Early surrender to knee arthroplasty.... Not so fast.... Let the knee tissue preservation and function sustainability dialogue begin!

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Suppose a middle-aged patient complains of knee pain and displays compelling radiographic evidence of osteoarthritis at one knee compartment [12]. The surgeon suggests that joint replacement will alleviate this pain. This offer appeals to the patient who has been experiencing escalating knee pain levels for almost a decade. However, perhaps another explanation of the same procedure might not be as appealing. Suppose instead the patient is offered removal of all sensory feedback from the diseased knee through the process of internal knee amputation! With this procedure, all

knee sensory components will be removed and replaced with metal and plastic parts. Depending on how the question is proffered the patient's response may differ considerably. Any difference in the relative appeal between these two offers suggests the need for greater substantive dialogue about the sum consequences of the recommended surgical procedure. Based on both descriptions, knee pain is likely to be reduced. This is a fantastic offer to the patient solely from a pain relief perspective! There is little doubt that TKA when used as an end-stage intervention for knee OA among elderly patients possesses strong efficacy for alleviating pain and improving function. However, its efficacy is considerably less robust if the patient is <70 years of age, is overweight, has less severe joint space narrowing, or displays symptoms of depression or anxiety [1, 2, 4, 10, 11].

Of great concern is an expanding market of younger patients who possess quality-of-life-enhancing activity and societal role interests that necessitate more functionally demanding tasks with highly repetitive and greater magnitude knee impact loading forces and torques [9, 14]. If

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knee pain is not the sole concern, further discussions are greatly needed. While pain-free walking, stair climbing, and rising from a chair are desired, the patient may have vocational, recreational, and sporting interests and needs that substantially exceed those of basic activities of daily living. Additionally, the knee pain the patient experiences may not be related to basic activities of daily living. These interests may likewise exceed the knee joint loading of golf and swimming, two sports generally considered safe for patients following TKA [5, 10]. Following TKA and rehabilitation how likely will the patient be to safely participate in all activities that they deem essential to their quality of life, general health, mental well-being, and vitality [3, 13]?

When activity restrictions accompany a recommended surgical procedure, there needs to be greater dialogue between the patient, the surgeon, and the entire healthcare team prior to selecting a particular care path. To date, the best evidence regarding patient satisfaction and fulfilled expectations following TKA resides among elderly patients with low performance expectations. But what about our middle-aged patient? Do they desire to continue regular sports and other activities that generate knee joint loads that consistently exceed those of walking or slow jogging? To avoid excessive prosthetic wear, loosening, and early failure, more intense activities that the patient may greatly value as quality of life and societal role enhancing will likely become prohibited following TKA [8, 14]. Embedded within the second scenario is the likelihood that the prosthesis–longevity-enhancing requirement may take precedent.

In the end, after reflecting that pain relief is their overriding concern, the middle-aged patient may decide they are willing to forego participation in activities that might damage their new prosthetic knee. However, after being thoroughly informed, this must be their decision [2]. For many middle-aged patients who desire to continue to participate in more stressful activities, dedicated psychobehavioral changes such as weight loss, smoking cessation, and individualized prescriptive exercise programme participation may enable them to continue quality-of-life enhancing activities while better managing knee pain [7]. This helps them develop coping, self-efficacy and resilience skills, better identify and use support groups, and assume healthier lifestyles. In addition to improved physical function, changes such as these may also increase the efficacy of less invasive knee-preserving surgical procedures such as high tibial osteotomy [6], meniscus transplantation [15], meniscal repair, chondroplasty, and in severe cases unicompartmental knee arthroplasty. This preserves the function of living knee tissue for as long as possible. In this context, the diseased knee may serve as a conduit to effecting comprehensive positive lifestyle and health psychobehavioral changes [13, 14]. Before a specific care path is selected,

greater dialogue must take place regarding expectations, the efficacy of all surgical, medical and rehabilitation options, and the need for dedicated lifestyle changes on the part of the patient.

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