he. If this is you and you fall into this camp then you can probably skip the rest of this tip. You ride an e-bike for fun and you love every minute. That’s awesome.

Next up we have the ‘need to ride an e-bike full time’ group. These folk know they will probably never be able to ride a non-powered bike again except perhaps on uplift days. Most of this group have been mountain biking for years and now have been forced to move to an e-bike. (Some will have also got into mountain biking through an e-bike). These people are pretty much exclusively those with health issues. The person who has had a heart operation and has been told under no circumstances must they elevate their heart rate over ‘x’ beats per minute. Or the person with degenerative arthritis that is in far too much pain when they try to ride a non-powered bike and knows that the arthritis will only get worse. Or the person with spinal nerve damage that is likely to ever recover to full function. Or the elderly person who can’t ride as far or for as long as they would like on a non-powered bike anymore.

These people have no choice but to ride an e-bike if they want to mountain bike. It’s often these folk who struggle with their ego or sense of shame around riding an e-bike. Many used to ride non-powered bikes and feel they are letting themselves down, losing their prior selves or ‘cheating themselves’. Let me be very clear with this - if you are in this situation then you have to let any and all guilt, shame or embarrassment go and you have to move forward. If you hold onto the past, constantly hold yourself to the standards of your younger self or don’t accept that your body has changed then you will only enjoy this sport less and less and will associate negative emotions with what should only be positive. If you have a health reason that has caused you to move to an e-bike (or choose an e-bike in the first place) and you know you won’t be going back, then accept it and let go of all those negative emotions.

It's important that instead of thinking of yourself as a failure, you think of yourself as the exact opposite - a fighter! You have a health condition that would floor many other people. That would cause them to stay at home or to give in and yet *you* are out there putting in the work. You are out there not quitting. You are out there not letting negativity win. You should be proud of yourself for finding a *way* and not an excuse. Many would quit, but not you. Hold your head high for that. It takes a special kind of person.

Finally, we have the person riding an e-bike temporarily but who wants to move to a non-powered bike. This could be due to a lack of fitness from years of inactivity, it could be through being too overweight at the moment to ride a non-powered bike any real distance or perhaps a temporary injury that means the e-bike is being used as a form of rehab. Guilt and negative emotions can often come here because you feel you have let yourself down. If you are overweight, it can seriously hit your self-esteem because ultimately you know it's your fault. If you have an injury that's holding you back it can really play with your mind and have you feel crap about yourself. If you are fighting through an illness, it can feel awful to not 'feel yourself'.

In October 2021 I caught Covid and had 6 months of feeling truly dreadful. I was in and out of hospital, I was coughing up blood and I could barely walk 1/4 mile without being exhausted. On a handful of occasions I remember speaking to Sophie about the possibility of this being long term damage. If it was long term and I wasn't going to get better, then I'd be getting an e-bike to assist my riding. Luckily after a hard few months I turned a corner and I'm now at 95% full health, with only the occasional lasting symptom.

In the above examples it's important to *use* that negative emotion, but to not let it overwhelm you. They are all temporary and with enough work, effort and dedication they can be beaten. You can lose the weight. You can rehab the injury. You can build your fitness back up.

Negative emotions are sometimes a sign that you have messed up, or that something isn't right. When my health took a turn for the better I had the biggest fire in my belly to get into the best shape I have ever been in. I saw what it was like to have terrible health, terrible fitness and to be out of shape. To be honest, it terrified me. When I was able to train and ride again I had more motivation and more discipline than I had ever had before, which culminated with going from 500ft of elevation rides to racing Ard Rock with 6000ft of elevation 5 months later and losing 10 pounds. That negative emotion of being out of shape and not feeling 'myself' was fuel to the fire and made me train harder, eat better and not let myself off the hook. If you see an e-bike as a temporary tool, maybe to lose weight or rehab an injury, then use all those negative emotions you have. Use them for good. Negative

emotions are often more powerful than positive ones so put them to good use. Don't waste them. Your e-bike is a tool.

Some people won’t feel any shame or embarrassment for riding an e-bike and for them, they won’t relate to this chapter at all. That’s all good. My want is for every other e-bike rider to get to that point as well. To accept their body has changed and they get to ride one to continue enjoying this awesome sport, or to become at peace with the fact that it’s a temporary tool to get back to riding a non-powered bike.

3 - Goals - Know Where You Want To Get To!

If you are reading this guide, it's because you have a hunger for improvement. You strive to be better. Plodding along isn't for you. You want to improve. Well, a massive part of improving is knowing where you want to go and *why*. So many riders go through the motions of riding regularly but they don't really see any improvements or progress, they just…ride. Now there's nothing wrong with this, but if you want to improve, you need to have a target.

In 'tip 2' I chatted about the three types of e-bike riders. Those who ride an e-bike simply because they want to (or in combination with a non-powered bike), those who ride one temporarily due to an injury/health condition and want to move to a non-powered bike and those who will always be riding one due to a health condition.

First of all, you need to make sure you are clear with which of the above camps you come under. Now ask yourself; "What do I want to achieve? Why do I ride? If I could achieve anything with my health, riding and fitness, what would that be?". Spend some time sat with yourself just pondering these questions. It's important you do this with no distractions. We live in a world with *so many* distractions so spending some quiet time with yourself to think is surprisingly powerful.

After this, you should have a little more idea of where you want to go. Your goal may be a riding goal, it may be an off-bike goal, or it could be an event.

You might want to rehab your knee injury and get back to riding your non-powered bike, be able to complete a 50 mile ride on your e-bike or enter and finish an enduro race. You might want to lose 30 pounds, get your blood pressure to a healthy level or you might want to be faster and more skilful on the descents.

Whatever the goal, it's totally personal to you. Let me give you a personal example - at the beginning of 2022, my aim was to build my fitness up to prior levels after having covid and race Ard Rock Enduro. Now that's complete, at the writing of this guide my health/fitness goals are two fold. I get married in 11 months, so I want be in the best physical shape I can be for that and secondly I want to race Ard Rock again in 2024 (22 months away at the writing of this) but properly *race* it, not just aim to complete it.

Notice that the goals are long term, they aren't just one or two month. When you have the main goal, you can crate mini goals. I now that racing Ard Rock requires being fit enough to climb 5000ft and do 7 hard stages with max effort. That means I can set mini-goals along the way of completing X event,

riding X distance or losing X amount of weight. The goals also compliment each other nicely. Getting in the best shape I can for the wedding can be achieved through my goal of racing well. They work in tandem. It's important your goals compliment each other - if you have a goal of building as much muscle as possible…and of riding a 100 mile event, well then you have a problem as the two are opposing goals.

Hopefully my personal example here helps. I often find it's easier for people to figure out what their goal and aim should like like when they have an idea of someone else's. It's important to remember - this has to be personal to *you*. The goal should feel right to you and you alone. It's important you don't just take on someone else's goal or feel pressured into something that doesn't motivate you. If you friends want to race an enduro, but you really don't, don't feel you have to tag along. You need to work out what is important to you.

When you have the goal, put a date on it and get a plan together. Work out exactly what you need to do to hit the goal. To do this, you'll need to know your starting point and how long you have to your goal. Let's say you want to build your fitness to be able to complete a 3 hour ride and you want to lose 10 pounds. Well, how far you can ride now? 1 hour, perfect. You can expect a loss of 0.5-1 pound per week, so how about you play it safe and give yourself a time-frame of 20 weeks? Now you know what you want and when, now work at the how.

That will usually be down to training, riding and eating right. For the training element you can follow the structured training plans in my MTB Fit app, built specifically for mountain bikers, or work with your physio if you aren't at that point. For the riding portion, build up bit by bit. In the above example, you want to go from 1 hour to 3 hour rides. Well do an extra 5 minutes in your next ride. Then another 5 minutes and so on. As for the nutrition side of things, get stuck into my nutrition guide.

Having goals is knowing what you went, why you want it, when you want it by and how you are going to get there. Spend some time on this and you will be absolutely miles ahead of so many riders who just get swept along with life and with riding and have no real aim or purpose.

The great thing with goals is that they make riding and training (and life in general) more fun. When you have something to aim towards it's exciting. It fuels every ride and every workout. It gives purpose to healthy eating and sleeping well. It gives you motivation and it gives you a *reason* to work hard.

4. Using The Bike As A Tool, Not A Crutch

The great thing about e-bikes is that they can give you as much support as you physically need. On the flat, or on gentle slopes, you can keep the resistance in a lower setting and when you really need it you can crank it up and have the bike help you out much more.

This is the blessing of the e-bike but, like with most powers (excuse the pun), it's also a curse. See, while the e-bike can be used to give you just enough help…it's also easy to get lazy and to flick it into 'boost' mode the whole time if on a short enough ride. Now, if you are using that for a purpose, for example to get as many descents in as possible in a set time frame, then all good. If however your aim is to improve your fitness and improve your strength…but you are finding you are always using boost mode and getting back from your rides not tired and your fitness levels aren't really improving. Or worse, if you find you are getting *less fit* because you are relying on your bikes higher assistance settings, then you may want to nip that in the bud.

With great power comes great responsibility! If you want to use your e-bike to improve your fitness and leg strength, then it's important you stay disciplined. If fitness is the aim, I would recommend only using the power setting that you actually need. At least on the majority of your rides. In tip 16 I talk about the mechanics of this in detail and when to use what assistance. Here I just want to talk about the mental side.

If fitness is the aim then you want to select the lowest possible assistance that you can and maybe even run your bike turned off on easier sections of trail, like flat bridleway.

