

## Bölüm 2

# EGZERSİZ VE ENERJİ HOMEOSTAZİSİ İLE İLİŞKİLİ HORMONLAR

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### Giriş

Egzersiz, metabolik olaylar ve vücudun enerji dengesinin (homeostazis) düzenlenmesinde önemli rol oynamaktadır. Enerji homeostazisinin ayarlanmasında endokrin sistemin, sinir sisteminin ve vücudun sıvı elektrolit dengesinin önemli rollerinin olduğu bilinen bir gerçektir. <sup>1</sup>

Egzersizin, enerji metabolizmasının düzenlenmesinde rolü olan hormon düzeylerini değiştirmeye yönelik etkisi, özellikle leptin, nesfatin-1 ve irisin üzerine odaklanarak, çok fazla araştırmanın ilgi odağı olmasını sağlamıştır. <sup>2</sup>

İskelet kası endokrin bir organ gibi çalışarak, çeşitli doku ve organların koordinasyonunda ve aynı zamanda insan homeostazisinde rol oynayan miyokinler olarak bilinen sitokinlerin salgılanmasını sağlar. Enerji metabolizmasının düzenlenmesi ve kasların rejenerasyon yeteneği ile ilgili olan miyokinler, bir hormon gibi çalışarak, egzersiz ile aktifleşerek çalışan kasa destek sağlamaktadırlar. <sup>3</sup>

Egzersiz, iskelet kaslarında, biyoaktif maddeler ve miyokinler gibi pek çok potansiyel arabolucunun salınmasını sağlayarak sağlıklı olmaya katkı sağlar. Miyokinler, enerji metabolizması ve kas rejeneratif kapasitesi ile ilgili süreçleri düzenlemenin yanı sıra gerek kısa süreli gerekse düzenli yapılan egzersizlere adaptif cevapların gelişmesi için de aktif kaslara çok yönlü destek sağlamaktadır. <sup>3,4</sup>

Araştırmalar, nesfatin-1' in yeni bir hipotalamik anorektik peptid olduğunu ve yiyecek alımı ve metabolizmanın düzenlenmesinde leptinden bağımsız bir mekanizması olduğunu göstermektedir. <sup>6</sup>

İrisin, vücutta enerji tüketim oranını artıran ve metabolik durumunu yansıtan, egzersizle ilişkili bir hormondur. Yine irisin, metabolik bozulma ile ilişkili obezite ve diyabet dâhil olmak üzere hastalıkların izlenmesi ve tedavisi için bir ajan olarak umut vaat etmektedir. <sup>7</sup>

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