

Social Connection in Older Adults:

Grouper's Solution for a
Critical Health Crisis

Grouper

Executive Summary

Humans are inherently social creatures, primed for connection through millennia of natural selection. Our ancestors' survival depended on their ability to form strong social bonds within groups, and

isolation had deadly consequences. This hardwired us for connection, such that it became a fundamental, biological need. Today, a lack of meaningful social connections can have far-reaching consequences on our overall health and longevity.

A lack of social connection damages our health at similar levels as smoking, excessive drinking, and physical inactivity. It leads to a ~50% increased risk of dying and dramatically increases the risk and progression of many chronic diseases. This occurs through multiple pathways, including biological mechanisms such as the effects of chronic stress, as well as behavioral changes like delays in obtaining diagnoses or poor adherence to treatment plans.

In the United States, we face an epidemic of social isolation and loneliness in our aging population. Older adults are uniquely vulnerable to weakening social ties because of the physical and life stage changes that come with aging. It follows that 1 in 3 older adults report feeling lonely and 1 in 5 are socially isolated. As our population ages and traditional social structures evolve, we must confront this growing crisis.

Grouper is tackling this pressing issue by creating the leading engagement platform for older adults. Grouper supports healthy aging by connecting members to a national network of over 10,000 community-based in-person groups and over 4,500 online groups with shared interests such as pickleball, walking, and chess. Grouper also provides value to health plans through its group activities, a more popular and cost-effective mechanism of delivering its supplemental fitness benefit. Grouper leverages the power of communities to meaningfully engage older adults and create authentic, lasting relationships. Grouper creates stronger ties for its community members; in addition, its success creates a ripple effect, fostering healthier, resilient communities for all.

Evolutionary Benefits of Connection

Humans are happier and healthier when they have meaningful social ties. The need for connection is deeply rooted in our evolutionary history, as social bonds played a crucial role in human survival and development (Cacioppo 2008, Murthy 2020). Cooperative groups were

better able to gather and share resources, providing a buffer against challenges such as seasonal food fluctuations and natural disasters. Communal care for offspring improved child survival rates and enabled the transmission of complex cultural knowledge. Furthermore, groups that could effectively collaborate to solve complex problems, such as hunting large prey or defending against predators, had a significant survival advantage.

This evolutionary history has profoundly shaped our biology, psychology, and behavior, creating a deep-seated need for social connection that persists throughout our lives.

New Interest in a Long-standing Problem

Despite its significant evolutionary role, the health impacts of social connection were largely ignored by the broader medical and public health communities. In 2010, Julianne Holt-Lunstad and colleagues published a meta-analysis that thrust this pressing issue into the spotlight. Their paper, which analyzed data from 148 studies, persuasively demonstrated that low social connection led to a 50% increase in mortality risk, comparable to smoking 15 cigarettes a day (Holt-Lunstad 2010, Holt-Lunstad 2017). This striking statistic ignited interest in the topic and spurred a new wave of research that further cemented the significant impact of social connection on health.

Health Impacts of Social Isolation and Loneliness

As research into social connection expanded, scientists began to unravel the numerous ways human relationships affect our health. To systematically study this phenomenon, researchers developed methods to quantify and categorize different aspects of social connection. Two key concepts emerged as central to understanding the health impacts of social relationships: social isolation (an objective lack of social connections) and loneliness (the subjective feeling of inadequate social connection). Although distinct, these concepts often overlap and independently impact health outcomes (Fiordelli 2020, VanderWeele 2023).