I remember once riding an Olympic level XC loop (at Dalby forest) with a friend of mine. I was on an e-bike, he was on a top of the range World Cup standard XC bike. He decided he wanted to get the Strava KOM (fastest ever time recorded) on the 20 minute loop, so I joined him. He absolutely went for it and managed to bag the KOM. When he got back he was shattered and had pushed himself to his absolute limit. I rode the majority of it in boost mode, one handed, with the saddle dropped. That's the great thing about e-bikes…but it can also hold you back if you always use this mode.

This is where discipline comes in. I was obviously just mucking around on the above ride, but when you want to improve, you need to make sure you are still pushing and working hard (within your health limitations). When you get back home, you want to think 'yeah - that was a great workout'. Now for some people reading this, they have health issues that dictate how hard they can push. They may have to keep their heart rate to a certain level or can

only use certain assistance levels due to injuries or arthritis etc. With these in mind, you still want to push yourself to *your* safe limits while you ride.

I have a one-one client who has suffered a heart attack (I have 5 one-one clients who I see each week). He is only allowed to get his heart rate up to 80% of his max and when he gets there he can't maintain it. So, he wears a heart rate monitor and we do workouts that get his heart rate right up there…and then give him a rest as soon as he does to bring it back down… and repeat. He's a great example of pushing to *his* limits and still improving his fitness despite having physical health limitations. He could physically push to 85,90%+ of his max heart rate but it wouldn't be safe. It would be easy for him to say 'right, I've had a heart attack, it's time to take it easy and stop exercising now'. He of course has taken the exact opposite approach and regularly pushes himself to his safe limits. This is exact mindset you want to build and harness.

But what if you don't have a defined health limitation? How do you know what 'pushing too hard' is? Practice, experience and using advice from your health specialist where you can. If you are unfit and want to improve, then over time you can push yourself harder and harder and see how you feel. If you are getting to the point where you are feeling faint or sick, that's probably a little too far. You can gradually ramp it up and use less and less resistance to strike that balance. If you have a joint issue, then combined with your physio/doctors advice, you want to strike that perfect balance between strengthening those surrounding muscles and having a little discomfort in your joints…to absolutely nailing yourself and being in agony for the next few days.

It takes experience, self awareness and discipline. What I want you to take away from this point is that just because your fitness isn't where you want it, or you are overweight, or you have a health issue, or you have a joint issue that does NOT mean that you can't push yourself to improve your fitness. You can push *your* safe limits and strive to improve and hit your goals. You can use your e-bike as a tool to get to where you want to be, rather than a crutch on which you must rely.

5. Knowing Your C*urrent* Level

We've all heard horror stories of people running out of charge 15 miles and two large hills away from the car. Or a new rider using their bike to scale a mountain, before realising that the descent is beyond their skill and confidence level. Or taking on a challenge that's too big to bite off, with no 'out' and ending up needing mountain rescue help to get to safety.

It's important as an e-mountain biker that you have a good understanding of your physical body, fitness, skill and confidence levels. Are you someone who has been riding for 20 years and used to race downhill? Or are you a total mtb beginner using the e-bike as a gate-way into the world of mountain biking? Do you use your e-bike simply to help you ride further in less time, or is it a crucial tool to stop your heart rate going too high on doctors orders? Do you regularly ride 50 miles on a non-powered bike, or is 10 miles on the eeb your current limit?

Understanding these things is crucial. It's important you know what you are comfortable doing and what you aren't. Where your fitness can take you to and where it ends. What your body can handle and what the threshold is to it becoming dangerous. It's imperative you assess these things *without* ego. Mindset is incredibly important and a huge factor to being a 'successful' mountain biker, but having a great mindset isn't about positive thinking your way through everything with naivety and bravado. It's about honestly and objectively knowing where you stand. What you can and can't currently do.

I can think of countless times where I was too cocky or too oblivious to my limits, especially in the first couple of years of riding. Sometimes it ended in a harmless crash that I walked away from or having to ride home in the very bottom gear, exhausted. Other times it's ended in broken wrists, torn ankle ligaments, broken bikes or near heatstroke. Mountain biking is a sport with inherent danger, that's one of the reasons it's so awesome. Learning to totally rely on yourself, knowing in the back of your mind you could get hurt if you mess up, is one of the great thrills and confidence boosters of mountain biking. When it crosses into naivety though or you ignore your bodies signs, that's when it gets silly.

My best friend Ozzy once put himself in an air ambulance and missed severing his spinal cord by a few millimetres because he sent himself off a 6 foot drop at under 5mph, with zero attempt to manual off it. He had all the confidence and positivity in the world, but not the skill level (at the time, he'd be fine now) to send it. He had a few months off training and off the bike, but it could have been *much* worse. Seeing him in a spinal board getting flown to intensive care was a scary moment and a huge slap in the face that we have to take our sport seriously. As much as it's amazing, the best sport in the

world, things can go wrong. Our job is to minimise the risk of these things happening by gradually pushing our comfort zone and our skills and planning sensibly.

So, how do you do this? It's all about awareness. If you are planning to ride that 6,000ft of elevation mountain are you fully prepared for it? Do you know you can do the descents? Is there a backup plan (like a fire-road bale out) in case your body has had enough 1/2 way up? Are you going solo or with a friend? Can your joints handle it? Is there mobile reception in case you struggle or need help?

This level of planning and thought is important with any mountain bike ride, but they are even more important with an e-mountain bike. The bike is much heavier than a normal bike, making it a real effort to push back down a mountain, especially if you have dodgy knees. If you use your bike to help you out on the fitness front, then you could be in a sticky situation if the battery dies in the middle of nowhere, in a storm and you know your fitness levels would struggle to get you home.

Most rides you go on are local to home and you'll know the trails like the back of your hand. It's the rides further afield, in new territory that you want to put extra effort into considering the above.

Of course, it's not all negative. You only need to spend a *tiny* proportion of your mental energy on the potential negative outcomes, then you can focus on having fun and having a great time, but it would be remiss to not think about them and to not plan for them. It's a bit like driving a car…you don't obsess over what could go wrong, but you *do* focus on driving safely, watching for dangers and staying in your lane. You don't constantly think of the dangers while driving…but you still get in the car knowing that a certain level of responsibility comes with doing so and that if you get distracted or make a big mistake it can go very wrong. It's the same with the bike. It's safe when you do it well and ride to your limits…and it can go wrong if you don't.

Of course, you also need to understand your current limits not just to avoid negative outcomes…but so you know how to push them to improve! If you know you currently are comfortable riding blue trails, you can gradually move onto reds. If you know your fitness allows you to ride 10 miles right now, you can build that up to 12, 14 and so on.

Being brutally honest with yourself can be tough. It can dent your ego. It can upset you. It can lower your self esteem. But these feelings are all short term and just like we have spoken about before, you can use them to fuel your improvement. Limits are temporary. We need to push them gradually, bit by

bit by bit, so they get bigger and bigger. Pretending the limits aren't there though isn't the way to play the game.

6. Building Belief That YOU CAN DO IT

When it comes to achieving the things you want to achieve both on the bike and with your physical health and fitness, you need to build the belief that you can achieve them. When you believe you can get there, you put in the work to do what's necessary.

Being able to picture and visualise where you want to get to and then believe you can do it is a key part of achieving your goals. Without your belief, you'll quit at the first hurdle or the first struggle. You throw in the towel because 'what's the point?'. If you don't believe you can achieve your goals you won't. There's is a brilliant quote from Henry Ford 'Whether you think you can, or think you can't - you're right'.

So how do you build this belief that you can achieve every one of your goals? To get the body you want. To build the skill levels you desire? To attain the fitness you dream of? One word - progress. You make small, even tiny levels of progress towards your goal. It doesn't need to be much, it just needs to be *something*. It needs to be a step in the right direction. If you want to lose 30 pounds, you just need to lose the first 0.5lb. If you want to build the distance you can ride on the bike, you just need to ride an extra 0.1 miles. If you want to learn to clear 10 foot gap jumps, you need to learn to clear a 1 foot table. You simply need to take one *tiny* step in the right direction.

When you do this. When you make that real small improvement, you start to quiet that voice that doubts you. You start to realise that if you can do this little bit of progress once, that you just need to repeat it over and over and over. Many people get overwhelmed by the end goal, by the sheer size of it and how far away it seems. It's this that makes it seem impossible. If you are *here* how can you get *there* when it seems so so far away? You don't focus on that end goal, that's how. You have the goal in mind and you always keep one eye on it, but you put 99% of your mental energy into what you can achieve and what you can do today. Building towards your goal is about taking it day by day by day. Big goals are scary and overwhelming. You focus on the now and on the small wins.

Anyone who achieved anything has to have that first small success. The minute you get that, it snow balls. The small win turns into another and another and another. Before you know it, that small win is a huge step forward. You keep it going, you keep the momentum and you get to where you want to get.

To begin with, you may have zero belief. You may simply think you just can *not* get there. That's ok. You might not believe at first. Just be a little

stubborn and take the first steps anyway. Even if you don't think you can get there…just start. Stick at it for a few days and as soon as you get that tiny morsel of progress, then you'll have the spark you need to progress and to build towards your goals.

You don't have to see the whole route…you just need to take the first step (or in our case, the first pedal stroke…)

THE PHYSICAL SIDE

"Take care of your body, it's the only place you have to live."

- Jim Rohn

MTB FITNESS

7. You Must Resistance Train

Resistance training off the bike is essential for all mountain bikers but even more so for e-mountain bikers. Why?

Well first, let's start with what I mean when I say ‘resistance training’. Resistance training (or weight training) is when you workout off the bike using some kind of resistance. That resistance can be weights, your bodyweight or tools like resistance-bands.

