

Clinical Briefs in Primary Care

By Louis Kuritzky, MD

Evidence-based updates in primary care medicine

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Leaving the Annual Physical Behind

SOURCE: Mehrotra A, Prochazka A. *N Engl J Med* 2015;373;16:1485-1487.

Commentary that should have led us away from participating in the annual physical has been in front of us for more than 35 years. In 1979, a Canadian task force suggested that the practice of the annual physical, quite simply, be abandoned. Echoing this sentiment, the Choosing Wisely campaign (2013) voted thumbs down to annual preventive examinations in otherwise asymptomatic individuals.

Jane and John Q. Public, however, seem determined to keep the annual physical alive. Approximately one-third of adults sign up for an annual physical each year in the United States, with no sign of abatement over the last 8 years. As clinician-scientists, we must somehow evolve into one of two primary camps. First, embrace what expert reviewers have concluded based on evaluation of outcomes data — that the annual physical does not improve outcomes and expends billions of dollars that otherwise could be spent for greater benefit — and eschew further endorsement of the annual physical. Or second, admit that the annual physical (though perhaps lacking merit on the basis of measurably improved health outcomes) provides fertile ground for germination of difficult-to-quantify elements, such as improved clinician-patient relationships, while acknowledging the recognized outcome limitations.

Mehrotra and Prochazka go so far as to suggest that if the fundamental benefit of the annual physical is relationship build-

ing, then we might consider establishing contact visits with the specific agenda of relationship building, rather than anticipating relationship growth as a “sidestream benefit.” To date, the annual physical has shown minimal, if any, benefit and potential for harm. The busy clinical setting has little room for spending time frivolously. Each of us will have to balance the absence of concrete benefits from the annual physical with the rewards measured by ourselves and our patients, accrued by the acutely well patients seeking the reassurance of the annual physical. ■

Is Breakfast the Most Important Meal of the Day?

SOURCE: Jakubowicz K, et al. *Diabetes Care* 2015;38:1820-1826.

Primary education (grades K-6) teachers have parroted the mantra “breakfast is the most important meal of the day” to children and parents alike for at least 60 years. Although I’m not quite sure whether our grandparents’ teachers also had the same party line, it wouldn’t surprise me in the least. Before continuing further I must confess to my own breakfast pathology: Since my teens, I have happily consumed a 12-ounce Mountain Dew and a Chunky candy bar for breakfast every morning, eschewing coffee or anything that required more preparation than tearing open the single-layer silvery Chunky wrapper. After ingesting this carbohydrate/caffeine concoction, I am happy to abstain from further calories until noon or later, after which I employ what you would call “normal” food.

It’s a good thing I don’t have type 2

diabetes (T2DM), because apparently the omission of breakfast wreaks havoc on carbohydrate metabolism later in the day in diabetics. To elucidate the phenomenon further, Jakubowicz et al compared glucose, fatty acid, and glucagon metrics in a population of T2DM patients, half of whom consumed breakfast and the other half did not. All meals were provided to subjects and standardized for caloric content. Subjects were randomly assigned to a crossover-design methodology.

Omission of breakfast was associated with less secretion of insulin and glucagon-like peptide and higher levels of free fatty acids, glucose, and glucagon. In an era where the expanding tools for management of T2DM are accompanied by a comparably expanded price, it’s nice to know that some simple lifestyle measures may enhance the opportunity for glucose control. ■

Confirming the Value of Total Knee Replacement

SOURCE: Skou ST, et al. *N Engl J Med* 2015;373:1597-1606.

Since more than 500,000 total knee replacements are performed annually in the United States, it is heartening to review a clinical trial confirming efficacy. After all, it was not so long ago that a clinical trial of knee lavage — an equally well-respected, time-honored, and commonplace orthopedic intervention — failed to show benefit when compared to sham lavage in patients with knee pain and osteoarthritis.

This prospective, controlled trial included 95 patients who were randomized to medical treatment (physical therapy, analgesia,

and anti-inflammatory agents) or total knee replacement, which was also followed by medical therapy. Outcomes were measured at 12 months. As measured by the Knee Injury and Osteoarthritis Outcome Score, total knee replacement patients enjoyed significantly greater improvements than medical therapy, although both groups did improve significantly over 12 months. Additionally, because of symptom progression, 26% of subjects originally assigned to medical therapy ultimately underwent surgical intervention during the 12-month interval.

