



DEMENTIA, **Loneliness, and** **SOCIAL ISOLATION**

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Dementia

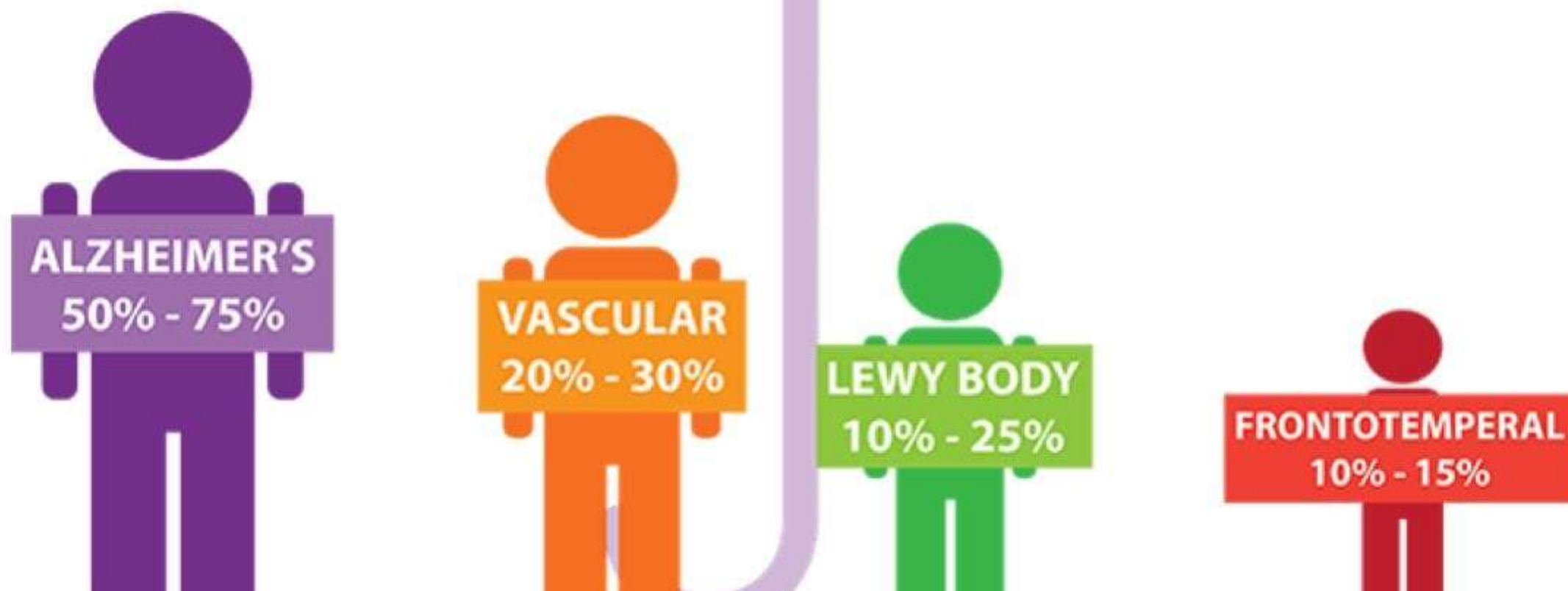
Life expectancy has increased significantly due to major medical advances. However, increased longevity has its own set of problems, such as an increase in age related somatic- and neurocognitive diseases, including dementia, which often incur vast economic and health-care related challenges.

Dementia

- Dementia is a multicausal medical condition with a high and increasing prevalence in both developed and developing countries.
- The number of people with dementia is expected to increase three-fold within the next 30 years, from 50 million to about 152 million by 2050.
- Alzheimer's disease and vascular dementia account for ~90% of cases.
- Currently, there is no cure for dementia, even though lifestyle factors have been shown to play a potentially important role in its prevention.

DEMENTIA

An "umbrella" term used to describe a range of symptoms associated with cognitive impairment.



