Freedom to move

Cycling's role in relieving osteoarthritis of the hip

by ALAN PARKER

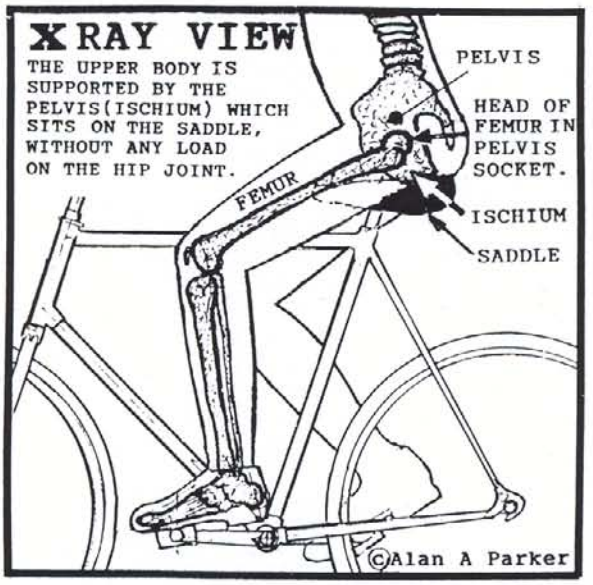
THE SENSE of well being and freedom that comes from walking is only really appreciated when you can't do it any more without pain.

That happened to me twelve years ago when osteoarthritis in my hip joint went from bad to worse. Osteoarthritis is not fatal but the physical inactivity it enforces on normally active people leads to other health problems. It also takes away the pleasure of simple things like a stroll in the sun on a beautiful morning. It's a disease which can be controlled but not cured. As the condition deteriorates, you begin to feel crippled.

My experience of substituting cycling for most of my walking was that the feeling of physical freedom was regained and I could pretend to be whole again because riding did not hurt. With osteoarthritis the easy bit is the surgery to put in an artificial hip joint, the difficult bit is coping with the many years before and after surgery because once the first hip is replaced the other hip usually slowly breaks down.

Hip problems afflict 600,000 fellow Australians. Their condition usually starts as soreness during their 40s and 50s and finishes on the surgeon's table years later. One in eight readers of this may develop an osteoarthritic hip. It may be you.

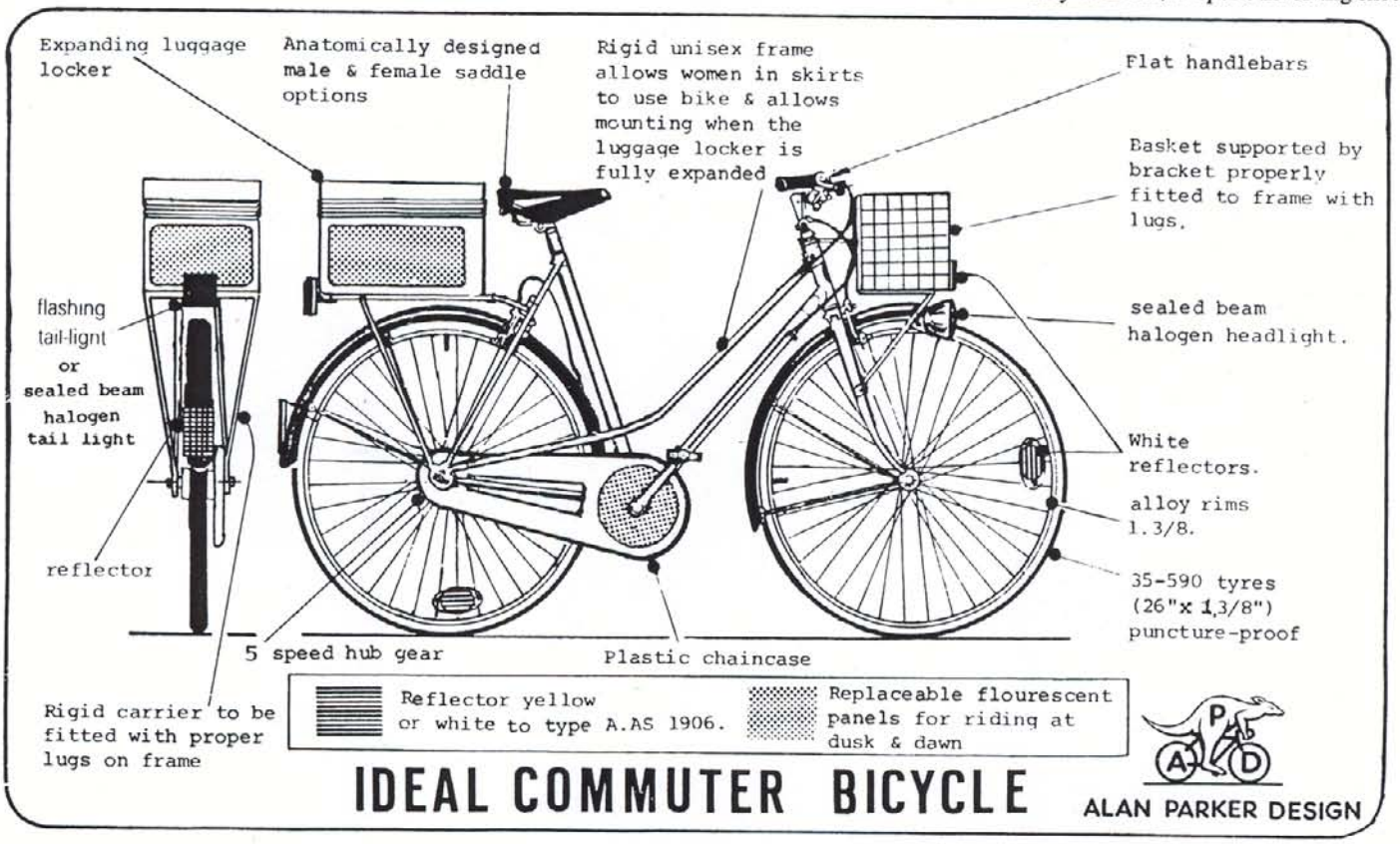
Everybody needs to be mobile and to exercise. If cycling is substituted for activity which heavily loads the hip joint, it is very beneficial. If only I had avoided running down mountains and on hard surfaces when the first symptoms appeared 16 years ago and had known how to use the bicycle for remedial exercise, I'd have had a few more years free of pain. It is likely that tens of thousands of people could likewise gain both physical and psychological relief from pain if they took to cycling to manage this condition. For thousands more cycling is an exercise that will prevent overloading of artificial hips if riding techniques recommended here are followed.



