



Brace Yourself... For a Walk Through on Knee Braces

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Janet, a 48-year-old desk clerk, comes to your office complaining of right knee pain she has had for roughly two years. After taking a detailed history, performing a thorough physical examination, and ordering some X-rays, you are able to determine she has no significant degenerative joint disease.

It is very possible Janet has some form of chondromalacia of her right knee. You recommend a regimen of modified activity, physical therapy, and icing to help reduce her knee pain. Your colleague, who is a recent graduate, suggests you also prescribe Janet a brace (plain patella sleeve).

Janet ices her knee, attends physical therapy for a few weeks, and avoids offending activities. She also uses the brace, but says it is uncomfortable on her knee. What do you do now?

The old adage *primum non nocere* (“first do no harm”) always applies. If the brace is bothering her, ensure she discontinues its use. The question is, why is it bothering her?

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In this case, Janet’s cone-shaped thigh doesn’t allow her brace to sit properly. You suggest a more sophisticated patella stabilizing brace to accommodate her conical shaped thigh. After switching braces, Janet’s pain subsides.



Janet returns two months later doing quite well; the only problem is she is now dependent on the brace. She uses the brace everyday and doesn't do her exercises consistently (once every two weeks). How do you correct this dependency?

A brace is always meant to be used as an aid to overall treatment, *not the treatment!* An individual can become dependent on any kind of brace, if they stop doing their exercises. The exercise program, ideally done daily, is homework for life; if a patient stops exercising, all they have to fall back on is the brace. The patient must be educated on the purpose and deleterious effects braces can have on the overall treatment if they discontinue their exercises.

Janet starts developing a stigma from needing the brace on a regular basis. She stops wearing it and the knee pain returns. At this point, what would you do?



Explain to Janet that the purpose of the brace is to improve the stability, support, and proprioception of her knee. The latter improves with the presence of the brace on the knee; feeling the brace sends messages to the brain informing it of where the knee is in space. If a poor position is adopted, the brain will tell the muscles to move the knee into a more comfortable and safe position. The brace can

also help keep swelling down. In addition, many people feel the brace helps keep their knee warm.

Janet needs better education on what she must do for the long-term to control her symptoms. Does she have any other issues in regards to knee alignment (*e.g.*, foot posture, body weight, leg length discrepancy, pelvic dysfunction, or muscle tightness) that may be contributing to the overall problem? If so, one must first correct those problems.

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Janet's friend highly recommends a pair of orthotics. Would this be a good purchase for her?

As mentioned above, foot problems can either cause, or help, a particular knee condition. One has to review all the facts of Janet's condition before prescribing any orthotics. For example, in this case, Janet happens to have a varus-like deformity of her knees, and any pair of corrective orthotics may put further undue strain along her medial joint line, aggravating her knee. Janet should, therefore, hold off on any customized corrective orthotics.

Janet is reassured by your words and now has a better understanding of her condition based on your detailed explanation with the aid of knee models. She realizes the value of her daily exercises and what she must do to avoid knee pain in the future.

In this scenario, Janet did not have any ligamentous instability, and therefore, did not require anything more sophisticated in the way of a supportive brace, or one with metal. Bracing for ligaments is a whole other kettle of fish. In short, make sure your patients are well aware of the need to continue their exercises as homework for life. If they don't, they will have to be prepared to "brace themselves" for a life of dependency. CME



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