



## ***BICYCLES MODIFIED FOR PEOPLE WHO PREFER A MORE UPRIGHT RIDING POSITION***

Many people find that the handlebars on their bike are too low or too far forward, leading to back or neck pain, and causing them to lean too far forward on the saddle. Sometimes the root of these problems is that the bicycle is too large or the saddle does not suit the rider. But often it is simply because the handlebars are too low for comfort, and in the UK few modern bicycles are available with old fashioned Dutch-style high handlebars.

Women in particular may suffer from backache or sore shoulders/arms/hands because most bikes are sized for average or larger-than-average men. Even women-specific bikes often have handlebars which are too low or far away from the saddle, meaning that you must either strain your back or overstretch your arms.

A high handlebar conversion can be carried out for anything between £50 and £100 depending on what style of handlebar you choose, and whether your gear and/or brake cables need extending.

*"I'm getting way less pain in the shoulders and neck, the handlebars you fitted are great... I think you have done a \*great\* job and I wanted to say thank you. I know that if you hadn't modified the bike for me, I would never have been able to ride it again."*

***Sally Davies, Somerset***

## RIDING CONSIDERATIONS

- **Steering and geometry:** any alteration to the bicycle's handlebar and/or stem will effect the steering geometry and change the way in which the bike handles. In general, a shorter stem or swept back handlebars will produce quicker, more responsive steering, and the combination of both may produce undesired effects. Normally the rider will quickly become used to the new feel of the bicycle if the change is not extreme, but any combination of stem and handlebar which results in the rider's hands being placed behind the centre-line of the steerer tube is potentially unsafe.
- **Hillclimbing:** a high handlebar and/or one which is swept back toward the rider may impair the ability to climb up steep hills. A typical hybrid or mountain bike has straight handlebars which enable the rider to pull on the bars when hill climbing, thus using the strength of the arms and upper body as well as the legs when required. High and swept back handlebars may be comfortable on level terrain but will tend to reduce the rider's ability to climb hills efficiently, and may increase the likelihood of the front wheel to lift off the ground on very steep uphill gradients. If the bicycle is to be regularly used in hilly terrain, careful consideration must be given to the height and angle of the handlebar conversion.
- **Altered saddle:** thanks to the more upright riding position afforded by high handlebars, less weight will be placed on your hands but more will accordingly be supported by your bum. At the very least your saddle is likely to require a slight adjustment to its angle to cope with the new riding position, but more likely you will find that you require a new saddle, probably somewhat wider and/or more padded than the old one.

## FITTING PRECAUTIONS

- **Stem strength and reliability:** bicycle stems normally have a 1-bolt arrangement for clamping a typical straight or drop handlebar. For a new bar with a small amount of rise the old stem may be sufficient, but for a higher handlebar it may be necessary in some cases to replace the stem with a stronger 2- or 4-bolt design. Failure to observe this precaution may result in a high handlebar which twists and turns in the clamp, or even the failure of stem or clamp bolt. Do not assume that simply because it does not twist or move when newly fitted it that it will remain safe indefinitely: the extra leverage and flexing of a high handlebar could mean that metal fatigue causes a stem or clamp bolt to break in a few weeks or months.
- **Longer brake and gear cables:** as well as the handlebar and stem, brake and gear cables will almost certainly need to be replaced. Due to the extra height of the new handlebar, the old cables would be over-stretched and would possibly impede the bike's steering if re-used, so longer inner and outer cables must be fitted for both gears and brakes. This procedure in itself requires the correct re-adjustment of gears and brakes afterwards, so if you are not confident in this task we strongly suggest you have your new handlebars fitted professionally.

**WARNING:** *The above do not constitute fitting instructions or a design guide. Jake's Bikes cannot be held responsible for any damage, accident or injury resulting from the improper use of high handlebars. If in doubt please seek expert advice before attempting your own high handlebar conversion.*