Known Risk Factors for Dementia

- Age
- Genetics/family history
- Smoking and alcohol use
- Atherosclerosis
- Cholesterol
- Plasma homocysteine
- Diabetes
- Mild cognitive impairment

Social Interaction

Interacting socially has been hypothesized to be dependent on a variety of factors:

- The capacity to understand emotions both in self and others.
- Interpreting people's desires and intentions.
- The ability to regulate behavior and be flexible in social interactions.
- The competence to execute social behaviors and self-care skills or activities of daily living.

Social Interaction

Different social factors can also play a significant role in creating social isolation and loneliness:

- Those who have supportive relationships with friends, family, neighbors and caregivers (both paid and unpaid) report less loneliness.
- Bereavement, which often occurs after the loss of a spouse, child, or even a pet (but can occur after any significant loss) often has loneliness as one of its symptoms.
- Retirement can lead to isolation and feelings of loneliness.
- Social environmental status, such as lack of transportation, homelessness and rural vs. urban location can affect social isolation.
- Age, gender, race, religion, and many other factors can be used to marginalize, thus leading to isolation and often loneliness.

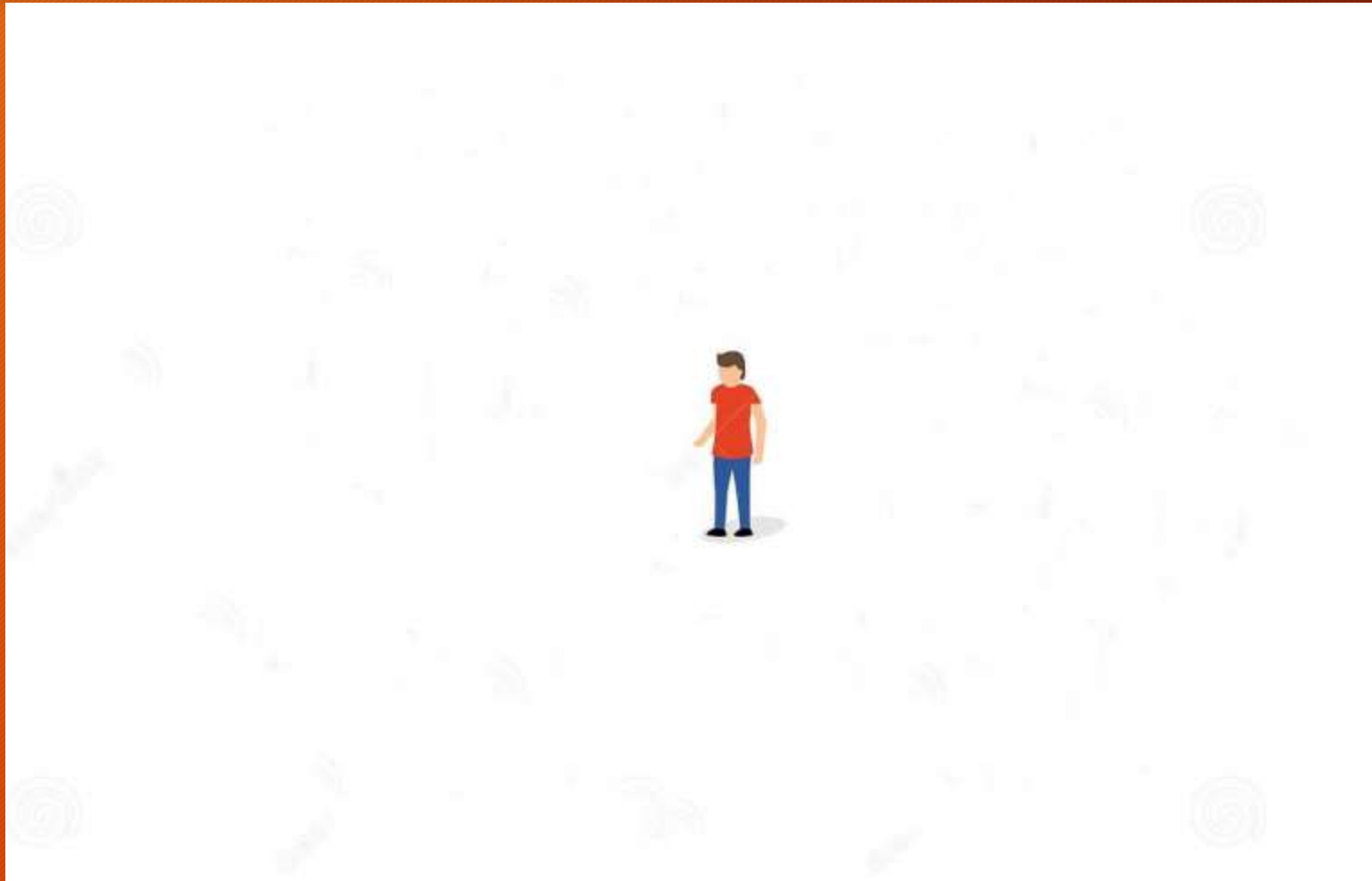
Loneliness and Social Isolation

Whereas social isolation is considered an objective condition that arises when someone does not have enough people around, measured through type of living arrangements and marital status, loneliness is referred to as a subjective distressing feeling of alienation. Hence, one can be socially isolated without feeling lonely, or feel lonely without being social isolated.

Loneliness



Social Isolation



Related Research

- A number of studies have shown that loneliness and social isolation are risk factors for dementia.
- Some studies suggest that perceived loneliness has a stronger impact on adverse health outcomes than mere social isolation.

Related Research

A prospective population-based study examined the association between perceived loneliness and incident dementia with up to 20 years of follow-up, and showed that participants who reported feeling often lonely had an increased risk of developing all-cause dementia and especially AD, notably, no association was observed between loneliness and vascular dementia.

Related Research

- A large population-based cohort study in the Netherlands showed that feelings of loneliness were associated with development of dementia even when objective indicators of social isolation and other covariates were controlled for.