My MTB Fit app offers two types of resistance training plans for riders to follow - the home plans which can be done at home or on the road, using a simple set of resistance bands or the gym plans which utilise a full commercial gym setup.

So why bother? Surely riding your e-bike works all the muscles in your body? Riding *does* work all the muscles in your body, but it doesn’t work every muscle evenly nor through their full range of motion. You work your chest and shoulder muscles more than your upper back. You work your quads and glutes more than your hamstrings. You work your lower body more than your upper. You also often work your stronger side (perhaps your right) more than your left.

This means that some muscles become much stronger than their opposing muscles. This can lead to postural issues, aches and pains, poor movement on the bike or simply reduced performance. If you struggle to turn one way on the bike over another, have issues manualling or bunny hopping or find some techniques on the bike miles easier than others, muscle imbalances could be having an impact.

You also don’t work your muscles through their full range of motion when you ride. Take your average pedal stroke - it only works your leg through around 25% of its full range. Full range of motion would be squatting your bum right down until it touches your heels. Pedalling is a fraction of this movement. Over-time this can cause the muscles to get tighter and to shorten. This limits movement on and off the bike, limits the force your muscle can produce and also puts more pressure on joints. If you struggle with aches and pains or have any kind of hip/knee/back pain etc. this is even more important to you.

To compound all this, rather than having a 12-16kg mountain bike to manoeuvre, you have an e-mtb which weighs 17kg (for the super-light low power ones) to 25kg+. A significant amount of weight to move around. This means you need to be strong in order to direct the bike where you want it to go, to take corners with great technique, to soak up every bump and hit and

to jump and bunny hop. The bike is heavier than a non-powered bike, which means you need to be stronger than if you were riding a non-powered bike.

Training off the bike is how you achieve all the above. Either training at the gym or at home following good well structured plans that are specific to mountain bikers is how you correct muscle imbalances, build strength, improve flexibility and correct the effects that mountain biking has on your body. I say 'follow a well structured plan' not just to try and sell you on my MTB Fit app (although I of course recommend it) but because following a bad plan or just hitting the gym and making it up can actually make things *worse* not better. Many hit the gym and do a ton of pressing exercises, with bad technique and actually end up making things worse. It's important you train properly off the bike, with good technique and with a well balanced plan.

Here's a good workout for you to give a try at home. This will help you dip your toe into training from your front room or garage. Perform each exercise for 10-12 reps and then go straight into the next exercise. When you have done all 4, rest for 2 minutes, then repeat 3-6 times.

Exercise	Reps	Rest
A1 Bodyweight Squat	10-12	0s
A2 Press Ups	10-12	0s
A3 Static Lunges	10-12	0s
A4 Plank	30-90 seconds	2 minutes

8. How To Get Strong For The Descents

Tough descents on any mountain bike require a lot physically. You need to have the strength to stay on the bike when you get hits from jumps, drops and rock gardens. You have to have the fitness and muscular endurance to constantly keep moving around on the bike, in and out of the attack position, off the back to manual and moving side to side to corner. You have to have the power to be able to bunny hop or pivot that back end around tight corners. You need to have strength and stamina in your forearms to avoid arm pump. I could go on and on. Descending is physical. If you want to be able to descend well and descent repeatedly, you need to be fit for it and you need to be strong for it.

In some areas of descending, an e-mtb can be an advantage. The extra weight allows the suspension to work better and keeps the bike more stable. This is especially noticeable through rock gardens. The frame will often feel like it's 'floating' while the wheels will track the ground much better and the suspension will work much more freely. When jumping, the weight of the bike helps it feel much more stable in the air and it's also easier to keep momentum up when you get up to speed.

On the other side of the coin, some areas of descending are harder on an e-mtb. When you have to bunny hop or pick the back wheel up, a heavier bike means more strength is needed. The bike is easier to keep up to speed…but it's also harder to slow with the extra weight, which means better technique is needed. As mentioned earlier, the bike is also harder to manoeuvre with the extra weight. You will also often do 2-3x the number of descents in the same time frame on an e-mtb which is awesome…but also takes a lot out of your body and requires greater fitness.

These advantages and disadvantages even themselves out and it so happens that in some cases, an e-mtb is faster than a non-powered mtb. (There are some cool comparison videos on the EMBN youtube channel if you are interested in seeing the difference).

So, you know you need to get stronger for the descents…but how? Here's 5 tips to help improve descending on your e-mtb.

1. Train off-the-bike for it.

First up (and this will be a common theme) you need to train off the bike for it if you want to have more strength and more fitness for the descents. A mix of strength training in the gym, where you focus on getting stronger with

workouts with higher weights and less reps (6-8 for example) and circuit workouts where you do 4-6 exercises in a row, alternating upper body/lower body, is a fantastic combo. You can also see a lot of progress through training at home, doing bodyweight workouts. Resistance training, whether you do it at home or in the gym, is essential though.

2. Repeat the same descents

The e-bike is awesome for sessioning the same descent over and over. Do the descent. Ride to the top again. Do it again. And repeat. Hitting the same descent repeatedly is great for working on line choice and technique…but it's also a great workout. You get way more descents in the same space of time and because you are doing the exact same turns, drops, lines etc. the same muscles get tired more than they would when doing different descents meaning they get a more intense workout.

3. Hit longer descents

My local descents are typically 1-3 minutes long. When you go to places with more elevation, like the alps, you can be descending for MUCH longer. This is, obviously, much tougher. Where you can, practice riding longer descents where you start right at the top of a hill and end right at the bottom. You might need to connect a descent or two with a sprint between to do this, but it's a good way of getting used to descending for longer periods of time. If needs be, you can also head to places a little further afield that may have bigger descents. This will obviously depend on where you live, but heading for a riding weekend somewhere with bigger descents than you usually do (and trying to regularly do this) can be a great way to build descending fitness and strength.

4. Work on technique and pick the smooth lines

Descending is a lot less physical if you learn to pick the smooth lines and nail your technique. Rather than slamming on the brakes and sprinting out of corners, focus on braking early and being smooth and controlled. Rather than choosing the roughest part of the trail, try to find the smooth line. Use sections of trail to your advantage to gain momentum and speed, rather than having the trail work against you. This of course all comes with time and practice, but the better rider you can become, the smoother you will ride descents and therefore the less energy they will take out of you.

5. Ride new descents

Finally, you want to take the time to ride new descents as often as you can. We all get into the habit of riding our local trails that we know like the back of

our hand. The only issue with this, is that they don't push us the same mentally and from a skill point of view as we know what's coming…and they also don't 'shock' our bodies as much physically as you are used to riding them. Riding new descents often is a fantastic way of keeping your progress up for those descents.

9. Lifting Over Fences, Obstacles & Into The Van

One of the biggest struggles when moving an e-bike around is often not actually on the bike…but off it. There's no getting around it, e-bikes are heavy. When it comes to lifting them over fences, lifting them onto bike racks, lifting over broken trees or moving them up and down stairs they can be a struggle to move! Throw in any kind of injury and it becomes even tougher.

Not to worry though, the solution here is…you guessed it…to get stronger. Ideally you want to train the muscles that you use to lift the bike over these obstacles *off* the bike. I'd recommend the gym for this. You can get stronger at home with resistance bands, but due to the weight of the bike, it's better to use 'proper' weights for this to get the desired effect.

First up, you need to learn to lift properly. There's an exercise called the 'deadlift'. Rumour has it, that it was designed by the Romans. After battles they would have thousands of bodies to move off the battlefield and into piles. Too many soldiers were getting injured by pulling their backs out, lifting the bodies in an incorrect manor with rounded backs, not squatting down, not bracing their core etc. They invented the deadlift to correct this, teaching the soldiers how to 'lift the dead' correctly and lowered the number of injuries. Whether this story is true or not, who knows, but it doesn't really matter whether it's factually correct or not. It's got you picturing picking a dead body up correctly. Swap your bike out for the body and you are onto a winner.

Learning how to lift properly is best done in the gym. The basics are :

- Bending your legs and using your legs to drive the weight (rather than just bending over with straight legs and lifting as if you've dropped something, putting all the pressure on your lower back)

- Keeping your back straight at all times.

- Bracing your core, helping it support your spine

- Keeping your shoulder's pinned back

- Keeping the weight as close to your body as possible (Grab a sack of potatoes and hold them to your chest, now stretch your arms out in front of you, massive difference right?)

Learning how to lift correctly can make a big difference if you aren't doing it properly at the moment. It can MASSIVELY reduce the risk of you hurting yourself, but it can also literally make the lifting easier as you are using the correct, strong, muscles.

When you've learned to lift correctly, you want to work on building those muscles up. There are several muscles you use to lift the bike up and over the fence and I explain which in the video. Essentially you use your legs, core and lower back to get the bike off the ground and up to chest height. Then you use your biceps, shoulders and upper back to lift the bike up and over the fence, while your lower body and core works as the stabilising muscles.

If you think, you may only lift the bike like this 2-5 times a ride *max*. Sometimes you may not need to at all. That means it's real hard for your body to get stronger at it, because you simply aren't doing it often enough. When you train in the gym, you can do several reps and several sets of the same large movement you do to lift the bike…and then various 'isolation' exercises afterwards that strengthen the different independent muscles you use when lifting the bike. This makes you *tons* stronger and makes it much easier to lift the bike.

Ideally, you want to aim to be lifting much more than the weight of your bike. As a rule of thumb, you can aim to eventually be deadlifting and squatting 1-2x your bodyweight and shoulder pressing 0.5-1x your bodyweight. If your e-bike weighs 25kg, that means you are capable of lifting much more weight, meaning lifting the e-bike will be a piece of cake. Of course, the above aims take time (potentially years) but in the short term, every extra kg you can lift off the bike will make it easier to lift your bike.

