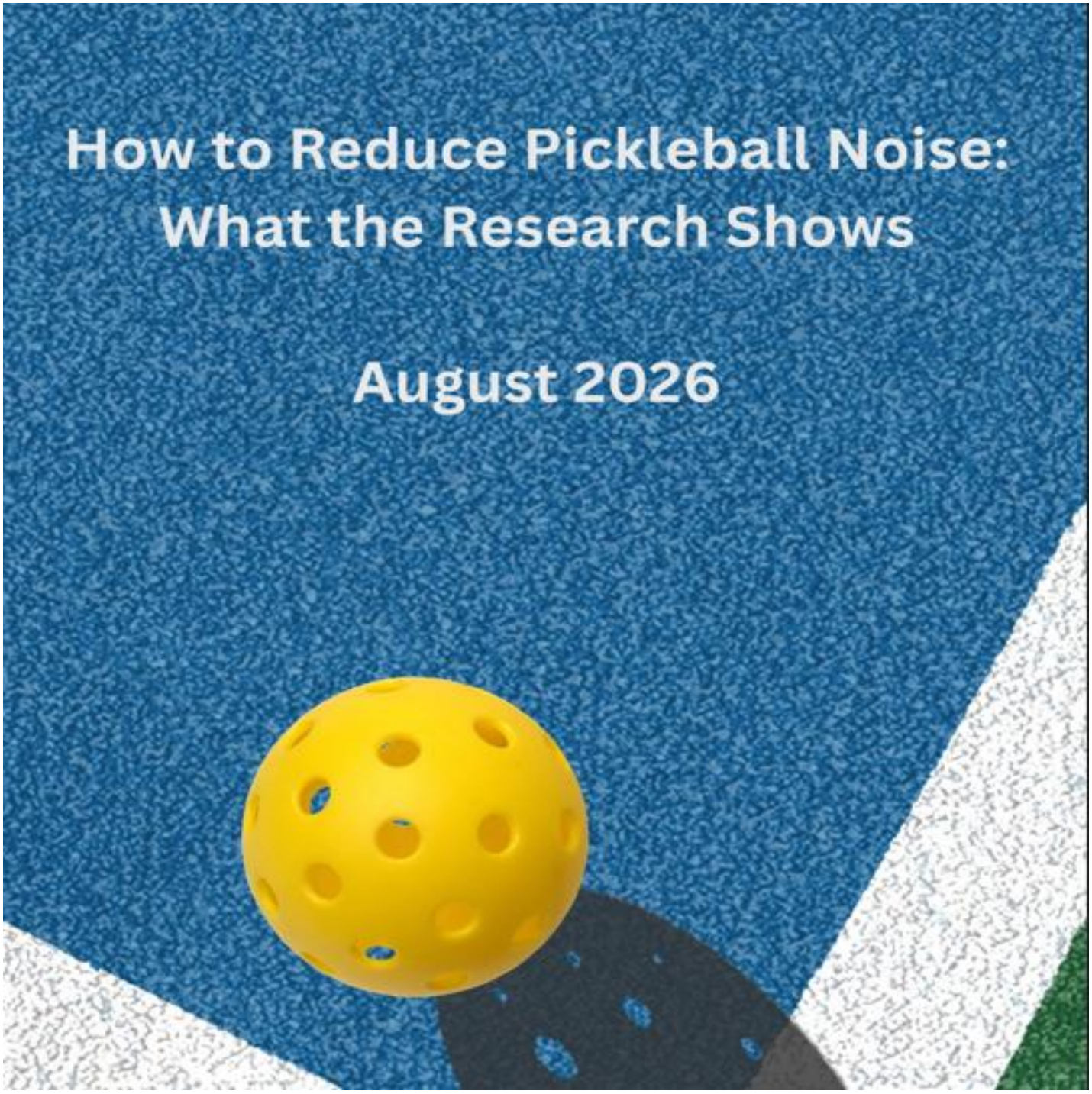
The National Task Force On Pickleball Noise



quiet.
COMMUNITIES

How to Reduce Pickleball Noise:

What the Research Shows

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Executive Summary

Pickleball is one of the fastest-growing sports in the United States, often played for extended hours in close proximity to residential areas. Pickleball produces a frequent, impulsive “popping” sound thousands of times per day. The popping noise is frequently reported to be audible inside nearby homes and has a significant impact on health and well-being for nearby neighbors

This white paper uses results from two community-based data sets to evaluate which noise mitigation strategies successfully reduce the impact of the noise on nearby neighbors.

