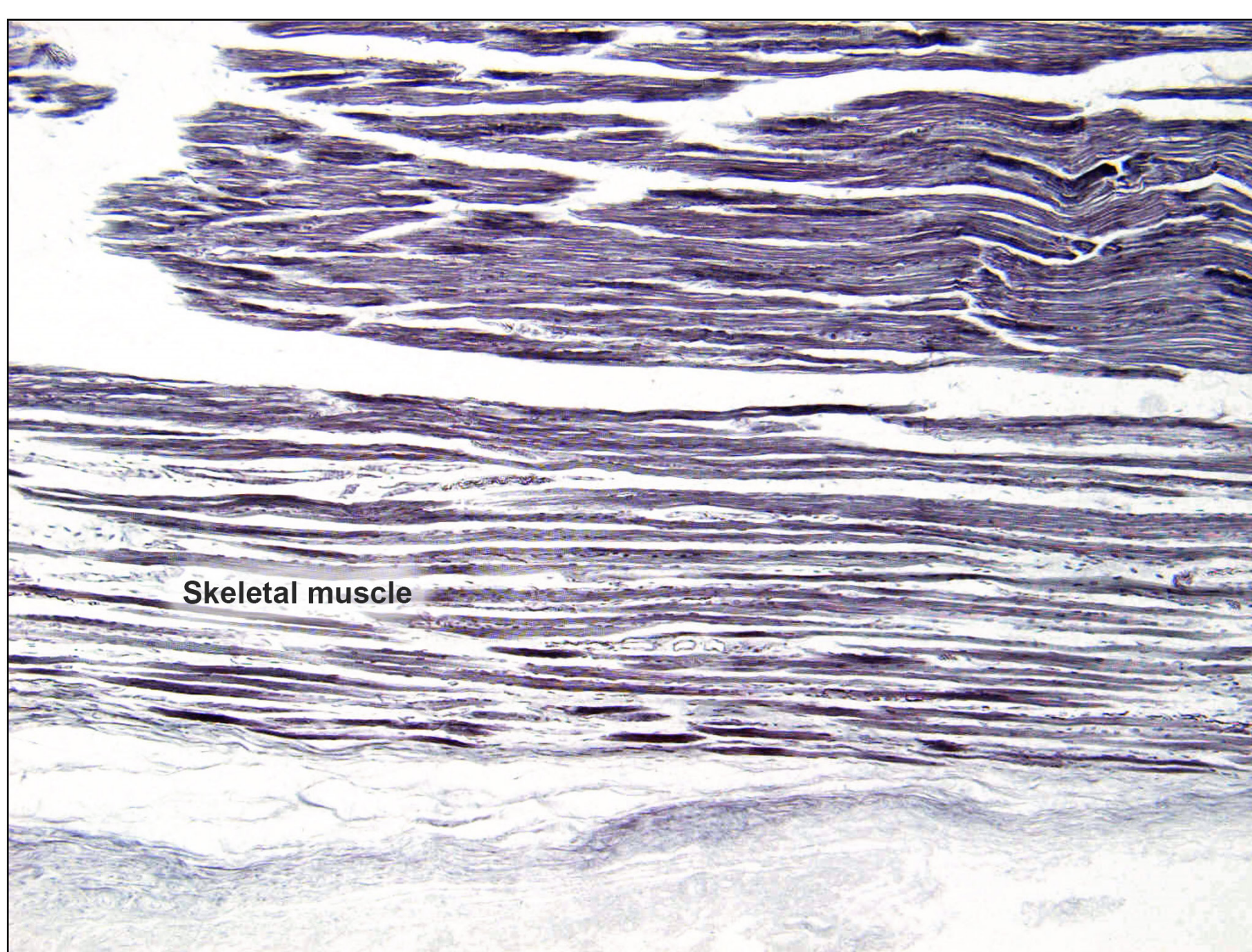


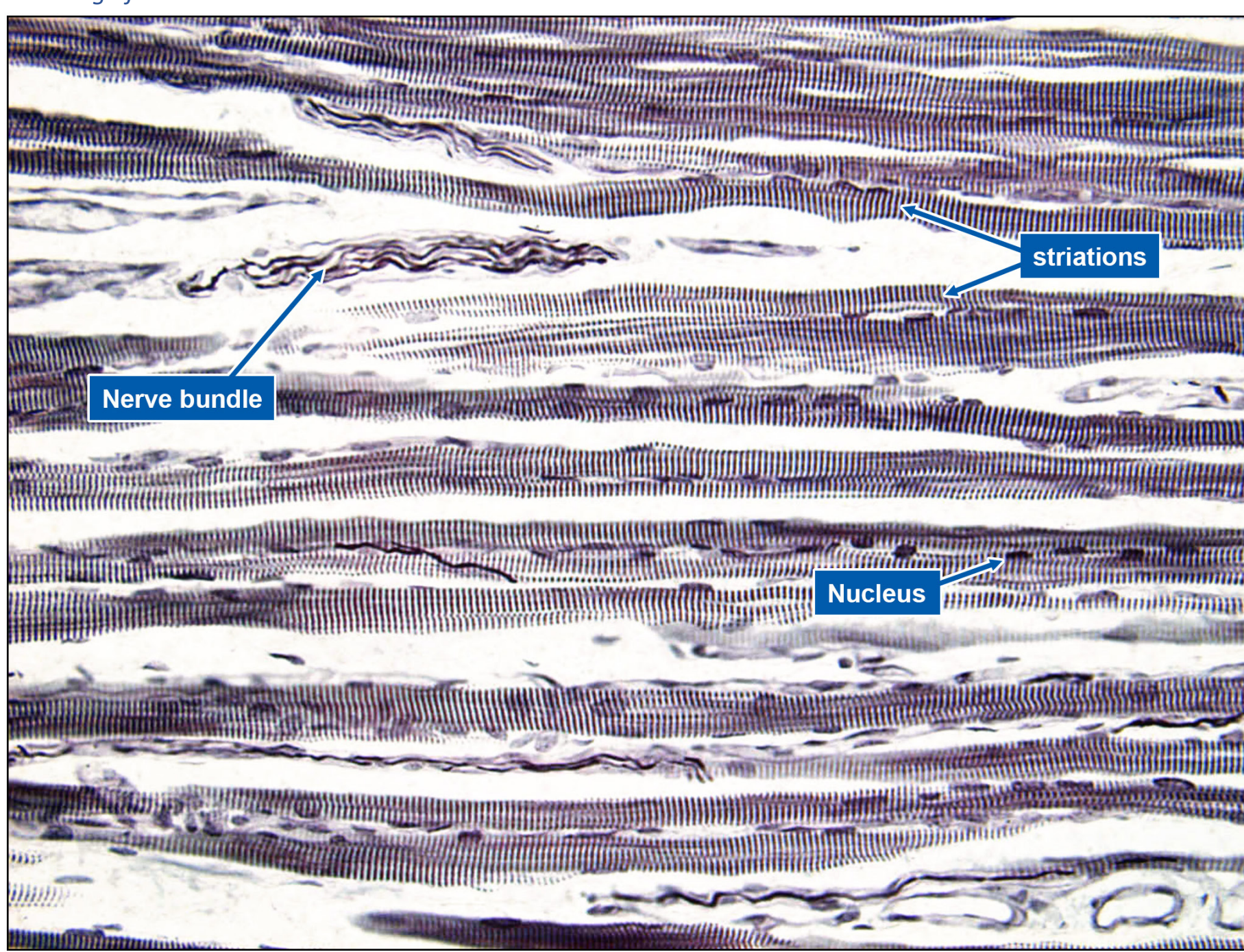
SKELETAL MUSCLE, SILVER STAIN

Musculoskeletal System

Skeletal muscle produce movements under voluntary control. Silver staining facilitates the observation of internal and extracellular components. Making the striation of skeletal muscles more visible in silver staining.



Low magnification



High magnification

1. Skeletal muscles are composed of **muscle fibres**, which are striated, multinucleated cells. They also have blood vessels, nerve fibres, and connective tissues.
2. Each muscle fibre is composed of myofibrils.
3. Myofibrils are composed of actin (thin filaments), myosin (thick filaments), and support proteins (such as dystrophin).
4. The arrangement of thick and thin filaments gives the **striated** appearance.
5. Each muscle fibre also has a **sarcolemma** and a connective tissue known as **endomysium**.
6. A group of muscle fibres make up a **fascicle**, which is encased by a layer known as **perimysium**.
7. The whole muscle is covered by a thick dense connective tissue known as **epimysium**. It is continuous with the fascia and tendon which connects the muscle to the bone.
8. **Muscular dystrophy** is a pathology affecting the muscle. It is an inherited condition that cause permanent muscle weakness. One of the most common types is Duchenne Muscular Dystrophy (DMD).
9. DMD is an X linked disorder caused by the mutation of the dystrophin gene. It leads to progressive muscle wasting and muscle degeneration due to the absence of dystrophin protein.