When you are out lifting the bike, I would aim to lift it as little as possible - the higher off the ground it goes, the harder. If lifting over a fence, there may be a lower section 10m further down the trail. Head to that if possible. If you can have one friend on each side of the fence and pass it over, that can help a lot, as the hardest part of the lift (and the part that puts most pressure on your lower back) when the bike is up in the air, is the reaching over and putting it back down.

Finally - pay attention to any weaknesses or injuries you have. You want to do two things with this. First of all, in the short term, learn to compensate. If your right knee has arthritis, you will probably need to learn how to lift correctly while putting more pressure on your left, stronger, leg (perhaps in a

‘split stance, with one foot forward’). Learning to compensate by changing the movement, but still with good technique, can really help. Secondly, you want to work on those weaknesses. If you find your back aching when you lift - it’s time to strengthen your core, glutes and lower back. If your shoulders are where you struggle, time to strengthen those up and the surrounding muscles.

Ultimately, what I want you to come away from with this point is that you shouldn’t just accept lifting the e-bike is tricky and you also shouldn’t just ignore it. You should work on it. It means you are MUCH less likely to injure yourself lifting it…and if you do hit an extra high fence or unexpected obstacle, you’ll have the strength to easily tackle it.

Below is a basic gym workout for you to try. Unlike the other plan, do each exercise one at a time for 3 sets each. So do 10-12 dumbbell deadlifts, rest 90 seconds, do 10-12 more, rest 90s, 10-12 more then move to B.

Exercise	Sets and Reps	Rest
A Dumbbell Deadlift	3 x 10-12	90 seconds
B Standing Shoulder Press	3 x 10-12	90 seconds
C Bent Over Barbell Row	3 x 10-12	90 seconds
D Front Raise	3 x 10-12	90 seconds

10. Supporting Dodgy Knees, Hips & Backs

Some who ride an e-bike, do so because they have issues with ‘dodgy’ backs, knees, hips or other joints and find that a non-powered bike puts too much stress on their joints.

If this is you, then alongside the advice from your doctor/physio (always follow this) then it’s important to work on two areas :

- Full body flexibility

- Full body strength (and especially in the surrounding areas of the joint)

Let’s tackle these one at a time.

First, flexibility. You’ll note I said ‘full body’ flexibility. The areas around the affected area will often become tight and lose flexibility. If you have an arthritic knee for example, it’s common for the quads and hamstrings to become tight. What you may not realise though is that muscles up and down the chain can also affect said joint. With your knee - tightness with your hips or around your ankle joint can actually make the issue worse. Sometimes the issue can cause tightness elsewhere…and other times the tightness in the other part of your body can make the underlying issue worse. As an example, tightness in your calf can sometimes cause a poor pedal stroke, this can have the knock on effect of putting more pressure on your knees.

Another example - let’s say you have a sore lower back and find your back is really tight because of this. What you might not realise, is chances are your hips, glutes and hamstrings will also be really tight. This may or may not be caused by the issue with your lower back…but it can certainly make it worse. Stretching off these surrounding areas and improving their flexibility in them can put less pressure on your back because the surrounding areas aren’t ‘pulling’ on your lower back. Even though the pain is in your lower back, often the surrounding muscles and those further up/down the chain can be having a real impact.

Weakness in key areas can also have a big impact. You want the surrounding areas of your ‘issue area’ to be as strong as possible. If you have bad knees, you need your immediate surrounding muscles such as your quads, hamstrings and calves to be strong to take as much load as they can. You also want those muscles that are further away to be strong too though. They may seem inconsequential, but small issues like having weak inner and outer

hip muscles can cause your walk and pedal stroke to not quite be right which overtime can cause issues and/or aggravate the knees.

There are hundreds of areas around the body where this can happen - knee pain can be caused by ankle or hip issues. Sore elbows can be caused by wrist/forearm, shoulder, tricep/bicep or neck tightness. Lower back pain can be caused by lower body weakness/tightness. It's often easy to zone in on the area that hurts, but zooming out and looking at the body as a whole can often be a real help. What you DON'T want to do, is just accept the weak/sore area as it is and build a belief that it will never be better. You may or may not be able to fully correct it, but there's a good chance you can help it.

Now for all the above, you need an expert. There are certain basic exercises and stretches you can do to start to help the areas. Ultimately though, it's an expert you need to go to to truly diagnose and help you. Understand the examples are listed above are just *examples* the real issues will be totally personal to you. You need assessing to find these.

If it's a niggle or ache and pain you have, a physio is well worth a visit to diagnose this and help show you where you need to stretch and strengthen. Often, even those aches and pains that have been there for a long time can be corrected with correct diagnosis and treatment.

If it's a long-lasting issue such as arthritis, then you likely won't be able to totally get rid of it…but strengthening and improving flexibility in those surround muscles can certainly help decrease the pain and pressure you put on the area. The stronger, more flexible muscles will move better and can also take more of the strain. You might not be able to fully solve the issue, but chances are you can still do lots to support it and decrease the pain. Of course, doing the above alongside the advice of your health-care professionals.

11. Supporting & Riding Around Injuries & Health Issues

Many who ride an e-bike do so because of a health issue. Perhaps they have a heart issue, arthritic knees or a bad back for example. If you have some kind of 'health issue' that causes you to ride an e-bike, then it' really important you manage it well. It's tricky to strike a balance between doing too much…but also not pushing yourself as much as you could and selling yourself short. Learning how to stick this balance takes time, self awareness and some trial and error.

I want to share some tips with you in this tip (tips within a tip, it's like Inception…) that can help. These are applicable whether you have a short term injury, a long term health implication or anything in between.

1. Set yourself objective parameters

One of the difficulties of managing a health concern and/or injury is that it can be tricky to know how much to do and how much to not do. Can you ride everyday? How far should you ride for? How high can you get your heart rate and for how long? How much should you push yourself? How much pain is 'good' and acceptable…and how much can be detrimental?

Whenever I've had 1-1 clients in the past with health issues, I always get them to determine parameters with their health specialist. One of my current clients has had a heart attack and has been told to only get his heart rate up to 120bpm and bring it back down when it get's there (not maintain it for a long time). I've had clients in the past with arthritic joints - they were told that any pain at a 5/10 or less when training was acceptable, but if going beyond that to stop or back off. It can be hard to pin down these objective parameters, but if you can decide them with your health specialist they can be *really* helpful and help you manage your training load much more effectively. It takes a lot of the questions and the doubt out of the equation.

2. Learn to listen to your body

When you have objective numbers to work to, it's simple, but not every issue has this luxury. When I was 'rehabbing' myself back up after Covid/long Covid, there were 2 main factors that I was struggling with. Firstly, I had varying energy levels, some days I would feel OK, other days I would feel floored and need a nap at lunchtime. Secondly, I had to balance how hard I worked my lungs - if I pushed them too hard, for too long, I came down with a chest infection again.

It was a new situation, so I had none of the objective aims to work towards,

it all had to go off ‘feel’. What that meant was paying attention to my energy levels, training and riding to a higher level when I felt up to it and backing off and taking it easy when I didn’t. It also meant being very conscious of *gradually* building the strength up in my lungs and taking a couple of days rest from stressing them when I had done a hard ride and they felt weak.

I messed up a few times and tried to go too hard, too often and that set me back, but you learn from those mistakes. The key here is to understand you and *your* body. My example is Long Covid, but the energy/recovery component could easily be applied to ageing, low iron levels, fibromyalgia or a host of other things. The constant is learning to understand and listen to *your* body. A ‘gung ho’ attitude of going full steam ahead won’t cut it…but if you take it too easy, you also won’t progress or be able to achieve the goals you have for yourself.

3. Track

A good way to manage the above two tips is to journal your progress. You could set-up a spreadsheet or buy yourself a nice journal/tracker to write in. You could keep a food, sleep and exercise diary and record what you eat, how long you sleep for and what exercise you do. You can then record things like energy levels, pain levels etc. You can customise this to take your personal criteria into consideration and make it as simple or detailed as you like. We all have busy lives so we often forget what we have done or how/why we are feeling a certain way. Keeping written documentation of this is a brilliant way of connecting the dots and learning about yourself.

4. Set your bike up to win

If you have any kind of ache, pain or joint issue then getting your bike setup in the most comfortable setting for you is essential. It can take a lot of trial and error, but it can make an absolutely ginormous impact. Spend time getting your bike setup right for you. There are tons of areas you can tweak, which can be overwhelming, but just change one at a time and see the effects. It’s a fiddly process…but a fun one. When you see the small differences making slight changes to the bike makes to how you feel, you really get in touch with your body and bike more and learn what works for you. Don’t underestimate it. It may be something as simple as lifting your stem one spacer that drastically lowers your back pain or moving your seat forward/back or up/down a cm or so that ends up having a giant effect on the pressure it puts on your knees and hips.

There are tons of areas to consider. Here’s a handful you can work through one by one over a few rides. This process may take a few weeks, don’t worry. It’s worth getting it right :

- Saddle height, forward/back position and tilt. This make a massive difference to your pedal stroke and is worth spending the time on, especially if you have knee/hip issues.

- Clipless vs flat pedals (flat are generally better for any aches/pains etc. as you will naturally put your foot in a more comfortable position rather than being fixed) but clipless pedals allow you to use your hamstring a little on the upstroke and also make the bike easy to flick around.
- Grip choice. For any kind of upper body issue, the choice of your grip can have an impact. Thin grips allow you to feel what's happening under the front wheel better, but also let more impact and vibration through. Thicker, more 'cushy' grips soak up more of this trail chatter and put less pressure through your upper body in the rough stuff.

