ORTHOSPORTS
QUESTION FOR PHYSIOTHERAPISTS

QUESTION | WHICH NON JOINT REPLACEMENT TREATMENTS HAVE BEEN SHOWN TO WORK IN OSTEOARTHRITIS OF THE KNEE?

ANSWER|

It is natural and sensible for patients to delay joint replacement surgery for as long as possible while still maintaining an active lifestyle. The question is whether the myriad of treatment options are useful or just act as a placebo.

In an attempt to provide a scientific basis for treatment the American Academy Of Orthopaedic Surgeons studied the literature to find which treatments had good evidence, which had poor-quality evidence and which were inconclusive when treating knee osteoarthritis.

They then created guidelines which listed a treatment as Recommended, Suggested and Inconclusive (neither recommended nor not recommended). While these guidelines are useful there are always exceptions to the rule for individual patients.

The following are classified as **Recommended**:

1. **Overweight patients** (BMI>25) should lose a minimum of 5% of their body weight.

2. Participation in **low impact aerobic fitness** exercises

3. Occasional use of **intra-articular corticosteroid injections**
   These can give short lived relief for acute flare-ups but tend to last a matter of days or weeks only. The medication is relatively cheap but the results are unpredictable. Generally the more severe the arthritis the less effective they are.

4. Do **NOT** prescribe glucosamine and chondroitin sulfate
   While the literature does not support the use of glucosamine sulphate there are a number of patients who do benefit from its usage. I recommend that patients take the medication for 6 weeks and then stop it. If they have more pain off the medication then it is worth while restarting it. If stopping the medication has no effect on their pain then it is not worthwhile continuing.

The following are classified as **Avoid**

1. Range of **motion and flexibility exercises**
   Building up muscle to act as a shock absorber works well but trying to improve motion causes irritability of the joint and almost never works.

2. **Lateral heel wedges** for medial knee OA
   This is a time honoured tradition but has been shown not to work in several good clinical trials

3. **Varus unloading brace**
   Expensive and very unlikely to help

4. **Arthroscopic debridement** unless other pathology is also present. Surgery works well for patients that experience a sudden change in symptoms and can localise a particular area of pain. This usually means that they have a new meniscal tear or chondral flap which is reliably improved with surgery. It does not fix their underlying arthritic symptoms

   Washouts for chronic arthritis help about 60% of patients and this number decreases with the number of washouts performed. About 20% are no better but 20% are worse off after the surgery. Generally speaking this is a bad idea if the symptoms have been stable for some time.

5. **Interpositional devices**
   These are completely experimental and have all failed dismally up to now

The following are classified as **Suggested**

1. Participate in **education programmes** (walk instead of run, lifestyle modification etc)

2. Quadriceps strengthening exercises

3. **Patella taping** for short term pain relief

4. Use regular **Paracetamol** (and NSAIDS if tolerated)

The following are classified as **Inconclusive**

1. **Valgus unloading braces**
   These are expensive (about $800) and tend to either work or not work. It is difficult to know which patients will benefit from using the brace until they actually try it. It needs to be used all the time and does not help at all once the brace is removed. These days they are easier to apply because they are no longer custom made and various sizes are available from the companies.

2. **Hyaluronic acid injections** (viscosupplementation)
   A small number of patients have a allergic type reaction to this which can be difficult to differentiate from an infection. It tends to work well or not work at all and is unpredictable in that way. It is only useful in the early stages of arthritis but can give months or years of relief in the right patient.

The Future

We are hoping that genetic modification, stem cells or some other medication will alter the natural history of arthritis. None of these seem to be realistic options in the near future. Joint replacement is improving all the time. It is reasonable now to expect the prosthesis to last 15 years but the results of revision surgery are not as good as that of the primary operation. It remains sensible to delay the surgery until the patient is not able to maintain an active but realistic lifestyle.

- Dr Doron Sher | Knee, Shoulder and Elbow Surgeon

Reference: J Am Acad Orthop Surg 2009;17:591-600

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