The following are key areas where social isolation and loneliness have shown a large impact on health outcomes:

- 1. Mortality:** Holt-Lunstad's original study showed a 50% increase in mortality as a result of low social connection (Holt-Lunstad 2010). A follow up meta-analysis examined more specifically the increase in mortality due to social isolation (29%) and loneliness (26%) (Holt-Lunstad 2015). Ongoing research continues to validate the large impact of social isolation and loneliness on mortality, creating a strong scientific consensus around this relatively new finding (Holt-Lunstad 2017, Rico-Urbe 2018, Wang 2023, Naito 2023).
- 2. Cardiovascular health:** Studies have found that social isolation and loneliness increase the risk of developing and dying from cardiovascular disease (Wang 2023, Valtorta 2016, Manemann 2004, Mookadam 2004, Hakulinen 2018). In a meta-analysis, Valtorta estimated that risk of developing coronary heart disease increased by 29% and stroke by 32% for those who were socially isolated and lonely (Valtorta 2016). Many studies show that the progression of cardiovascular disease after an initial diagnosis is much worse for those who are socially isolated or lonely. For example, Manemann used a longitudinal cohort to show that after a heart failure diagnosis, lonely adults were four times as likely to die, 68% more likely to be hospitalized, and 57% more likely to visit an emergency room (Manemann 2004).
- 3. Cognitive health:** A *Lancet* panel named social isolation as one of the top 12 leading risk factors for dementia, increasing dementia risk by 60% (Livingston 2017). Many meta analyses corroborate the link between social isolation and loneliness and dementia (Kuiper 2015, Penninkilampi 2018, Lara 2019). Researchers have also found a relationship between social isolation and accelerated cognitive decline across a number of functions, including short-term memory, attention, and global cognitive functioning (Evans 2019, Cardona 2023).

Health Impacts of Social Isolation and Loneliness

(continued)

4. Other chronic conditions: The health impacts of social isolation and loneliness extend to other chronic conditions as well. They are linked to an increased risk of depression and anxiety, particularly in older adults (VanderWeele 2023, National Academy of Sciences Report 2020). Additionally, studies have shown associations with functional decline and the development or exacerbation of diabetes, chronic obstructive pulmonary disease (COPD) and cancer (National Academy of Sciences Report 2020).

A Cascade of Negative Health Outcomes

To fully grasp the gravity of social isolation and loneliness, we must look beyond these individual health outcomes to a more complex reality where the effects of social isolation and loneliness are interwoven. The impacted pathways, and diseases themselves, are bidirectional and intensify over time. A lack of social connection can initiate a cascade of negative health outcomes, each exacerbating the others. This creates a cumulative effect that can rapidly deteriorate an older adult's overall health and quality of life (Hawkey 2015, Murthy 2020).

For example, an initially healthy older adult who becomes socially isolated may develop depression. Depression leads to reduced physical activity and poor diet, contributing to the onset of type 2 diabetes. Managing diabetes while depressed and isolated becomes challenging, leading to complications that further reduce mobility. Reduced mobility limits social engagement, which accelerates cognitive decline and the development of cardiovascular disease. This cognitive decline then makes it even more difficult to manage additional health conditions and maintain social connections, continuing the downward health spiral (National Academies of Sciences 2020).

Addressing social isolation is, therefore, not just about tackling a single health risk, but about preventing a potential avalanche of interconnected health issues. By focusing on reducing social isolation, we have the opportunity to positively impact multiple facets of health simultaneously, promoting healthier aging while significantly reducing the risk of chronic diseases in our aging population.

Biological and Behavioral Pathways

BIOLOGICAL MECHANISMS

Social isolation and loneliness triggers a variety of biological responses that harm an individual's physical health. The experience of isolation can “get under the skin” to influence physiological processes and lead to cardiovascular, metabolic, neurodegenerative diseases and death (Ahmed 2023, Cacioppo 2003, Murthy 2020). The following are significant biological pathways that isolation impacts:

- 1. HPA Axis Dysregulation and Chronic Inflammation:** The Hypothalamic-Pituitary-Adrenal (HPA) axis, a key component of the body's stress response system, becomes dysregulated with prolonged isolation, leading to an increased production of pro-inflammatory cytokines. Chronic inflammation ensues and affects multiple body systems, including an increased risk of infections and hypertension. It can also alter metabolic processes in the body, including disrupted glucose metabolism and increased risk of insulin resistance.
- 2. Sympathetic Nervous System Activation:** Chronic social isolation can lead to persistent activation of the sympathetic nervous system, often referred to as the “fight or flight” response. This results in elevated heart rate, increased blood pressure, and enhanced cardiovascular reactivity.
- 3. Sleep Disturbances:** Loneliness and social isolation are strongly associated with sleep disturbances. These include fragmented sleep patterns, reduced sleep quality, and altered sleep-wake cycles. Poor sleep can lead to disrupted blood pressure regulation, increased inflammatory processes, and cognitive impairments.

