NEW ENGLAND FUNCTIONAL FITNESS
The Gym Rag

PELVIC FLOOR SEMINAR

Physical therapist Dr. Michelle Broughton, who was featured in our January newsletter, will be hosting a seminar on pelvic floor health on Monday, April 22 from 4 to 5 p.m. at the NEFF facility, 168 Denslow Road. This seminar is welcome to all who want to learn more about the pelvic floor.

Talk to your coach to sign up!

Monthly trivia

March's answer:
The knee is a *hinge* joint

April's question:
When placed on skin, does ice act as a vaso*dilator* or vaso*constrictor*?

GOOD BOY ALERT

The NEFF family would like to congratulate Atlas the Bernedoodle puppy on the adoption of his two humans: Coach Natalie and her boyfriend, Greg!

Atlas, seen in the photo to the left, is the handsomest boy. He is also an absolute unit. Make no mistake, this dog will be eating entire hams for breakfast. Based on the size of his paws, he will most likely be able to palm an NBA regulation sized basketball and proceed to dunk on all of us.

Keep an eye out for Atlas spottings at NEFF!

SOME BIG FAT FACTS

By Julie Quintero

Long considered to be just a blob of unused energy stores and the main reason I have trouble buying pants, fat actually plays a significant role in the body's energy metabolism, immune system, and neuroendocrine functions. There's a good chance we're all pretty familiar with the more common negative effects of too much adipose (fat) tissue, like high cholesterol, high blood pressure, diabetes, etc. But in reality, the role of fat in the body is far more complex. In this issue, let's explore some of the many different dynamics of adipose tissue and why we need it, but also why too much of it is bad - again, other than making pants difficult.

Energy metabolism

Adipose tissue is most well-known for its function as an energy source. Among the three macronutrients (fat, protein, carbohydrate), fat carries the most calories per gram with 9, while protein and carbs only have 4. Fat gets burned when we work for longer durations under lower intensities, while carbs get used when we work at higher intensities.

When we accumulate too much adipose tissue, i.e. a caloric surplus where we consume more calories than we use, metabolic dysfunction appears in the form of insulin resistance (diabetes Type II), inflammatory responses, cardiovascular disease, hypertension, atherosclerosis, and cancer.

Immune function (inflammation)

Inflammation is a complex topic of its own (see our June 2023 issue), but how does too much adipose tissue affect this process? Several inflammatory cells are released through adipose tissue, making it an important part of our overall homeostasis. However, excess adipose means an excess of these inflammatory markers and this has been hypothesized to increase insulin resistance.

Metalloproteinases are enzymes released by adipose tissue that are involved in the breakdown and remodeling of joint tissues like collagen. When an excess of adipose tissue is present, these enzymes become overactive and can cause more degradation of these tissues than can be remodeled, often leading to joint pain.

Neuroendocrine (hormones)

Did you know fat is classified as an endocrine organ? That's right, just like your thyroid or adrenal glands, adipose tissue secretes many different hormones. Since the amount of adipose tissue on the body can change, that also means that how much hormones are secreted is affected as well. So, too much fat can lead to hormone imbalances which can lead to adverse health effects. For example, leptin is a hormone secreted from adipose tissue that helps regulate hunger by telling the brain you're full. Excess adipose causes an increase in leptin levels. Instinctively, you might think that more leptin would mean you would feel less hungry. Rather, these increased levels cause you to become desensitized to it, making it less effective and thereby making you feel *more* hungry.

Overall, fat is paramount to optimal health, but we need to be mindful of how much we carry, because it can most certainly whack us out of balance (and the pan