Key findings:

- Increasing the distance between pickleball courts and homes decreases the impact of noise on neighbors.
- Thick vinyl acoustic barriers do not appear to reduce the impact of noise on neighbors, at this time.
- Limiting hours of play may not reduce the impact of noise on residents.
- Using quiet paddles and balls is unlikely to decrease the impact of noise on residents. If foam balls can be required and supervised, the impact may be reduced.

Background

Pickleball produces a new type of impulsive noise in residential settings, creating challenges for community leaders. The sport has expanded rapidly, with more than 4,000 new locations and 18,445 courts added in the USA in 2024 (USA Pickleball) , often by converting a single tennis court into four pickleball courts. Its popularity, higher player density, and equipment produce substantially more noise than tennis. As courts proliferate, noise-related disruptions have led to widespread community conflict. The issue has generated hundreds of news reports, extensive social media activity, and an estimated 200+ legal claims in the United States

Decades of research show that chronic noise exposure, especially from transportation noise, leads to adverse health impacts. More recently, chronic exposure to pickleball noise has been associated with lifestyle disruption and adverse health effects. An audio sample from four courts is available at https://zenodo.org/records/15566001.

Pickleball noise presents challenges for community decision makers, who must balance benefits for players with potential impacts on nearby residents and broader resource constraints.

Attempts to mitigate the noise have included 1) appropriate setback distances between homes and courts; 2) acoustic sound barriers; 3) limited hours of play; and 4) quiet paddles/balls.

Purpose

This white paper presents early research findings on whether common noise-reduction strategies are linked to fewer reported problems among nearby residents.

Methods

Data for this analysis were drawn from two primary sources.

- **A community pilot survey** of 264 impacted communities was used to characterize the reported impacts of pickleball noise and collect information on exposure and mitigation in place. Residents lived between 10 feet and 1000 feet from courts. (Pilot Survey of 264 Communities, Acoustical Society of America 2026).
    - The effectiveness of each form of mitigation was evaluated by residents who lived within 1000 feet of pickleball courts.
    - Several questions assessed the ability to enjoy one's home. Responses were all evaluated on a five-point Likert scale indicating frequency of impact. Answers of "never", "sometimes" or "occasionally" impacted were categorized as "able to enjoy home". Answers of "often" or "always" were categorized as "unable to enjoy home."
    - Logistic regression was used to estimate how factors, like exposure and mitigation, relate to the likelihood that residents report negative impacts. When assessing the effectiveness of vinyl acoustic barriers, setback distance was also considered (covariate).
- Observational data were drawn from a **City of Martinez, California community survey** of residents living within 500 feet of 8 pickleball courts. This survey, distributed to all residents within a defined geographical zone in Martinez, offers an initial understanding of how commonly impacts are experienced among nearby neighbors, following mitigation efforts. The Martinez Survey provided descriptive statistics. (Martinez, California Survey)

Key Findings

1. Increasing setback distance decreases the impact of noise on neighbors.

In the pilot survey, 385 respondents living between 10-1000 feet from courts reported on the impact of the noise.

Response	**<100 feet from courts** Responses (percentages)	**100-300 feet from courts** Responses (percentages)	**>300 feet from courts** Responses (percentages)	**Adjusted odds ratio for<100 feet vs >300 feet**
Unable to feel calm at home	145 (86.8%)	91 (76.5%)	65 (65.7%)	3.52 (1.85, 6.69)*
Unable to socialize, enjoy home	120 (71.9%)	72 (60.5%)	120 (71.9%)	3.07 (1.77, 5.34)*
Unable to sleep undisturbed	85 (50.9%)	144 (37.0%)	26 (26.3%)	3.18 (1.81, 5.57)*
Unable to work productively at home, concentrate	41 (41.4%)	6 (55.5%)	114 (68.3%)	3.42 (1.96, 5.98)*

Results from Community Pilot Survey 2026

*Survey data were stratified by distance (<100, 100-300, 300–500, 500–1,000, and >1,000 feet), but sample sizes in the latter three groups were insufficient for statistical analysis.

