



The Prayer Hip

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IN SEVERAL CULTURES, sporting activities and religious rituals, it is expected or accepted practice to place the lower limbs in positions that place considerable strain on the associated joints and ligaments, both in terms of range of motion and load bearing at these extremes. Much has been written regarding knee replacement and the Muslim praying ritual of Salaat, but what about the hips?

Orthopaedic surgeons watching their patient perform the various movements

place, or only subluxes, the positions described may yet exceed the range of movement of a THR before impingement between the neck of the femoral prosthesis and the edge of the acetabular component takes place. If Salaat is regularly performed the required 5 times a day, significant potential exists for notching, wear and accelerated loosening. Ceramic liners on the acetabular side of THR's have been known to fracture as a result of this precise set of circumstances.

»No artificial or prosthetic hip can ever match nature's own, but just how close can we come?«

of Salaat after a conventional total hip replacement (THR) will inevitably feel themselves cringing as the hip goes into high flexion, the worshipper bends forward to prostrate themselves to the floor, then sits on their haunches (Sudjood & Qu'ud). If ever there were situations in which a THR could dislocate, then these positions would rank pretty high on the list! Even the position of Ruk'u requires good hip stability, muscle control and proprioception. The experienced Birmingham Hip Resurfacing (BHR) surgeon will, on the other hand, not bat an eyelid, as they will know that a well-performed BHR safely permits these extremes and will suffer no long-term harm. It will not dislocate!

Accepting that the THR remains in

No artificial or prosthetic hip can ever match nature's own, but just how close can we come? The author has been performing Birmingham Hip Resurfacing (BHR) since March 2000 and has now carried out more than 750 of these procedures. He is struck by the uncanny ability of BHR recipients, especially the younger patients, to duplicate the pre-pathological range of motion and confidence of use of the joint. Patients, who have at some stage in the past received a THR on one side, then a BHR on the other, will always comment that the BHR feels more natural, more like their original hip. They are usually very happy with their THR, and profoundly grateful for the pain relief this offers, but they are still happier with their BHR. Why?





The answers may be controversial, but the author believes BHR more closely mimics or replicates the original anatomy and the surrounding tissues recognise this. Proprioceptive structures around the hip are probably better able to send accurate data to the cerebellum and other brain stem controllers when confronted with a BHR than the much less 'recognisable' THR. This gives the patient a more natural, confident feel to the hip. Rehabilitation is easier and quicker. The walking pattern has been objectively proven in the gait analysis laboratory to more closely resemble the 'normal' for able-bodied individuals of the same age and sex.

BHR preserves the femoral head and neck, whereas THR effectively amputates these structures. There are fewer difficulties deciding or adjusting femoral offset and anteversion. Leg length discrepancy is an issue that often causes friction between an unhappy patient and a surgeon who tried his best, but got this slightly wrong. This error is much less likely to occur after BHR. Finally there

are the hard-wearing characteristics of the metal-on-metal bearing surfaces of BHR and the 'boundary film' phenomenon where the components do not so much rub against each other as float on a fluid film. The same fluid mechanical principles are what make it possible for the 'big end' bearing on a car to last millions of miles before wearing out.

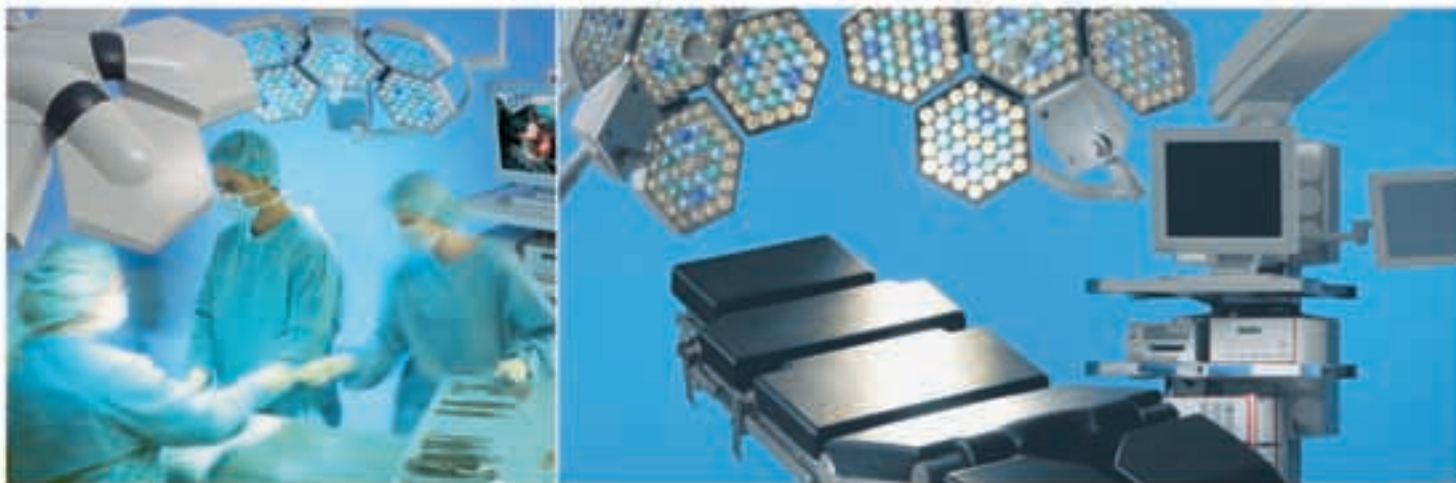
In other words, BHR may be the one prosthesis couple that might live up to the elusive promise of the 'everlasting hip'. Even if it fails, a BHR should be relatively easier to revise to a THR, but one cannot reverse this the other way round.

Seriously overweight patients fare particularly well after BHR. The scar will, however, be correspondingly longer!

So what's the catch? BHR does need good quality bone in the head and neck if fracture is to be avoided. How good the bone needs to be is something that the surgeon learns by experience. It is determined more by physiological than chronological age. The author's oldest recipient was 82, but he would generally not consider BHR for an inactive male above 70 or an inactive female above 65 years of age. DEXA scanning can help the decision making process. ■



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