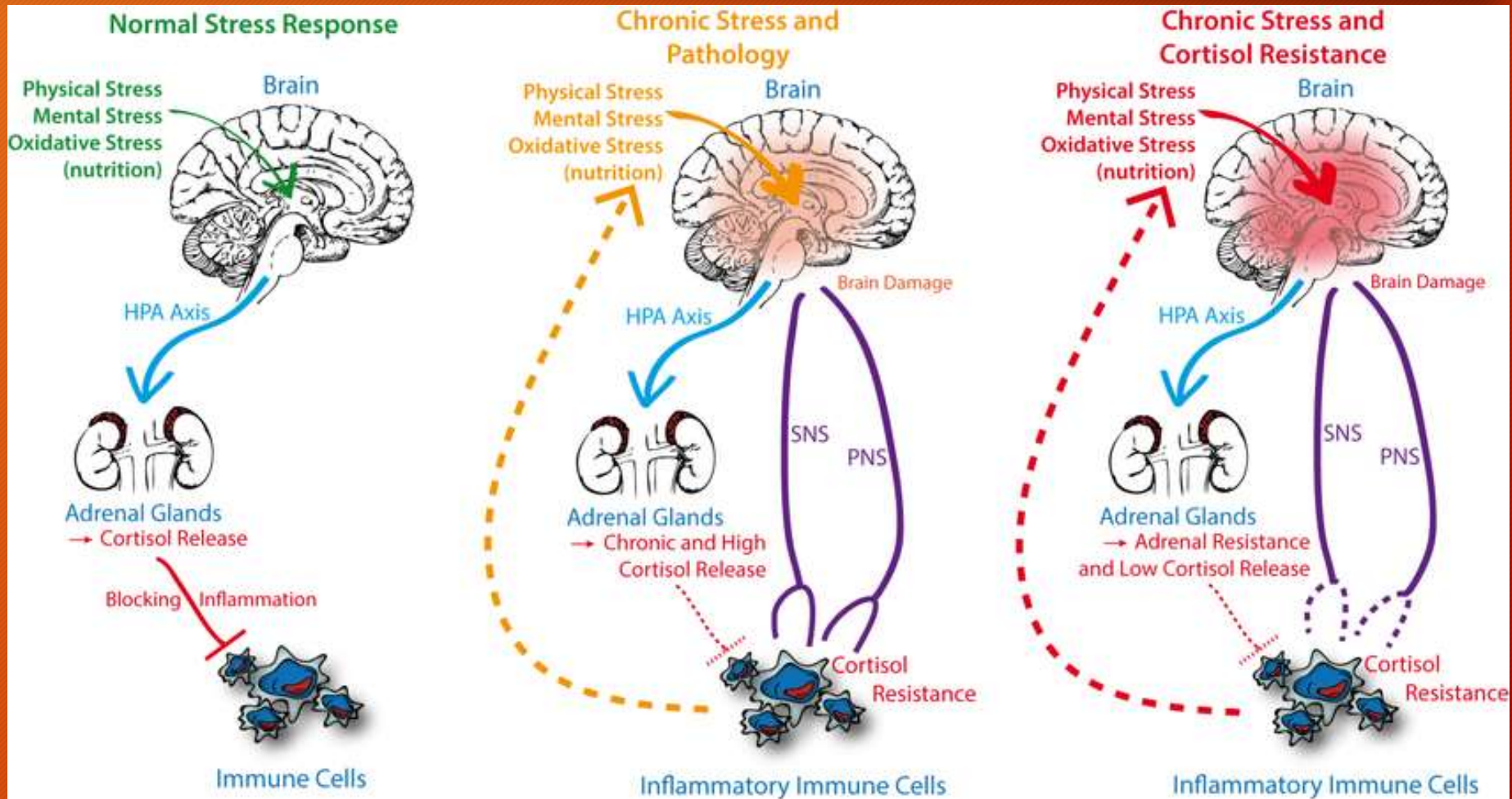
Proposed Pathogenesis

- Loneliness has cross-sectionally been associated with a higher cortical amyloid burden, a neuropathological feature of AD.
- Social isolation may cause depression, which may predispose to dementing disorders through hypothalamic-pituitary (HPA) axis hyperactivity and subsequent hippocampal atrophy.