- Increasing setback distance between courts and homes leads to improved ability to enjoy one's home. There is a statistical correlation between setback distance and the ability to enjoy one's home for people living < 100 feet compared to >300 feet.
- However, even at >300 feet, levels of disruption remain very high and our data show meaningful impacts persist for some residents living at distances up to 1000 feet from the courts.
- In the Martinez, California survey 41% of all respondents living within 500 feet of courts noted that the court activity negatively affected their sleep, relaxation, work-from-home or overall neighborhood experience. The survey did not stratify residents into subgroups with 500 feet of courts.

2. Currently, there is no evidence that vinyl sound barriers effectively reduce the noise impact on neighbors.

Respondents from 40 different locations (defined by ZIP code) reported local courts with thick vinyl sound barriers. Their responses were compared with those from 206 locations without thick vinyl sound barriers. Setbacks ranged from 100-1000 feet.

Response to pickleball noise	**Acoustic vinyl barriers present** Responses (percentages)	**Acoustic vinyl barriers not present** Responses (percentages)	**Adjusted odds ratio for barriers present**
Described the noise as loud	38 (66.7%)	226 (68.9%)	1.06 (0.57, 1.98)
Unable to socialize, enjoy home	35 (61.4%)	204 (62.2%)	1.07 (0.58, 2.00)
Unable to sleep undisturbed	23 (40.4%)	132 (40.2%)	1.11 (0.61, 2.03)
Unable to work productively at home, concentrate	30 (52.6%)	191 (58.2%)	0.79 (0.44, 1.44)

Results from Community Pilot Survey 2026

- Acoustic vinyl barriers did not lead to fewer residents describing the pickleball noise as “loud”. This was true regardless of the distance between courts and homes.
- Acoustic vinyl barriers did not lead to any significant improvement in the ability to socialize or enjoy home, work productively, or sleep undisturbed.
- Overall levels of disruption remain high even with thick acoustic vinyl barriers present. 2/3 of people with vinyl barriers in place describe the noise as loud and more than 6 in 10 said they we unable to enjoy their homes.

3. Limiting hours of play does not effectively reduce the noise impact on neighbors.

In the community pilot survey, 379 respondents provided information about the impact that duration of exposure to pickleball noise (hours/week) had on their lives.

Impact	Total exposure (hours/week	Responses (percentages)	P value (<0.05 is significant
Unable to feel calm at home	Less than 50 hours	52 (72.2%)	0.1381
	50-70 hours	51 (78.5%)	
	More than 70 hours	157 (80.5%)	
Unable to enjoy being indoors or outdoors at your own home	Less than 50 hours	48 (66.7%)	0.0063**
	50-70 hours	50 (76.9%)	
	More than 70 hours	164 (84.1%)	
Unable to socialize, enjoy home	Less than 50 hours	43 (59.7%)	.0.1984
	50-70 hours	37 (56.9%)	
	More than 70 hours	125 (64.1%)	
Unable to sleep undisturbed	Less than 50 hours	20 (27.8%)	0.0094**
	50-70 hours	21 (32.3%)	
	More than 70 hours	89 (45.6%)	
Unable to work productively at home or concentrate	Less than 50 hours	36 (50.0%)	0.1791
	50-70 hours	32 (49.2%)	
	More than 70 hours	121 (62.1%)	

Results from Community Pilot Survey 2026

- Fewer hours of exposure were linked to slightly less disruption at home. People with less exposure reported somewhat better sleep and greater enjoyment of being indoors and outdoors at home.
- However, even when hours of noise exposure were limited to less than 50 hours/week, disruption remained very high. Even with less than 50/hours/week, almost ¾ of people said they were unable to feel calm at home due to the noise.

Findings from the Martinez, California survey also show that reducing hours does not lead to significant improvement for residents. After reducing open hours of play to 20 hours/week in Martinez, CA, half of all respondents still reported negative impacts from pickleball noise compared to years prior.