Total knee replacement provides better outcomes for pain, symptoms, activities of daily living, and quality of life than medical therapy alone. ■

Manipulating the Microbiome to Enhance Metabolic Functions

SOURCE: Simon MC, et al. *Diabetes Care* 2015;38:1827-1834.

The content of the microbiome — that is, the diversity and relative proportion of various intestinal bacteria — has been increasingly recognized as an important component in fundamental metabolic

paths. Indeed, it has been suggested that an altered microbiome may be a key factor in the development and maintenance of overweight and obesity. Animal studies have shown that altering the microbiome by means of probiotics resulted in enhanced plasma levels of glucagon-like peptide (GLP).

Simon et al performed a double-blind, randomized, prospective trial among healthy volunteers who ingested capsules of the probiotic *Lactobacillus reuteri* (or placebo) twice daily for 4 weeks. The healthy volunteers were comprised of both lean and obese individuals.

The group that received the probiotics demonstrated increased insulin levels. Enhanced GLP levels were also seen in the probiotic group, albeit only in lean volunteers. Markers of insulin sensitivity were unchanged. Summarily, the data support that concept that addition of *L. reuteri* enhances release of incretins in healthy subjects. The recognition that incretin secretion is impaired in type 2 diabetes stimulates consideration of a similar trial in diabetic patients. Because this was a short-term trial, these data cannot speak to the issue of whether probiotic utilization might impart long-term benefits. ■

No Payoff to Physical Therapy After Healed Ankle Fracture

SOURCE: Moseley AM, et al. *JAMA* 2015;314:1376-1385.

Ankle fracture is a very common injury afflicting persons of all ages and degrees of athleticism. After initial healing, some persons have availed themselves of a program of physical therapy (PT), anticipating improved functional outcome as a result. In the face of remarkably limited data confirming the efficacy of PT after healed ankle fracture, Moseley et al performed a randomized, controlled trial of an intensive program of PT vs simple advice alone for adults who had had immobilization casts removed subsequent to healed ankle fracture. Researchers followed up with study subjects at 1, 3, and 6 months after engagement into treatment arms.

Participants randomized to a supervised exercise program administered by physical therapists did not enjoy any greater degree of improved mobility or quality of life than subjects simply given a single session discussion of education about return to activ-

ity and a brochure with pictures describing some exercise activities they might perform.

Quality of life and functional activity outcomes did not differ between the two groups at the conclusion of the trial. The lack of efficacy of PT was similar across subgroups, including gender, age, and fracture severity. After successful healing of an ankle fracture, a program of supervised PT does not appear to improve outcomes. ■

Bisphosphonates May Impact Bone Recurrence in Postmenopausal Women with Breast Cancer

SOURCE: Early Breast Cancer Trialists' Collaborative Group. *Lancet* 2015;386:1353-1361.

It has been recognized for more than a decade that selective estrogen receptor modulators may exert a protective effect on breast cancer. While typically thought of as an osteoporosis drug, raloxifene demonstrated breast cancer benefits in the Multiple Outcomes for Raloxifene Evaluation (MORE) trial. Bisphosphonates, while not possessing any known effects on estrogen receptors, could affect characteristics of bone that might reduce the likelihood of cancer cell adhesion to, or proliferation within, bone.

The Early Breast Cancer Trialists' Collaborative Group evaluated individual patient data from randomized trials in early breast cancer in which data on bisphosphonates were available (n = 18,766). Although the rate of distant recurrence and breast cancer mortality were statistically and significantly superior in women who had been treated with bisphosphonates, the absolute degree of benefit was of dubious clinical relevance.

On the other hand, among the subgroup of postmenopausal women with breast cancer, bisphosphonates treatment was associated with meaningful (and statistically significant) reductions in overall recurrence, bone recurrence, and breast cancer mortality; similar benefits were not seen in the premenopausal population. Various bisphosphonates agents were studied in clinical trials, with no clear advantage demonstrated of one over another. Postmenopausal women with breast cancer who merit consideration of bisphosphonates for osteoporosis prevention or treatment may also enjoy risk reduction in reference to their breast cancer. ■

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Associate Managing Editor: Jonathan Springston.

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Customer Service: (800) 688-2421

Email Address: jonathan.springston@ahcmedia.com
Website: AHCMedia.com

Address Correspondence to: AHC Media, One Atlanta Plaza, 950 East Paces Ferry Road NE, Suite 2850, Atlanta, GA 30326.

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