Immunology

Lec.10

Immunological tolerance

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Immunological tolerance

- One of the remarkable characteristics of the normal immune system is that it is capable of reacting to an enormous variety of microbes, but it does not react against each individual's own (self) antigens. This unresponsiveness to self antigens, also called **immunological tolerance.**
- **Immunological tolerance:-** is a lack of response to antigens that is induced by exposure of lymphocytes to these antigens.

- **Central T Lymphocyte Tolerance :-**
- **The principal mechanisms of central tolerance in T cells are cell death and, for CD4+ cells, the generation of regulatory T cells** (Fig. 9-2).

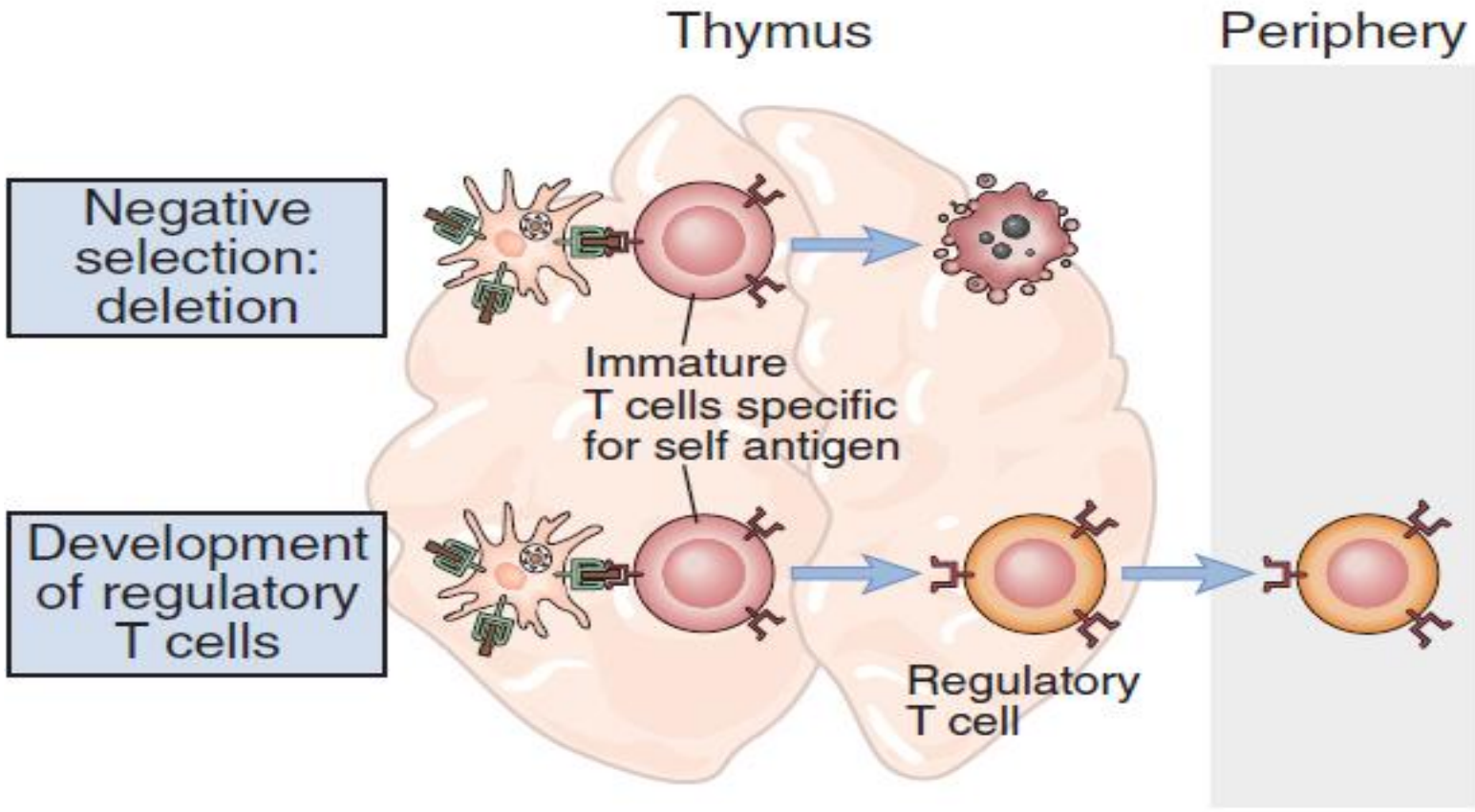

FIGURE 9-2
Strong recogr
immature T cel
death of the c
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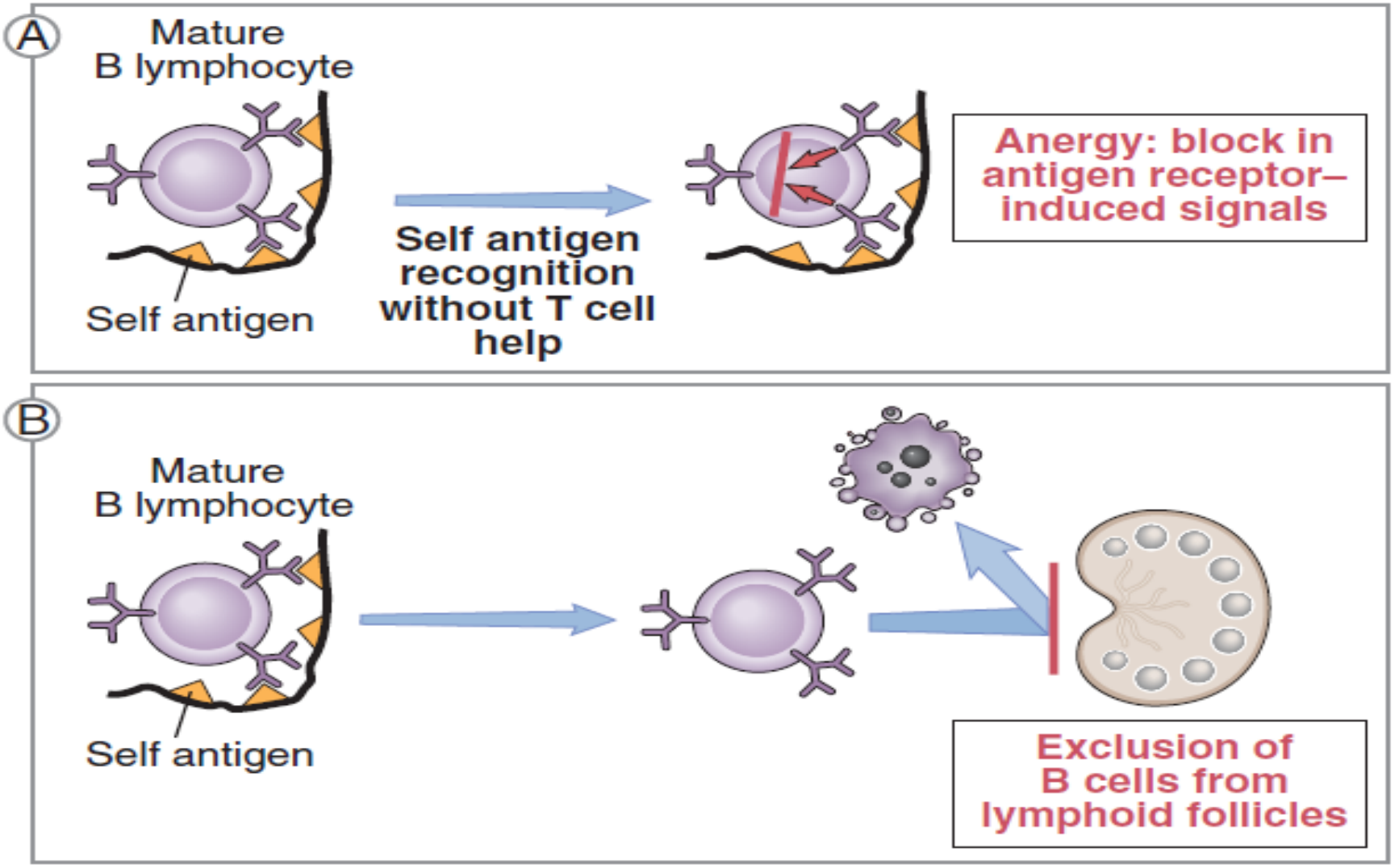
thymus also m
of regulatory T
tissues.

- **Peripheral T Lymphocyte Toleranc:-**
- **Peripheral tolerance is induced when mature T cells recognize self antigens in peripheral tissues, leading to functional inactivation (anergy) or death, or when the self-reactive lymphocytes are suppressed by regulatory T cells.**


A
Mature
B lymphocyte
Self antigen
Self antigen
recognition
without T cell
help
Anergy: block in
antigen receptor–
induced signals
B
Mature
B lymphocyte
Self antigen
Exclusion of
B cells from
lymphoid follicles