- Handlebar width, roll and rise. This is especially important for hip, back or shoulder issues as it has a dramatic impact on how upright you sit when pedalling (consider an enduro bike vs a road bike) and also on how strong your shoulder position is on the bars. A quick hack for a good handlebar width is to do a few press ups or bench presses and find your strongest/ most comfortable width. This is a good place to start

- Suspension setup. More plush/softer suspension will cushion the soft hits better. This can mean less pressure on your joints and muscles which can help. There can be downsides to softer suspension however ; hard hits can bottom out more easily (this can be solved with volume spacers) and it's also less efficient to pedal, meaning you may work harder.

The above are great places to start tweaking the setup of your bike. I totally get it can be a bit of a mine-field, but don't be afraid to make small tweaks bit by bit to find your 'Goldilocks' setup.

12. Weight-Loss Basics & Misconceptions

Do you want, or need, to lose weight? If so, it's one of the BEST things you can do to improve your riding. Every pound you lose from your body is a pound you don't have to carry up the hills, making you more efficient. It also allows you to be more nimble on the bike, more easily. You can move quicker and change direction more easily when you are lighter. The best sports cars are always lightweight, mass matters.

So you want to lose weight? Let's explore the basics and shatter some common misconceptions that are out there.

Energy balance

First of all, weight-loss (in the absence of an underlying health/medication issue causing weight gain) comes down to one thing - energy balance. You need to eat (and drink…) less calories than you burn. The swimmer Michael Phelps famously ate 10,000 calories a day while training for the Olympics… he also burnt 10,000 calories a day, so stayed in phenomenal shape.

You'll have no doubt heard the phrase 'you can't out-train a bad diet'. It's true. Many of us over-estimate the effects that training has on our calorie burn. If you go on a 2 hour ride, that's awesome, but that doesn't mean you can have a pizza for dinner and hope to lose weight. Calorie balance matters and is the number one factor behind weight loss.

When it comes to losing weight, it doesn't matter if you eat high carb or low carb. It doesn't matter whether you cut out all fat or cut out all sugar. It doesn't matter whether you do intermittent fasting, eat 2 big meals a day or eat 6 small ones. The most recent studies show one thing - when it comes to losing weight (and maintaining a healthy weight) it's calorie balance that matters. You need to consume less than you burn. If you aren't losing weight (again, in the absence of medication/a health issue) then you are consuming too many calories. Cut down those calories (or up your exercise) and you will lose weight.

Not all about the 'weight'

Now this might seem contradictory, but weightloss isn't all about 'weight' loss. What you want to do is lose fat and likely build muscle. As you train more, (especially if you lift weights) you will build muscle. This will often at the same time as losing weight - especially if you are a beginner to lifting weights. This means you can't fully rely on the sales. You may build 2lbs of beneficial-muscle and lose 2lbs of 'holding you back' fat…but the scales

won't show it. The way around this is to measure yourself as well as weigh. Hop on the scales once a week and measure your key areas such as your belly, thighs, arms, hips and chest too.

How much fat you have to lose will have an effect on this. If you have 28 pounds of fat to lose, for example, then you won't build anywhere near that much muscle and therefore you want to see a loss on the scale. On the flip side, if you are a skinny dude with a bit of a belly, chances are you can totally change your body with a minor change to the scales (it may even go up). Use the scales smartly based on your situation - don't become a slave to them.

The best 'weight-loss' workouts

Don't stress too much about what workouts are the best for weight-loss. Instead, just make the effort train/ride as often as you can and to move more. The more you ride and the more you train off the bike, the more calories you will burn. An ideal mix would be to train off the bike doing resistance workouts and also riding regularly. This would be a great mix to benefit not only your weight-loss but also your riding fitness/strength at the same time too.

You also want to focus on moving more. If you have a largely sedentary lifestyle, then make the effort to move more. This is called your NEAT 'Non-Exercise Activity Thermogenesis'. Essentially, how many calories you burn while not actively doing hard exercise. You can increase this by moving more through the day. Small things like standing up to take a phone call, parking further from your office and walking in, going for a morning/evening walk or the cliched 'taking the stairs instead of the escalator' actually all make a real difference. Let's say you burn an extra 100 calories a day from these simple changes…this adds up to 35,600 calories over a year, or 10 pounds of weight lost.

Play the long game

When it comes to losing weight, so many people want to see massive results in far too short of a time frame. In the first 1-2 weeks, you will see a greater weight loss. After that, aim to lose 1-2 pounds a week (dependent on how much you have to lose). This is a safe amount that allows you to still eat plenty to fuel your workouts and rides, keep your energy levels and mood high while losing weight. So many people try to starve themselves. They last a few weeks (if they are lucky), but feel miserable and then fall off the wagon and put the weight back on. Be patient and play the long game. It's a lifestyle change.

THE RIDING SIDE

“Riding my bike is so simple, yet I’m constantly blown away by the adventure that two wheels gives me. Mountain bikes rescued me from the darker side of what life can throw at you. I feel so lucky to have gained my family, my friends and decades of fun from this sport.”

- Steve Peat

MTB FITNESS

13. Overcoming Range Anxiety!

Range anxiety. It's something that you don't have to worry about on a non-powered bike, but you have to be very conscious of on your e-bike. It's arguably the biggest downside, next to weight, of e-bikes. When I was researching for this guide, it was by far one of the most common issues that came up. If your battery dies on your ride and you don't have a back up, then it can be massive inconvenience and it some cases downright dangerous (you don't want to be stuck in the wilderness with a storm coming in, with a heavy bike to lug out).

The great news is with a little planning, organisation and considering the 'what if's' you can negate this issue to the point that you give it as much thought as what clothes to wear, or what food to take.

Here's 4 tips to help

1- Plan your route conservatively

When you have had your e-bike for a while and have ridden it through the seasons, you'll learn what range you can expect consistently from the bike, in which modes. When you first get it though, you are still learning all this. The difference between riding in 'eco' mode on a sunny day and riding in 'boost' in the middle of winter will give a massively varied battery life.

If you are new to e-mtb's then while you get used to your new e-bike, I highly recommend being conservative with your planning. You may want to park at the foot of the trail and do a repeated 3-4 mile loop for example which gives an easy 'out' if your battery goes quicker than expected. If you are riding a new route that's a little further, you could take precautions like riding when your other-half is available to come pick you up, or staying within close distance to roads so that you aren't stuck for from civilisation if it dies.

When you get used to the mileage expected from your bike, then it's a simple matter of planning accordingly for it and planning *conservatively* when needed. On the more risky route, for example going scaling a mountain, you want to plan a route that is well under the mileage you can expect from the battery (30-35% under expected range is a good idea). If you have the option you may even want to carry an extra (fully charged) battery with you. Just like any bike ride - riding in a group is a brilliant idea, especially on those longer rides are more exposed rides where you are far from civilisation.

2 - Understand the difference in modes and riding style

As just touched on, the difference in riding-modes will make a massive difference to the battery life you get from your bike. Think of it like driving your car. Going foot to the floor on the accelerator can see really low MPG, whereas sitting at 60mph at 2,300rpm on the motorway (or free-way for my US friends) will see it many times greater. It's the exact same on your e-bike. The harder you work it, the quicker the battery goes. Ride up a steep climb in boost mode and you will drain the bike much quicker then when on a flat fire-road/canal path in eco mode. This will become second nature with time and experience, but if you want to decrease your range anxiety then you want to get in touch with your bike and really learn it inside out. The more you pay attention to how your riding style and riding mode affect the battery usage, the better you'll be able to manage it and know with confidence how long you can get from the battery on different types of ride.

3 - Consider the changing variables

There are certain variables that will effect your battery life that you want to consider. Weight (meaning both your bodyweight and how much you carry on you) has an impact. On a big ride you may carry 5-10kg of spares, water and food compared to a quick local jaunt. If you ever go a few months between rides and have put on weight, this can have an effect too as the battery will have to work harder to produce the same amount of watts at the crank.

E-bike batteries can be used in a huge range of temperatures, but when it starts to get to extremes, they can be affected. E-bike batteries generally work optimally between 60f-80f (15c-25c). If it drops below 40f (5c) or above 110f (43c) then the battery performance can start to deteriorate. Obviously this will be affected by where you live. We stand no chance of seeing 110f+ (43c) here in the UK, but through the winter we will regularly ride in temperatures under freezing through the winter. Both ends of this scale will be exaggerated if you ride in much higher or much lower temperatures, so bare this in mind. You also want to bear in mind that if your bike is kept in a non air-conditioned unit then it might already be up to a really high or low temperature before you head out, so you will want to keep your battery inside before rides to ensure you start at the optimal temp. Extra attention wants to be paid with leaving it in a car in the summer too - if you stop for a pre-ride breakfast, then take your battery in with you.

Riding speed : when ride alone this is fully in control, but when riding in a group this can be a little out of your control. If you know a group ride much faster than another (or faster than your solo pace) then understand your battery will likely drain faster.

4 - How to increase the range

There are going to be times when you want the range to last as long as possible. On days like that, here's some things to consider :

- Pump your tyres up, harder tyres drag less and roll more effectively

- Don't have your suspension *too* plush. Soft suspension feels great, but it can also be wallowy when pedalling making the bike less efficient.
- You can buy range extenders for most e-bike batteries, which come in significantly cheaper (and lighter) than a full on extra battery. These can be a great option as they give the flexibility of having that extra range (and weight) when you want it…but removing it when you don't. This can be a brill idea to give that greater range when needed.