50% increase in mortality

as a result of low social connection

(Holt-Lunstad 2010)

Biological and Behavioral Pathways *(continued)*

BEHAVIORAL MECHANISMS

In addition to biological pathways, social isolation can lead to changes in behavior that impact health outcomes. The following behavioral mechanisms often interact with and exacerbate the biological effects of isolation:

- 1. Unhealthy Lifestyle Factors:** Social isolation often leads to physical inactivity, poor nutrition, increased alcohol consumption, and smoking—behaviors that increase the risk of cardiovascular disease and overall poor health.
- 2. Poor Healthcare Utilization:** Socially isolated individuals often exhibit poor health-seeking behaviors, leading to delayed diagnoses, poor treatment adherence, and reduced engagement with preventive health services. The behaviors lead to worse health outcomes across all conditions.

60% increase in dementia risk

social isolation ... increasing dementia

(Livingston 2017)

Unique Risks for Older Adults

As people age, they face unique risks that make them increasingly vulnerable to social isolation and loneliness. In fact, recent studies paint a concerning picture. National studies reveal that 35% to 40% of adults in the United States aged 45 and older (50 million) experience loneliness (Cigna 2018, Anderson 2018). According to the National Health and Aging Trends Study, 20% of adults over the age of 65 (7.7 million) report being socially isolated, and 4% (1.3 million)

experience severe isolation (Cudjoe 2020). With the dramatic scale of this issue facing older adults in the United States, it's important to understand the age-specific risks they face.

- 1. Functional Impairments:** Issues such as mobility limitations, falls, incontinence, and sensory impairments (hearing/vision loss) can create a cycle of isolation. For example, fear of falling may lead to reduced social activity, which in turn increases the risk of falls due to decreased physical activity and muscle strength.

Unique Risks for Older Adults *(continued)*

- 2. Chronic Health Conditions:** With 80% of older adults managing at least one chronic condition, health issues significantly impact social connections. Conditions like heart disease, cancer, and depression can limit an individual's ability to participate in social activities. Moreover, this relationship is often bidirectional, which creates a vicious cycle.
- 3. Disruptive Life Events:** Major life changes common in older adulthood can significantly disrupt existing social networks. The death of a spouse, affecting about 25% of adults over 65, can result in profound social isolation (Vos den Ouden 2022). Adults in the United States retire on average in their early 60s, a major life stage transition that leads to a loss of the workplace social environment and the weakening of workplace social ties (U.S. Census Bureau). Additionally, transitioning to long-term care facilities, a reality for about 35% of older adults at some point in their life, frequently separates older adults from their established communities. All of these events, often occurring in succession, can lead to a cumulative erosion of an older adult's social network and increase their risk of isolation.

The National Erosion of Community and Its Impact

In recent decades, our society has experienced a significant erosion of community institutions and customs that foster strong social ties, as highlighted in Robert Putnam's "Bowling Alone" and Vivek Murthy's "Together" (Putnam 2000, Murthy 2020). In addition, broader societal shifts have eroded traditional support systems for many older adults. Increased geographic mobility has led to greater physical distances between family members (Murthy 2020). Changes in family structures, including a doubling of divorce rates for adults over 50 since the 1990s and decreasing family sizes, have resulted in smaller family networks (Brown 2022, National Academy of Sciences Report 2016).

These shifts have made it increasingly challenging for individuals, especially older adults, to find and maintain meaningful social connections. U.S. Surgeon General Vivek Murthy's recent call to prioritize this issue underscores its critical importance to public health (Murthy 2021).