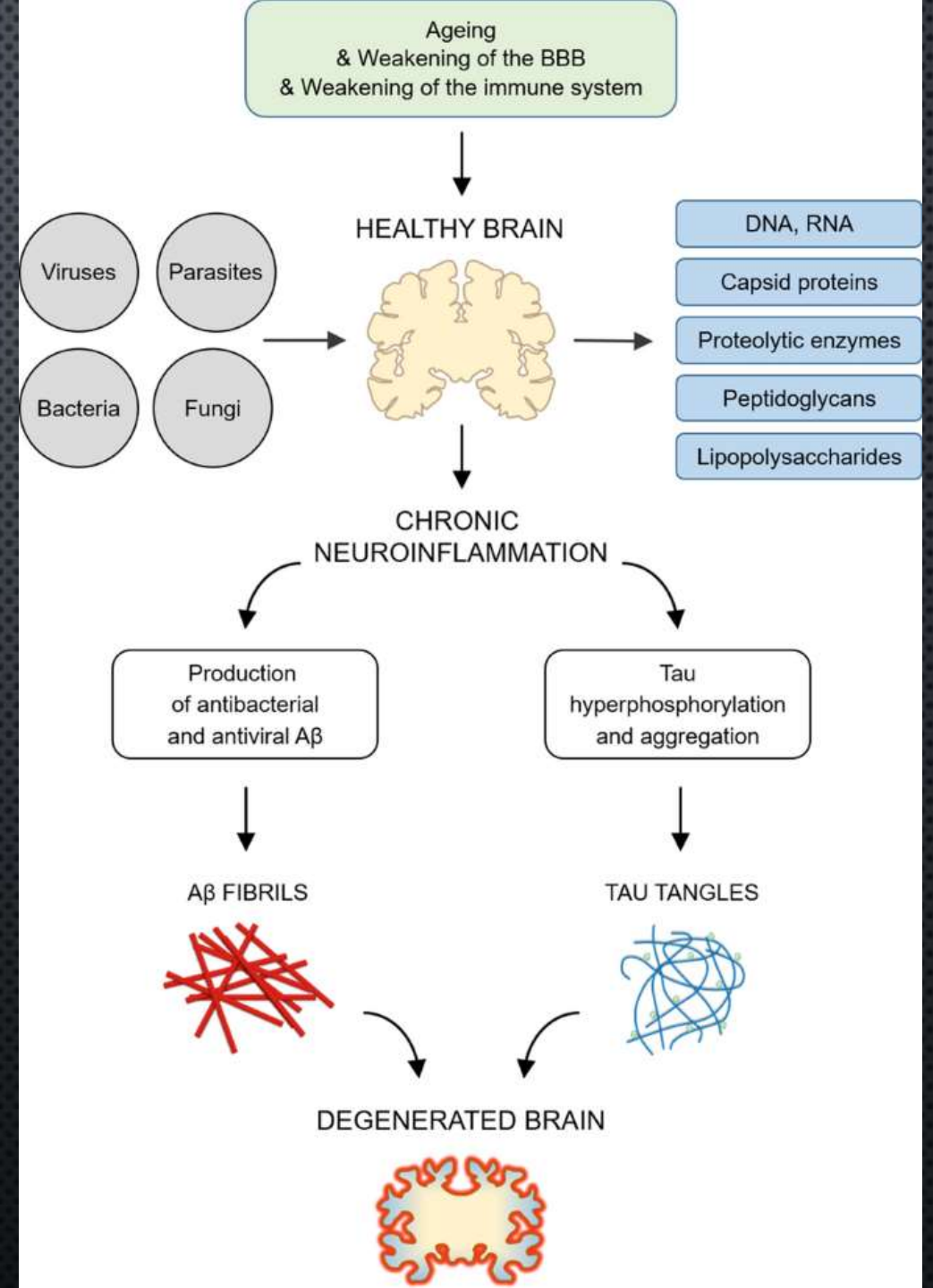
Proposed Pathogenesis

- A more recent model of loneliness and its effect on health posits that loneliness is equivalent to feeling unsafe, which unconsciously makes individuals more sensitive to potential social threats in the environment and to experience the social world as more threatening.
- Research has shown that a lonely individual's chronic perception of social threat may stimulate the sympathetic nervous system, which may affect the immune system by an up-regulation of inflammatory genes expression. Thus, the inflammatory response suggested to be associated with social isolation and loneliness could be a possible pathways linking it to dementia.

Proposed Pathogenesis



PROPOSED PATHOGENESIS OF ALHEIMER'S DISEASE



Healthcare Interventions

Social Prescribing: The approach that a clinic or hospital can use could be very informal, such as information posted in the health care facility that the patient can act on (or not). They can also be much more comprehensive, including case management services designed to specifically identify the social determinant(s) of health, including social isolation and loneliness, that are impacting the patient. More comprehensive services also provide specific referral and follow-up to see if services were obtained.



Healthcare Interventions

Support Groups and Group Membership: These are typically peer support groups that address the needs of those with a shared condition such as diabetes or those who would benefit from cardiac rehab and including those who are socially isolated or suffering from loneliness.



Healthcare Interventions

Pharmaceutical Interventions: Therapies directed towards the biological basis of feelings and decisions (often in conjunction with behavioral therapies) may be useful in managing the symptoms that lead to social isolation and loneliness.



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Healthcare Interventions

- **Interventions that target Specific Risk Factors:** This approach attempts to address the underlying causes of social isolation and loneliness and remediate them. Interventions include programs to enhance cognition, to increase physical mobility, or to address bereavement.

THANK YOU FOR LISTENING