- Ride slower and with less assistance. The less you stress the battery, the longer it will last. Using boost to pop of jumps on the *climbs* can be brilliant fun…but you might just want to sit and spin when max battery life is a consideration. You can even use no-assistance where you can.

- Use thinner, smoother tyres. Aggressive tyres are awesome for those technical descents…but if you are on more of a long-distance XC ride, faster rolling tyres would be a great shout.

- Make sure your bike is clean. A dirty bike will drag more (and be heavier). Ensuring your bike is nice and clean will minimise that drag.

- Carry less. Generally on those longer rides you want to carry more kit…but where you can try to avoid carrying too much to keep the weight down.

Overall - it's just a matter of planning and learning your bike and riding style. As long as you are smart and are realistic with the range of your battery you'll be A ok!

14. Maintenance! Happy Bike, Happy Rider

I'm a huge believer in 'happy bike - happy rider'. When your bike is clean and riding well, you feel so much better and more confident on the bike. Before I head out riding I always ensure I have fresh, clean riding gear. I make sure my bike is clean with a lubed chain and I always check my tyre pressures (it's good form to quickly check the bolts too). On rides where my bike is dirty from the get go I can never quite relax and get into the ride the same.

It's not just psychological though. A dirty, poorly maintained bike doesn't just feel worse in your head…it won't perform the same either. Maintaining and keeping any bike clean is important, but it's even more important on an e-bike.

Because of the extra power the motor creates, the extra weight of the bike and the extra mileage you can cover, components will wear quicker on an e-bike than they do a non-powered bike. Your drivetrain especially is put under more stress due to the extra watts going through and the extra mileage. They are built stronger to manage this, but it does mean you will want to pay close attention to the maintenance of your bike.

Checking it over every couple of weeks can catch issues before they develop (replacing a part worn chain early can help your drivetrain last much longer for example). You also want to give it a quick clean and dry after each ride. A dirty drivetrain layered in dried on grit will wear through the components much quicker than a nice clean, well lubed drivetrain.

The suspension and bearings will take a greater beating than a non-powered bike too. E-bikes mean you can hit 2-3 times the number of descents on a typical ride which is fantastic…but that does put extra stress on the bike as it takes more of a battering. Keeping the bike clean as above makes a big difference, but it's also worth servicing the suspension more often and replacing those bearings when needed to keep the bike running awesome.

Treat your e-bike like a Ferrari, rather than a farmer's Land Rover Defender and it will perform much, much better and for much longer. Your e-bike performs to really high levels…but it needs looking after to maintain that performance. Let's be honest, it's fun looking after your bikes though. Those hours spent in the garage tinkering with the bike are great fun and make you look forward to that next ride even more…

15. Plan Your Ride To Utilise Your E-Bike Best

E-bikes thrive in most mountain bike environments. They open up trails and conditions that a non-powered bike can't dream of. Super steep push-up? You can probably ride it. Deep mud? More than likely all good. There are also a few areas where they aren't in their comfort zone and can become a bit if a burden. With a little planning you can *really* maximise how much enjoyment you get from your bike.

When it comes to planning your rides, try to plan a route that really maximises the perks of your e-bike. Open routes with minimal gates to lift over or hike-a-bike sections are ideal and where your bike really thrives. You can utilise the extra power your bike gives you to keep flying up this climbs and get 2, 3 or 4 times the number of descents in than you would normally. You could plan a longer route than your time-frame or fitness would allow on a non-powered bike, or with more large climbs. You may have a section of trails near you with tons of off-piste descents through the woods and a nice fire-road or trail back to the start. These are all absolutely ideal for an e-bike and really allow you to use it to it's true potential.

You also want to think of the other side of it…and make sure you plan routes that aren't best suited to e-bikes. Some trail systems in the world sadly don't allow e-bikes, so that's naturally going to affect where you ride. You also want to consider things like how many fences/gates there are on said route and how many hike-a-bike sections there are, especially where you have to carry it.

A Ferrari and an Abrams Tank are at the top of the food chain in their relevant classes. The Tank wouldn't see where the Ferrari went on a country road… but the Ferrari would get stuck in the first puddle off-road. They both excel when they are in their field. The line between e-mtb and non-powered mtb is obviously *much* closer than this tank/Ferrari example, but hopefully it gives you the visualisation of how to best use your e-bike as a tool for certain scenarios, just like you wouldn't want to race World Cup Downhill on a 100mm XC Bike.

Chances are, you have some trails or rides near you that would be a pain on the e-bike. There are some rides near me where you have 10+ gates to lift the bike over, over the course of the ride. Not a problem if you won't struggle with this…perhaps a bigger issue if you have an injury or issue that would make this harder. We've all likely done epic days out on the bike that require a lot of carrying or pushing the bike. Many e-bikes have a walk mode, so as long as the climb is walkable then that's all good. Some places though require a long carry of the bike. I remember when me and a friend did Helvellyn, a mountain here in England. There was about 45 minutes of

pushing the bike (it *could* have been rideable on an e-bike but it was super steep) and then about an hour of putting the bike over your back and carrying to the top). That was a real effort with a light carbon fibre bike…I would NOT have wanted 10 extra kilos to carry.

Obviously the above is *totally* personal to where you ride and your local trails, it's worth considering though. If riding with a group somewhere new, perhaps ask the ride leader what the route is like in advance.

Finally, you want to be aware not only of what you can *climb* on your e-bike, but also what you can *descend*. E-bikes make technical, steep climbs easier, which is awesome. It can catch some less experienced riders out though if they get to the top of a trail that would have been a little out of reach on a non-powered bike, then realise they are going to *really* struggle to ride the trail back down the other side. Many e-bike riders are super experienced and can ride any descent…some are less confident. It's worth bearing this in mind when planning your rides.

You've got an awesome tool, you want to make sure you put it to work in an environment that it will thrive in. Not only will you enjoy riding it so much more, but you will also build your fitness, strength and skill much more consistently and effectively.

16. What Resistance To Use & When

There's a huge difference in assistance levels on your bike from the lowest setting and the highest. *(There are also a myriad of different names for the assistance settings on various e-bikes, so I'm just going to refer to them as high-low assistance here).*

So, you want to build your fitness and progress on your e-bike. When should you use each assistance mode? The first step is putting some conscious thought into when and why you are using the lower and higher assistance modes. The type of ride you are doing will depend how much assistance you give yourself. Let's look at some of the different types of rides (yep…a ride isn't *just* a ride).

Base miles

Base mile rides are where you keep your heart rate low and don't over-stress your body. You will keep yourself at a low intensity for the entire ride and *don't* push yourself too hard or stress your body too much at any point. On a non-powered bike, these would usually be completed on a static bike or on flat trails. On an e-bike you have more flexibility, you can use the assistance to keep the intensity down while on trickier sections or rides with climbs.

So why do base miles? What are they? Base miles allow you to build a big 'aerobic engine' for your rides without taxing your body. You can do them on the same day as a gym session for example. They are great for building the foundations of which to build your fitness.

For these, you simply want to use the assistance that allows you to keep your effort levels at around a 5/10. This could be low, medium or high depending on your fitness and the terrain.

Hard/max effort rides

On the opposite end of the scale we have 'hard/max effort rides'. These are rides where you absolutely nail yourself for a length of time dictated mainly by your fitness. You may go out and ride as hard as possible for 30 or 40 minutes, or if fitness allows 1-2 hours. These are usually fast, hard rides and can really skyrocket your fitness. These are only suitable for those with fairly decent fitness anyway and with no underlying health or physical limitations.

For these you will want to keep the assistance as low as you possibly can and allow you to put in the most work possible. You'll be at a 7-9/10 for most of these rides and should get home at a 10/10. A great idea for this is to

have a set loop and set a timer/Strava the minute you set off, then try and beat said time. You could even create your own Strava Segment to automatically log all your efforts.

(These rides aren't really necessary for most people reading this, but it's good to know)

Interval session

If you follow the workouts in my MTB Fit app then you know all about these. Interval workouts are where you alternate between going 'easy' and going 'hard'. A good interval session will be part of an overall plan where you work different areas of your fitness and the interval sessions get harder and harder each week, as your fitness progresses (this is called 'periodisation'). These are exceptionally good for building your fitness…but I'd only advise them if you have a 1/2 decent level of fitness to begin with and/or you don't have underlying health conditions.

For these sessions, you will use the assistance as defined by the workout. You may do 30s of max effort with 2min 30s rest as a random example. For this you would use the lowest or zero assistance for the 30s, then as much assistance as you need to recover in-between. On a longer interval though, perhaps 2 min work/2 min rest, you would likely use more assistance for that 2 minute work period.

I'd advise against writing your own interval plans. Instead, follow one from a professional.

Descent focused sessions

Next we have descent focused rides. These are rides where your sole aim is to ride as many descents as possible and really work on your skills. On a non-powered bike these would often be rides where you session the same trail or two over and over while pushing to the top again in-between. On an e-bike though you can likely use the power to get to the top of the descent fresher *and* in less time than it would take on a non-powered bike.

On these rides you may focus on building strength and muscular endurance on the descents by saving your energy on the climbs and nailing yourself by doing as many descents as possible. Or, you may be working on technique and line choice. In which case you won't work as physically hard on the descents.

For both the above, you will probably want to use the max assistance possible for the climbs. The reason being, is the aim is to get to the top *not* fatigued. If wanting to improve your descending, particularly from a skills point of view, you need to be fresh for the descents to focus on them. The aim here is to use as little energy as possible on the climbs.