Introducing Grouper: Healthcare's Leading Engagement Platform for Social Connection

Grouper is at the forefront of a social fitness movement to create healthier and more meaningful lives for older adults. Grouper has developed healthcare's leading engagement platform to solve social isolation and loneliness for this group. Grouper creates and strengthens relationships around shared interests, leading to more resilient and healthy communities.

Grouper Activities Support Healthy Aging

Grouper communities support healthy aging for older adults through group activities that are intrinsically social. The Grouper platform offers a wide range of in-person activities through a national network of over 10,000 community-based groups: walking, hiking, pickleball, bridge, Mahjong, singing, chess, bowling, and many others. In addition to in-person activities, Grouper offers 4,500+ online group classes and communities for a variety of passions, purposes, and social connection. Each Grouper activity offers unique physical and mental health benefits for members. Universally, they share the many benefits that come from the social connections they create and strengthen.

Grouper leverages group activities as powerful vehicles for creating healthy connected communities for older adults through three mechanisms:

1. Connecting Isolated Individuals to Communities

Grouper connects isolated and lonely individuals to communities that share their interests. Competing in pickleball or chess, for example, creates structure and a rhythm that engages and connects older adults in fun and meaningful ways.

Grouper Activities Support Healthy Aging *(continued)*

2. Supporting and Growing Existing Communities

Grouper's approach extends beyond connecting isolated individuals to communities. They also strengthen existing ties for community members and the organizations they join. Grouper contributes toward membership fees, covers activity-related expenses, and offers complementary services that encourage existing members to stay engaged and incentivizes new members to join. Engaged adults are more likely to invite friends, helping to further grow and strengthen these communities. Grouper's extensive clubs directory gives members the opportunity to discover and join other communities of interest, and provides organizations exposure to new potential members.

3. Creating New Communities

In addition to directing isolated people to existing communities, Grouper organizes new community groups for older adults who are not able to find a compatible group in their area. Walking and craft communities, for example, have shown great promise as a scalable way to build community for older adults. They attract strong participation, are proven to create new connections for participants and are accessible for nearly everyone.

Grouper Creates Cascades of Healthy Outcomes

Grouper's platform helps older adults live happier and healthier lives. The meaningful social connections that Grouper creates for its members have a wide range of positive impacts on well-being and longevity.

Regular participation in group activities such as walking and bridge clubs leads to improved physical health, enhanced cognitive function, and better emotional well-being. These improvements can increase an individual's capacity and desire to engage more deeply in activities and potentially branch out to new activities, creating a virtuous cycle of engagement and health benefits. They also might serve as a springboard for members to recruit friends to join their communities. Therefore, the initial act of joining a group activity can lead to a ripple effect of increased social engagement and improved health outcomes across a broad network of older adults.

Grouper Creates Cascades of Healthy Outcomes

(continued)

Consider Linda, a Grouper member. Linda is a single 62-year-old retired golf business owner. After retiring, her life suddenly became quiet and isolated in her small Colorado mountain town, and she didn't feel motivated to be active, describing herself as "a couch potato." Through an introductory class at the recreation center, she discovered pickleball. She quickly fell in love with the sport and embraced her new passion by becoming a member at her local pickleball club.

She also became a teacher and a USA Pickleball Ambassador to share her love for the sport and inspire others to pick up a racket for themselves and their community.

"I'm now 70, and my social life has been brimming with fun, wonderful friendships and exciting activities ever since I joined my club. My physical health has improved greatly, from weight loss to lower blood pressure and better blood test results. My emotional health is excellent due to having so many exceptional friends and relationships."

Grouper Creates Value for Health Plans

Grouper creates value for health plans in numerous ways. Grouper members have improved health and lowered costs as a result of participating in group activities. Members choose Grouper through the supplemental fitness benefit, which represents an attractive option for older adults who prefer doing activities with friends, and one that is more cost-effective than gyms for health plans. Lastly, Grouper creates and strengthens organic social networks, which can be used to more effectively engage health members in many ways, including addressing social factors.

