

# Review of: "Is gastrulation the most important time in your life?"

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I really appreciate this article, since the gastrulation process and the subsequent body axes formation are really the most important timepoints in our embryonic development. The article is clearly written and distillate the key information needed for the deeper understanding of what the gastrulation is. The author started with the historical view, how and why we call the gastrulation as gastrulation and continued explaining the common traits and evolutionary adaptations of the organizer, the embryonic cell structure driving the cell migration and determination of dorsal structures including the neuronal tube giving the orientation, shape, and functionality to Deuterostomia animals. As we know from Hans Spemann's experiments, absence of organizer (dorsal lip of blastopore in Amphibians) results in the shapeless unstructured ventralized tissue called "Belly piece". So, from this point of view the gastrulation is undoubtedly the key developmental process connecting the formation of all three germ layers (ectoderm, mesoderm, and endoderm) with the final determination and formation of body axes (anterior-posterior through the Wnt inhibitors), dorsal -ventral through the Bmp inhibitors and left- right through the inhibition of the Nodal pathway). The observation and characterization of NMPs (neuromuscular progenitors) is interesting and intriguing but not decreasing the value and significance of the gastrulation process. This would be the truth If we define the gastrulation only as cell migration through the organizer with subsequent differentiation of all three germ layers, but it is not the case.