Fun rides with friends

Fun rides are exactly that…*fun*. You want to chat to your mates. You want to whoop and holler on the descents. You want to have a great time and you *don't* want to be limited by your fitness (of course, you can have 'fun' solo rides too).

For these rides, you don't want to be really focusing on building your fitness or on pushing really hard. Instead, it's all about having fun. So, while managing your battery, you can use whichever assistance you feel you need that allows you to ride with friends while maximising fun.

In other words, if you want more assistance, use it. Just keep an eye on that battery as you don't want to have to ride off 1/2 way through from using up your juice too quickly.

Normal rides

Lastly we have 'normal rides'. These are most probably what 95% of your rides look like right now. They are where you get on your bike and you go ride. You don't really think about what assistance you are in and when. Just like changing gears, you just do what feels right at the time. This is fine and you will build fitness doing this, but it's not optimal. You can really maximise your fitness-building on your 'normal' rides without absolutely nailing yourself. I share more on this in the next 'tip'.

So, as you can see, one of the most important things you can do is to simply go from blindly riding, with no real thought behind it…to being conscious of when and why you use your assistance. This will take you from an e-bike rookie…to an e-bike pro!

17. How To Build Fitness Riding Your E-Bike Exclusively

Building your fitness on the e-bike is very similar to on a ‘normal’ bike. You want to progressively push yourself harder and harder, riding further and further and with greater intensity. The e-bike allows you to do this in a more controlled manner than a non-powered bike. There are tons of ways to build your fitness like the ways we have already talked about ; intervals and resistance training being the main two. In this tip I want to share advice with you to build fitness while out on your normal e-bike rides :

1. Gradually minimise the rest periods.

It’s common to take breaks at the top of the climbs, especially if you are riding with other people not on e-bikes. Shortening the rest at the top of the climbs in a gradual manner is a brilliant way to improve your endurance. If you normally rest for 5 minutes at the top of every climb for example, you could drop this rest down to 3 or 4 minutes. You could rest at the top of every other climb. If riding with a group on non-powered bikes, you could even ride back down to meet them and climb again after you reach the top. Finding ways to shorten the rest periods on your rides means you keep working harder, for longer.

2. Lower the assistance

This ones pretty obvious, but in a progressive manner over several rides, you can gradually decrease the resistance you use. For 4 rides you may use X assistance. Then on the next 4 rides use a lower resistance for 1/2 the ride, then a higher assistance for the other half. Then the next 4 use lower resistance for 3/4 and so on. This doesn’t need to be totally objective and accurate - but it’s a great way to ween yourself to lower assistance levels. This will build your fitness so you can have the battery last longer and enjoy the benefits greater fitness brings, but it also means that on your ‘fun’ rides where you use a bigger assistance, you will find it even easier and be able to enjoy said ride to the max. You’ll also be able to ride further on a higher assistance if you are used to riding on a lesser assistance. It’s easy to get hooked on the help the bike can give you. Be strict and work on using less. The above is applicable both when traversing and when climbing. You may use a different assistance on the flat and on the climbs, that’s cool, just adjust both accordingly.

3. Build up the distance

In a periodised way, work on increasing the distance you ride. This is real simple, if you currently ride 7 miles on a typical ride, increase to 7.5 miles on the next couple of rides. Then 8 miles. Then 8.5 and so on. The difference

here is you are paying close attention to it and making a real dedicated effort to build up. You can do this every ride, or perhaps insert a long ride in each week, say on a weekend where you have more time, where you could build the distance.

4. Add in more elevation

Extra miles aren't the only way to increase the distance you ride. You can also increase the elevation (the amount of vertical distance you cover). Track your elevation on your rides using an app like Strava and gradually increase it choosing rides with more and more elevation, much like you would with increasing the mileage of your rides. This is especially important if you are training for an event where you cover a lot of elevation. As you know, there is a giant difference between a 20 mile ride with 500ft of climbing and a 20 mile ride with 4,000ft of elevation. Making sure you build the elevation, if this is an aim, is a great way to build fitness. The stronger you are at climbing, the stronger you will be in every other area of riding.

5. Use no assistance

As long as your e-bike allows it, you can experiment with sections of your ride using no assistance. When riding on the boring flat sections of a ride, like a canal towpath or a road, you can have periods where you use no assistance and do 100% of the work yourself. This is a brill way to increase the difficulty of the 'easier' parts of your ride. Remember, the lowest assistance your e-bike can give you is actually zero. You can use this in controlled bursts to your advantage.

6. Use a HR monitor

Finally, one way to improve the benefits you get from your 'normal' rides is to use a heart rate monitor. Most handlebar mounted Garmin-type systems work with heart rate monitors and can give a running heart rate measure while you ride. You can use this to your advantage by pushing your heart rate higher in balanced ways or through trying to maintain a similar heart rate even as you get fitter. Let's say you find your usual ride has an average heart rate of 120bpm - as you get fitter and stronger, riding at the same pace and with the same assistance will see this average heart rate drop. If you don't start to push harder, you will work less and less to do the same effort, meaning your fitness stagnates. Tracking your heart rate means you can aim to keep your heart rate at a certain target, in this case 120bpm, by using the methods above to work harder. (120bpm is a random example, use *your* average heart rate on your rides). This method is especially useful for those with health issues as you can more accurately measure how hard you work.

Ultimately, there are tons of ways to build fitness while riding your e-bike. The main thing is to be focused on building and progressing, rather than just heading out in an unfocused manner. You can still enjoy your normal rides to the max, but can utilise the time so much better with a just a little bit of concerted focus and effort.

18. Balancing E-Bikes With 'Normal' Bikes

So you own and ride both an e-bike *and* a non-powered bike? Awesome. There are some fantastic ways to balance the two together to really maximise your performance and progress.

If you combine riding both bikes, awesome! There are tons of ways you can use your e-bike alongside your non-powered bike. Some of the best ways :

1. Downhill practice

If you want to get better, more confident and/or faster on the descents then an e-bike is a fantastic tool for this. If you have a couple of hours free, you can literally ride 2-3 times the number of descents in the same time frame *or* you can have the energy to stay out for much longer. Using your e-bike once a week to go ride as many descents as possible, either sessioning the same downhill repeatedly or going on a ride with tons of descents is a fantastic way to get better at descending. There's a reason many Pro-Downhillers and Enduro riders are using e-bikes for this exact purpose. Time is short for most of us, you can use your e-bike as a time machine.

2. Rest days

Us mountain bikers love to be active all the time, but sadly that's just not possible. Our bodies need rest and recovery. You can't go hard everyday and expect to progress, it simply doesn't work. Everyone is different, but an e-bike can be a great tool for a rider to use alongside their non-powered bike on rest days. Use your e-bike on rest days to go for a ride and be sure to take it easy and use plenty of assistance and it means you can get out for some active recovery, rather than sitting on the sofa. This is especially useful for those who live in high elevation areas where a flat recovery ride just isn't an option.

3. To manage arthritis/health issue flare ups or injuries

Many health issues don't stay the same. You have better days and worse days. Better weeks and worse weeks. My other half Sophie suffers from Sciatica. She can go weeks and months with very minimal pain and then have days or weeks when something triggers it where she is in agony (the last trigger was an over-night USA flight). For her (if she was to ride bikes!) an e-bike would be a brill option when her back is sore. Many issues like Sophie's back don't have constant pain levels - arthritis and joint issues being the most common. Having an e-bike in your repertoire can mean on more painful days the e-bike can take some of the strain for you…and on other days you can ride your non-powered bike when pain levels allow it.

They are also great for injuries. We all hate being off the bike when injured. If you usually ride a non-powered bike, an e-bike can be a fantastic step in-between not riding and riding your non-powered bike to help with your rehab and help you build back up to full fitness and strength.

4. Base miles

We touched on this in a prior point - base miles are a great way to build fitness without overly stressing the body which puts greater strain on recovery. An e-bike can be a great way to get base miles in as they allow much greater control of how much work you put in. A steep climb may make you work too hard on a non-powered bike for base miles, but in a high assistance at a chilled pace you can probably keep yourself in the right zone.

5. To ride with fitter & faster riders

We all have that friend or colleague who is *super fit*. They have no kids, an absolute unlimited supply of energy and motivation and are as fit as an athlete. An e-bike allows you to head out for rides with this person (or group of riders) without having the same fitness and be able to ride at a much more similar pace. Of course - they don't even need to be super fit, it's all relative. If you are are at the start of your mountain bike journey and have friends who've been riding for years, they will probably be fitter than you. Your e-bike can allow you to go out and ride with them and have a great time without fear or worry of 'holding them up'. I've heard from many female riders who ride their e-bike with their husband/partner who's sometimes a stronger/fitter rider and ride their non-powered bike solo or with slower friends (I also hear from tons of female riders who can ride circles around their husbands too!)

6. E-bike specific races

E-bike specific races are exploding onto the scene at a rapid rate. Many races are introducing e-bike categories right down from grass-roots (entry level) up to the world's largest race stages (take the EWS-E for example). If you want to compete in these races and categories…well you need to be riding an e-bike regularly. E-bikes do handle differently to lighter bikes and they are a totally different experience on the climbs.

7. For fun!

Finally, you may just want to use your e-bike alongside your non-powered bike because it's bloody good fun! The above are all great uses of an e-bike alongside your other bikes, but you don't have to utilise it for any of those if

you don’t want to. Simply because it’s fantastic fun and you *enjoy* riding it is plenty good enough of a reason!

Ultimately introducing an e-bike alongside your non-powered bike can be a fantastic tool for your fitness, skill and strength! The uses certainly aren’t limited to my examples above either!

