

The fourth sacral ventral spinal rami, which are smaller than the ventral rami above, exit the sacral canal through the fourth ventral sacral foramina between the fused fourth and fifth sacral vertebrae. Here they are connected to adjacent sympathetic ganglia by grey rami communicantes. Visceral efferent rami leave as pelvic splanchnic nerves containing parasympathetic nerve fibers.

Each ventral ramus of S4 lies anterior to the piriformis muscle and posterior to the internal iliac vessels and ureters and divides into a ventral and dorsal branch. The ventral branches of S4 join with the ventral branches of S2 and S3 to form the pudendal nerves and thereby participate in the sacral plexus. Small branches of the ventral rami of S4 join with the ventral rami of S5 and the coccygeal rami to form the coccygeal plexus. The ventral rami of S4 also give off muscular branches to the levator ani, coccygeus and sphincter ani externus muscles.

### **Supply**

The fourth sacral ventral spinal rami supply levator ani, the sphincter ani externus and muscles of the perineum. Cutaneous fibers are also distributed in the pudendal nerve.