4. The role of quiet pickleball paddles and balls is unclear.

Martinez, CA had pickleball ambassadors recommending quiet equipment without documented benefits in the survey. The Martinez staff report that accompanied the survey states:

> *The pickleball industry has promoted the use of "quiet-compliant" paddles as a potential mitigation measure, and these products are now widely available through major retailers. However, many players view this change as comparable to altering a baseball or golf ball, arguing that it fundamentally changes the feel and performance of the game. Because the use of quiet-compliant equipment is not preferred by pickleball players, this solution alone cannot resolve the noise phenomenon in most communities where conflicts have emerged.*

The Community Pilot Survey did not have the statistical power to analyze the potential benefits of quiet racquets and balls. In the survey, six respondents reported that playing with quiet balls was enforced at their neighborhood courts. All six had homes located within 100 feet of courts. Only one commented "no impact on daily activities". The other five reported significant disruption.

Discussion

Setback distance is currently the only mitigation measure that has been consistently shown to statistically decrease the impact of pickleball noise on neighbors. Some communities have begun to take proactive steps to adopt standard setbacks of 300-1000 feet. The National Task Force on Pickleball Noise, after reviewing the evidence, has recommended 1000-foot setbacks for new court installations.

Thick vinyl acoustic barriers may reduce decibel (sound) levels but currently, there is no data to show that they reduce the overall impact of pickleball noise on neighbors. Often, acoustic professionals focus on sound levels (decibels) only. However, decibels are responsible for only about ⅓ of the impact of noise on humans. (It's More Than Just Decibels: Acoustical Society of America, 2025)

Early reports suggested that reducing the total time exposed to pickleball noise would reduce impacts on neighbors. However, more recent data do not support this conclusion. Results from both the Community Pilot Survey and the Martinez, CA survey show that even with a marked reduction in open court hours, a significant proportion of neighbors were still negatively impacted.

While there is not enough data to fully evaluate whether quiet pickleball paddles and balls help to reduce the impact of noise on neighbors, abundant reports from community members suggest that only required, supervised use of foam balls leads to successful mitigation. Given that decibel reduction alone with acoustic barriers has not led to improvements for neighbors, it is highly unlikely that decibel reduction alone with quiet balls or paddles will help significantly.

The research is solid: Human health and well-being are impacted by many components of noise. These include not only loudness (decibels), but also impulsivity (short popping), repetition, irregular pattern, and total exposure. Additional factors include being able to hear the noise inside one's own home or at night, impact on personal relationships, and social conflict.

Limitations

The community pilot study may be underpowered to detect modest effects; therefore, non-significant findings should not be interpreted as evidence of no association. The sample was purposefully limited to residents who feel impacted by pickleball, which supports detailed characterization of affected communities but limits generalizability. Outcomes are self-reported and the analysis is cross-sectional, precluding causal inference.

The Martinez survey results were limited to a specific geographical location and included only residents living within 500 feet of 8 pickleball courts.

Implications for Policy and Practice

Decision makers are challenged to balance the benefits of pickleball courts, the potential for harm, and the resources required. Conversion of existing tennis courts to pickleball courts is relatively inexpensive. However, when those tennis courts are located near homes, the results are often problematic when they are converted to pickleball courts, impacting the health and quality of life of residents and requiring further use of municipal resources to address the conflict. When making decisions, the following are important to consider:

- Adequate setbacks are the best tool for successful long-term placement of pickleball courts. Specific evidence-based recommendations for new and existing courts has been published elsewhere (pickleballnoise.org)

- Thick vinyl acoustic barriers are expensive and do not appear to reduce the impact of pickleball noise, at this time. Given their documented lack of effectiveness, it is recommended that communities approach investments in thick vinyl barriers with extreme caution.

- Reducing hours of play is unlikely to be successful. Communities that choose this approach should ask nearby neighbors for feedback within 2 to 3 months after it is put in place.

- The use of quiet balls and paddles, at least at present, is unlikely to lead to successful noise mitigation. In rare situations where the use of foam balls can be required and supervised, noise concerns may be successfully resolved.

Conclusion

The human impacts from pickleball noise are real and measurable. Reducing exposure duration (hours of play) or installing acoustic barriers to reduce the noise do not prevent the harm to neighbors. In contrast, appropriate setbacks appear to offer more consistent protection

References

Pickleball Survey of 264 Communities, Acoustical Society of America, 2025

Martinez, California Survey, 2025

American Public Health Association Statement on Noise and Health, 2021

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