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Dual-hormone artificial pancreas

In a crossover trial involving 15 adults with type 1 diabetes, Haidar and colleagues show that an artificial endocrine pancreas involving dual-hormone, closed-loop delivery guided by advanced algorithms improved short-term glucose control and reduced the risk of hypoglycemia. Compared with conventional therapies, closed-loop delivery systems have the potential to substantially improve the management of diabetes and the safety of patients. **See Research, page 297**

Until recently, closed-loop delivery systems relied on insulin alone to regulate blood glucose levels, leaving patients with type 1 diabetes vulnerable to hypoglycemia. Haidar and colleagues have added to a growing body of evidence that glucagon can be used in a dual-hormone artificial endocrine pancreas that more closely mimics normal pancreatic function to prevent hypoglycemia. However, Nathan and Russell urge that such devices should be compared in head-to-head trials with insulin-only approaches under actual home-use conditions to clarify the relative merits of each. **See Commentary, page 285**

Deep vein thrombosis in pregnancy

Serial compression ultrasonography with Doppler imaging of the iliac vein can be used to safely exclude the presence of deep venous thrombosis (DVT) in pregnant women with symptoms suggestive of DVT. In this study of 221 pregnant women with suspected DVT, the tests were performed up to 3 times over a period of 7 days, and the women were followed for a minimum of 3 months to detect any subsequent venous thromboembolism. Because all cases were detected by the initial imaging, serial testing may not be necessary, suggest the authors. **See Research, page E194**

Observer bias may be substantial

Effect sizes in randomized controlled trials are 68% larger when based on outcomes assessed by people who are aware of the treatment allocation in the trial than when they are blinded. This systematic review included 16 trials comparing blinded and nonblinded assessment of the same subjective outcome measures. The range of bias seen was large, and the

authors advise caution in interpreting the results of trials where the outcomes are subjective and those assessing the outcomes are aware of which treatment was received. **See Research, page E201**

Grapefruit-medication interactions

Many drugs can interact with grapefruit and certain other citrus, some with very serious adverse effects. Bailey and colleagues review the mechanism for these interactions and provide information on the most common drugs involved. Options to reduce the likelihood of such reactions include not eating these fruits or using alternative medications. **See Review, page 309**

Varicocele and infertility

A 30-year-old man presents with infertility and a painful varicocele. Forster and Biyani review the issues that should be addressed during his initial assessment, including the need for investigations and prognosis with surgery. **See Practice, page 321**

Acute left varicocele in an adult

A left varicocele developed acutely in a 52-year-old man and, on abdominal palpation, an abdominal mass was found. Minutes after left nephrectomy for renal cell carcinoma, the varicocele disappeared. Whereas most left varicoceles are physiologic, Arrabal-Polo and Merino-Salas emphasize that further investigation should be considered if one occurs acutely in a man with no previous genital trauma. **See Practice, page 323**

Temporomandibular disorders

Most people with otherwise asymptomatic clicks of the temporomandibular joint do not require treatment and do well in the long term. In contrast, incomplete or delayed recovery in those with symptoms is associated with comorbidities, such as depression or fibromyalgia, stress Stoopler and Sollecito. **See Practice, page 324**