Sadly, special swimming programs are available for arthritics but there are no cycling clubs that show how to adapt the bike and to cycle in a way that can allow rides of 10 and sometimes 60 kilometres without pain. What is needed is an orthopaedic bicycle club or association that promotes the medical benefits of bicycling and encourages research. My purpose here is to float the idea, provide advice on the technique of remedial cycling and, I hope, contact other people with similar experiences.

Avoiding hip shock loads

The problem with osteoarthritic hip joints and their artificial replacements is that they wear out, so sports involving shock



loading should be avoided completely. Cycling and swimming are excellent alternatives because the shock loading involved is minimal. However, heavy training is not recommended because no implant is as good as the original self-renewing hip we were born with. Unlike healthy muscle which gets stronger if you push yourself hard, diseased cartilage deteriorates. Remedial exercise can gently nurse the hip and take advantage of whatever capacity still exists for self-renewal.

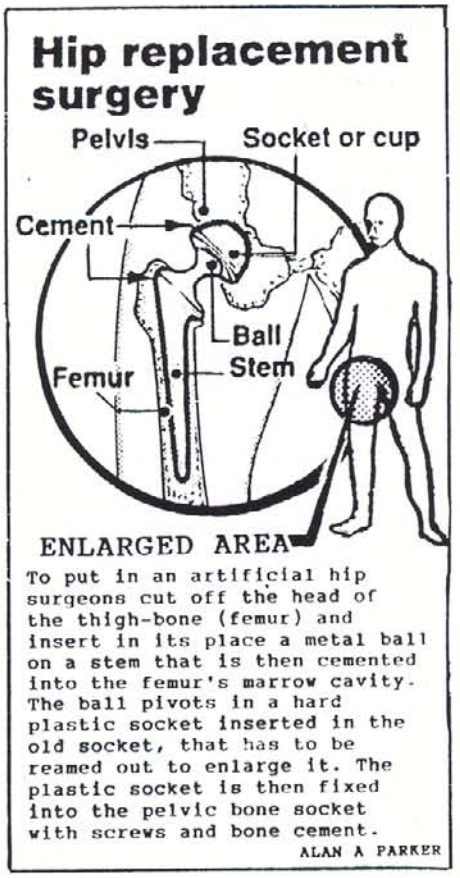
Some cycling styles and some swimming strokes need to be avoided. Standing up on the pedals and sprinting is not on.

There is research data available on how a brisk walk induces stress in the hip joint. Strange as it may seem, a brisk walk can produce brief stress in each stride equal to three times body weight. Running downhill on a hard surface can produce stress equal to six times body weight.

My 12-year experience with remedial cycling and swimming has been good but, after ten years or so, there will come a time when cycling has to be reduced to a minimum because the cartilage is so thin and patchy that bone is rubbing on bone and surgery is necessary. What is achieved is putting back the date of surgery. Who knows, if signs of osteoarthritis are picked up early enough, it may be possible to regenerate the cartilage with remedial exercise. That is probably just wishful thinking — if true it would be a major breakthrough in combating this disease.

The technique of remedial cycling

Cycling is so beneficial because the upper body weight bypasses the hip joint. The pelvic bone sitting on the saddle takes the load. This is shown on the "X-ray" view of the cyclist. Once you have ridden enough to have good muscle control, the only load you put on the hip is one it can comfortably take. The body can be trained so that the good leg takes more of the load.



Tricks of low stress cycling

1. Never stand on the pedals. Always let the bicycle saddle take the full body weight.
2. Adopt a more upright riding posture with handle grips about 20 mm above the top of the saddle.
3. Always use the lowest gear you find comfortable.
4. Always use the gears to avoid increasing pedalling pressure when climbing hills.
5. Learn to let the leg with the good hip do a little more of the work.
6. By personal experimentation, find the maximum distance you can cope with, that distance does not mean riding till you are sore but riding a distance that leaves your hip feeling good.
7. Never be deluded by the soothing feeling cycling can bring to the hip; never run or walk fast no matter how good it feels. Indeed remedial cycling will do little good unless you avoid every activity that overloads the hip. This is especially true if you are overweight.
8. On steep uphills use the arm to push down on the knee of the weak leg if your gears are not low enough. Do not use toe clips.
9. Equip your bike with the lowest gears you need to avoid standing on the pedals.
10. Use a frame that you can step through. Lifting the leg over the bike can be rather uncomfortable. The drawing of the commuter bicycle shows the preferred frame configuration which is made by companies such as Puch and Raleigh.

What I would like to see, to substantiate my practical experience is to fit up an artificial hip with sensors and a transmitter and use an exercise bike as well as walking. The patient could be tested with a high pressure/low speed pedalling action and a low pressure/high speed pedalling action to see the effect on the joint. Such tests would put the practice of remedial cycling on a scientific footing. My other hip will need to be replaced soon and I would be willing to be the host for such device. I am so confident of the benefits of cycling.