19. How To Move Powered To Non-Powered

Some e-bike riders want to move onto a non-powered bike. Others don't. Both are fine. If you *do* want to go from riding your e-bike full time, to mostly riding a non-powered bike then here's how.

Most of the tips so far in this guide around building your fitness (gradually increasing fitness, reducing assistance, interval training, resistance training off the bike etc.) are absolutely still relevant. Better fitness is better fitness. The stronger and fitter you get, the closer you will get to riding your non-powered bike.

So, let's look at a step by step guide to go from e-bike to non-powered bike :

Step 1.

Regularly ride your e-bike. This is the first step. The more you ride, the fitter you will get. Don't worry about how much assistance you use, just get out and ride regularly. I'd recommend a minimum of 2-3 times per week and aim to push the distance you ride up and up over time. When you can comfortably ride your e-bike 2-3x per week for 2+ hours at a time move onto step 2 in this stage.

Step 2.

Add in resistance training off the bike, if you didn't follow it in step 1. This will really help build your strength off the bike, which will directly transfer to on the bike fitness and strength. Alongside this, it's time to start to lower the assistance on your rides. Keep the distance the same, but drop the resistance over-time. The aim is to be able to ride your normal 2 hour+ rides on the lowest assistance for the vast majority of the ride.

Step 3.

So you can ride on the lowest assistance for long rides? Fantastic. Now's the time to buy yourself a non-powered bike if you don't own one already. (happy days!). It's time to start riding them both. I'd recommend a split of 1/3 non-powered rides to 2/3 e-bike rides to begin with. On your powered rides, aim to increase the distance *or* the speed you ride at on your e-bike rides. When riding your non-powered bike, take it easy and simply start by riding as far as you can. Stay in low gears. Manage your pacing. Don't over-push yourself and don't go for the steepest climbs. You want to record all of these

rides on an app like Strava. This will allow you to keep an objective measure of how far (and how fast) you are riding. From there you can build the distance up. When you are riding your non-powered bike for 2+ hours on 1/3 of your rides, move to step 4.

Step 4.

You've done it. Now it's time to start the transition from riding 1/3 of your time on the e-bike, to riding your non-powered bike more. Gradually increase the amount you ride your non-powered bike and lower the times you choose the e-bike. From there, simply refer to tip 19 on the best ways to balance riding both your non-powered bike and your e-bike!

If you have weight to lose then losing it will *massively* benefit this process. You don't need to be Tour-de-France lean (most of us probably don't want to be) but if you *are* overweight or are carrying some extra timber it will massively benefit your riding. Steps 1-4 work excellently to help you lose weight when combined with getting your diet nailed. Remember - weight-loss is about calories in vs calories out, so you need to get your diet nailed too.

Losing weight whilst following steps 1-4 will have a fantastic tag-team type result. You will be getting fitter *and* stronger all while having to carry less weight around on the trails. It's an absolute winner winner.

20. Riding With Non-Powered Riders

A massive benefit of e-bikes is you can ride with people of much greater fitness or physical ability and keep up. The person who only manages to ride once a week can go riding with their friend who's out 4-5 times a week and ride alongside them. They are also great if you are out guiding riders of lesser ability or confidence as it allows you to ride back and forth between riders when needed, perhaps helping on tricky sections of trail for example or helping the less confident rides descend.

I'm sure many reading this ride with riders on non-powered bikes, so I want to share some tips to really squeeze the most from these rides, both from a fitness point of view but also a *fun* point of view!

1. Take shorter rests by using a lower assistance

Riding with non-powered riders is a great time to push your effort a little bit. Rather than using a higher assistance and riding off, or using a higher-assistance and just chilling with the other riders, you can take the opportunity to use a lower assistance and work harder on the climb. The same time will elapse whichever method you choose, so you can use the time climbing to work that bit harder on the climb. When alone you can get to the top quicker and enjoy more descents in the same time-frame. This isn't the case with non-powered riders so you may as well use the time to work on your fitness. Or, you can use step 2…

2. Ride up and down

Another option is to ride up and down the same climb (assuming a two way trail). You can ride to the top, then ride back down to meet your friends, then ride to the top and repeat. Obviously the trail has to be right for this to work, but it can be a nice way to get some more mileage in. I sometimes do this on my non-powered bike while riding with my Dad who climbs slower. Of course, if you are riding with your friends and want to chat and have a social on the way up this won't be a good option…but if your friends are really working on the climbs and can't chat, or you ride with them all the time, it can be a good option to get some more miles and elevation in the legs!

You can also ride the same descent more than once if you like. Chances are, you may be able to ride up to the descent, send it and then meet your friends again before they reach the top. This can have the benefit of you getting more descent time, but you can also let your friends know how the conditions are that day.

3. **Ride the more technical climbing routes**

Another brilliant use of your time riding with non-powered bikes is to choose the more technical route. Good technique when climbing is to choose the path of least resistance. You want to conserve energy as much as possible by picking the line where you can avoid most obstacles, use the least energy and keep as much flow as possible. If you want give yourself a greater challenge while riding your e-bike then go the other route and choose the most difficult, most technically challenging line. The rockiest, rootiest and roughest part of the track is a great challenge. It can make the climbs more interesting, physically works you harder and importantly really helps you improve your skills. This means that when you *have* to ride those difficult lines on trails with no option you are well practiced. At my old house there were a couple of local climbs that were very technical. I use to go out of my way to ride them. Despite them being a real challenge they did wonders for my skill levels on technical climbs or traverses.

4. **Ride ahead to check conditions, check the trail is safe or if it's the correct way**

If you are the only rider on an e-bike and have the fitness/physical ability to do so, it can work really well if you ride ahead when needed. An e-bike rider can be a brilliant asset to the team of riders and can help rides run so much more smoothly. You could ride ahead to hold gates open, check ahead if unsure of the correct way to go and even scope out descents to ensure they are safe (some trails have issues with trail saboteurs leaving rocks and branches over the trails - obviously only do this when safe). Not only does everyone have a better ride, but you also get the warm fuzzy feeling of helping your fellow riders out *and* you get to work harder by riding more miles.

5. **Help less skilled or less-fit riders**

Finally, a great use of your time riding with non-powered riders can be to help out those less experienced or less fit riders. If you have a newbie with them or someone with less confidence, you can more easily hang back and help them with line choice, technique and hints and tips and catch up with the rest of the pack more easily. This helps you, not just them. When you read something first time, you retain 10% of the info. When you demonstrate what you have learned by *doing it* or hold a conversation around it, you retain 30-50%. When you teach the info you have learned however you retain 90% of the info. 90%! (Side note - all the more reason to read this guide more than once, take notes and implement).

This means that through helping out that less experienced rider, you are also

reinforcing that good technique and info into your own riding. Not to mention, helping others is a ton of fun!

With the right strategies you can get even more from your rides than just rocking up and riding. Of course, there's absolutely nothing wrong with turning up to your group rides and 'just riding', but these strategies can really help you squeeze the most out of those group rides!

21. Take The Time To Enjoy It

I want to finish with a story which when I think about or tell *always* grounds me into the present and makes me appreciate what I have.

We moved into our house in 2020 (on the day lockdown was announced in the UK funnily enough). I got really friendly with our neighbour 3 doors up who had just retired. I used to see him out walking 2-3 times a day, everyday. Sometimes on his own. Sometimes with his wife. But always smiling. He was the type of person who just lifted you up when you chatted to him - he radiated positive energy. He would be out in the rain, snow, wind, hail, sun, everything. He didn't care.

After seeing him daily for around 3 months, we got chatting about why he was out walking so much. He told me - he has always been into his fitness. He used to ride mountain bikes, race triathlons, run, swim, if it was fitness related he was into it. He had worked hard all his life to retire in his mid fifties, with the plan of enjoying his retirement with his family and carrying on all his fitness adventures over the next twenty, thirty or forty years.

He told me that just as he retired 4 months prior, he was diagnosed out of the blue with terminal Cancer with no chance of survival. He was out walking everyday as it was the only fitness activity he could do while going through Chemotherapy to extend his life. He could only manage short walks, which was why he was out several times a day no matter the weather.

He died a few months later. I'll always remember how I never once saw him complain. I never once saw him feeling sorry for himself. He wasn't going to see his 2 children grow up and wasn't going to be able to enjoy that retirement he had looked forward to for years but *he did not complain and he did not feel sorry for himself.* I aspire to have that kind of positivity in even the darkest moments.

When it's raining…or I'm tired…or I'm stressed…or I'm injured and feeling sorry for myself I often think of my Neighbour. Everything we take for granted right now will one day end. Hopefully it will be in many many years to come, but we just don't know when it will be. He didn't waste time on the sofa feeling sorry for himself…so me and you certainly shouldn't.

My final tip for you is to enjoy every minute on your e-bike that you possibly can. Whatever reason you ride it, above all remember it is a tool to enjoy the wonderful outdoors to the absolute max. It's a tool to push yourself both physically and mentally. A tool to live life to the upmost. A tool to laugh and whoop with your friends down the trails and to sit in solitude at the top of a peak, taking in the the sound of the wind in the grass and the birds chirping.

We are so lucky to live in a time where we can enjoy the amazing progresses in technology where e-mountain bikes exist. Don’t take it for granted. Chase your goals. Get out there. But over all - take a minute to breath in and savour it. We don’t know when it will all end, never forget how lucky we are to enjoy it. Thanks so much for reading and let me leave you with one quote…

“Life should not be a journey to the grave with the intention of arriving safely in a pretty and well preserved body, but rather to skid in broadside in a cloud of smoke, thoroughly used up, totally worn out, and loudly proclaiming "Wow! What a Ride!”

— Hunter S. Thompson

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