1. Improved Member Health

The Grouper platform improves member health through multiple pathways. Its directory makes finding curated, local and online activities highly accessible, lowering barriers for

Grouper Creates Value for Health Plans *(continued)*

trying new groups and activities. Grouper also helps members engage more deeply in their chosen pursuits. As a result, members create new and deeper friendships. These meaningful social connections reduce the risk of mortality and of chronic conditions, including cardiovascular, metabolic, mental health and cognitive diseases. Each activity offers additional health benefits, e.g., walking for cardiovascular health and chess for cognitive health. Going beyond group activities, Grouper's platform also promotes adherence to applicable health promotion activities like seasonal vaccines and age-appropriate screenings.

2. Lower Supplemental Benefit Expense

Health plans offer Grouper memberships as part of their supplemental fitness benefits. Grouper represents a more cost-effective choice to traditional gym vendors, reducing costs by 25% – 50%. As Grouper continues to grow in popularity among health plan members over the age of 65, health plans can correspondingly narrow their gym networks and lower costs with remaining vendors. Alternatively, health plans can incorporate incentives for participating in gym-based activities into the Grouper model, replacing a membership model with one that rewards and incentivizes the activity itself.

3 Member Growth & Retention

Grouper benefits are popular because they reward members for doing what they love. Members value group activities with friends 10 times more than gyms. Gyms are expensive and used by only 5% of Medicare Advantage members whereas 60% of members already engage in group activities. Benefits that cover the costs of group activities are more affordable for plans, and members value and utilize them more than their gym memberships—a win-win. In addition to member satisfaction and retention, there are many opportunities for member growth through the extensive network of partners that make up the Grouper directory.

4. STARS

Grouper's work around group activities can improve a plan's Star Ratings. Star Ratings were created by the Centers for Medicaid and Medicare (CMS) to help guide the public in evaluating Medicare Advantage plans by assessing a plan's ability to improve health and reduce disparities. Grouper creates organic social networks that are a powerful tool for disseminating health-related information and engaging members in healthy behaviors. Also, Grouper's ability to support members in doing activities they love leads to members who are satisfied and more likely to engage. Once engaged, gaps in care can be closed more easily. The resulting improvements in health literacy and rates of health promoting activities (cancer screenings, flu vaccines, etc.) that can be spread through these engaged member networks can significantly increase STAR ratings.

Grouper Creates Value for Health Plans *(continued)*

5. Health Equity

Group activities are, by their nature, more accessible to members with social risk factors (SRF). Grouper's ability to reach and engage these members would directly feed into Health Equity Index (HEI) reward, which replaces the current reward factor for 2027 STARS. Health plans can leverage Grouper's network of activity groups (e.g., senior centers, libraries, social organizations, veterans organizations, and sport clubs) to engage and optimize outcomes for members with qualifying SRFs. In addition, Grouper's online virtual platform offers health-focused content in a culturally competent manner in dozens of languages. For example, Grouper's online virtual platform offers classes on managing chronic diseases. They also have classes on how to access and use Special Supplemental Benefits for the Chronically Ill (SSBCI) benefits, helping members better navigate benefits that can directly address their social needs (e.g., food, housing, and transportation).

Conclusion

Social isolation among older adults represents a critical public health crisis with far-reaching consequences for individual and community well-being. The evidence is clear: a lack of social connection has significant impacts on mortality and disease comparable to many of the leading risk factors such as smoking and physical inactivity. The biological and behavioral consequences of isolation create cascading negative health outcomes that can rapidly deteriorate an older adult's quality of life. As our society ages and traditional community structures for older adults erode, the importance of developing and maintaining strong social connections only grows.

Through a social fitness movement that connects individuals meaningfully through group activities, Grouper offers a clear, direct, person-driven and cost-effective approach to addressing this issue. By connecting isolated older adults to social communities, supporting existing social networks, and creating new opportunities for connection, Grouper tackles root causes of social isolation for older adults. Grouper's work on social connection adds value to health plans whose goals are closely aligned with our mission: better serve their members with relevant offerings, improve health, and address health inequities. Through innovative platforms like Grouper, we have the opportunity to help older adults be happier and healthier while addressing a critical public health opportunity—building more resilient, connected communities that support healthy aging for all.

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