2. Conceptual Basis for Prevention and Control of Non-communicable Diseases

Life-course Approach

2.7 Individuals are influenced by factors acting at all stages of the life span and the risk of developing NCD accumulates with age (Exhibit 5). Life-course approach acknowledges such interactive and cumulative impact of social and biological influences throughout life, particularly the importance of early life factors predisposing to NCD in later years.7

Exhibit 5: Scope of NCD prevention - a life-course approach

(Source: Aboderin et al, 2002)

2.8 Utilising opportunities at each stages of life, it may be possible to have fewer disabilities and reduce premature deaths. The functional capacity, such as muscular strength and cardiovascular output, accumulates in childhood and peaks in adulthood, and then declines in older age (Exhibit 6). As the rate of functional capacity decline is largely determined by behavioural factors, adopting a healthy lifestyle will help maintain or prevent early decline in functional capacity during older age. For example, stop smoking at age 60, 50, 40 or 30 gains about 3, 6, 9 and 10 years of life expectancy respectively.8 Thus, it is important to secure growth and development in early life, maintain the highest possible level of function in adult life as well as maintain independence and prevent disability in older life.9
Exhibit 6: Maintaining functional capacity over the life course

Preventive Strategy

2.9 The planning of NCD prevention and health promotion programmes is based on the three levels of prevention: primary, secondary, and tertiary.

Primary prevention

2.10 Primary prevention is concerned with measures that prevent the onset of disease. Some of the important strategies under this category include health education, immunisation, environmental measures and social policy (Exhibit 7). The ultimate goal is to bring about a change in behaviour or factors affecting individuals so that diseases will be prevented from developing. This approach has contributed to some notable examples of successful intervention in public health especially those related to NCD.