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Research article

Effects of Repeated 1RM Testing on Strength, Velocity, and Load-Velocity Profiling: A Repeated Measurement Trial

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Abstract

Maximal strength assessment, particularly the one-repetition maximum (1RM) test, is essential in resistance training and sports science. Velocity-based metrics like mean concentric velocity (MCV) at 1RM and load-velocity profiling enhance neuromuscular monitoring, yet the stability of parameters such as load-velocity slope (VL-Slope) and peak power position (PP-Position) over repeated tests remains uncertain. Thus, 14 resistance-trained male participants (age: 25.2 ± 3.3 years; training experience: 2.1 ± 2.0 years) performed five 1RM tests in the squat and bench press over a seven-week period. Strength and velocity parameters, including 1RM, MCV at 1RM, VL-Slope, and PP-Position, were assessed using an inertial measurement unit. A repeated-measures ANCOVA was conducted to analyze changes over time, with effect sizes quantified using partial eta squared (ηp^2) and standardized mean differences (SMD). No significant training-induced adaptations were observed for 1RM or MCV at 1RM across all testing sessions ($p > 0.05$). VL-Slope and PP-Position remained stable, indicating no systematic changes over time. However, exercise-specific differences were found, with higher absolute loads and velocities in the squat compared to the bench press. Additionally, PP-Position was significantly higher in the squat, suggesting that peak power output occurs at a higher relative load for lower-body exercises. Repeated 1RM testing does not appear to induce relevant strength or velocity adaptations over time. Coaches and practitioners should consider exercise-specific differences in force-velocity characteristics when designing training programs and interpreting performance diagnostics.

Key words: One-repetition maximum, velocity-based training, load-velocity profiling, strength assessment, resistance training.

Introduction

Maximal strength can be assessed either dynamically or isometrically, with both approaches capturing distinct aspects of neuromuscular function (James et al., 2024). In applied training settings, however, dynamic strength assessments like the one repetition maximum (1RM) test are far more common due to their simplicity, practicality, and minimal equipment requirements. Dynamic maximal strength, defined as the ability to lift the heaviest possible weight for one repetition with proper technique, is a cornerstone of strength training and a central focus of sports science research (Westcott, 2012; Suchomel et al., 2018). The 1RM test is widely recognized as the gold standard for assessing muscle strength in non-laboratory settings (Levinger et al., 2009). Defined as the maximal weight that can be lifted once with correct lifting technique, the 1RM test is notably straightforward and requires relatively inexpensive non-laboratory equipment (Kraemer et al., 2006). Its practical applicability, combined with its ability to replicate movement patterns used in training, has led to its widespread adoption by athletic trainers, rehabilitation specialists, and strength and conditioning professionals for quantifying strength levels and evaluating training progress (Kraemer et al., 1995; Levinger et al., 2009).

Beyond absolute strength assessment, recent advancements in strength diagnostics have emphasized the importance of velocity-based metrics, such as mean concentric velocity (MCV) at 1RM and load-velocity profiling, to enhance training prescription and performance monitoring (González-Badillo et al., 2011; García-Ramos et al., 2018). These parameters provide real-time insights into neuromuscular function, allowing practitioners to tailor training loads based on movement velocity rather than relying solely on percentage-based intensity models (Jovanovic and Flanagen, 2014; Held et al., 2022). The 1RM test plays a crucial role in evaluating strength levels, monitoring progress, and tailoring training programs, making it one of the most commonly used strength assessment tools in both research and practical settings (Kraemer et al., 2006; Levinger et al., 2009). Despite its widespread use in different populations as a reliable and valid strength assessment tool, current research has primarily focused on short-term test–retest reliability. In contrast, little is known about the long-term effects of frequent 1RM testing alone on strength development and neuromuscular adaptation in the absence of structured resistance training (Seo et al., 2012). While regular strength assessments have been shown to provide critical feedback and may contribute to performance improvements, it remains unclear whether repeated exposure to maximal strength testing continues to yield benefits or if performance gains plateau over time. This uncertainty is critical for both practical training applications and scientific investigations aimed at optimizing strength training methodologies.

One other key area of research that has gained attention in recent years is the stability of load-velocity and power profiles over time. Load-velocity profiling provides valuable insights into an athlete's neuromuscular status and performance trends (García-Ramos et al., 2018; Pérez-Castilla et al., 2020). However, while some studies suggest that VL-Slope and PP-Position remain stable over repeated testing sessions (Jukic et al., 2022; Ruf et al., 2018), the long-term reliability of these parameters remains underexplored, particularly in the context of frequently repeated

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1RM testing. The degree to which VL-Slope and PP-Position exhibit sensitivity to fatigue, adaptation, or training-induced changes is not yet fully understood, necessitating further research into their validity as long-term monitoring tools (Alcazar et al., 2018).

Thus, our study aims to address existing gaps in the understanding of the effects of repeated maximal strength testing on strength development and neuromuscular adaptation. By systematically examining the adaptations of 1RM, MCV at 1RM, VL-Slope, and PP-Position across multiple testing sessions, our research seeks to determine whether these parameters exhibit meaningful changes due to repeated exposure. Given previous findings on the relative stability of load-velocity profiling (Jukic et al., 2022; Ruf et al., 2018), it is hypothesized that VL-Slope and PP-Position will remain largely unchanged, while potential improvements in 1RM performance could emerge. The results of this study hold practical significance for both researchers and practitioners, as they will help refine strength assessment protocols, enhance training periodization strategies, and improve the interpretation of performance diagnostics. A deeper understanding of these factors could contribute to more effective training prescriptions, minimizing unnecessary fatigue while ensuring accurate strength monitoring in both athletic and rehabilitative settings.

Methods

Participants

An a priori power analysis ($\alpha = 0.05$, statistical power ($1-\beta$) = 0.95, moderate effect sizes for partial eta squared ($\eta_p^2 = 0.9$; $F = 0.31$), correlations between repeated measures $r = 0.7$, number of measurements = 4) for repeated measurement variance analysis using g*Power (Version 3.1.9.6) revealed a sample size of $n = 13$. This power calculation was based on detecting significant changes in the primary outcome variable 1RM over time. To account for potential dropouts, 14 male participants (age: 25.2 ± 3.3 yrs; height: 1.80 ± 0.05 m; body mass: 77.2 ± 7.7 kg; resistance training experience: 2.1 ± 2.0 yrs; bench press 1RM 107.5 ± 19.9 %BM; squat 1RM: 149.6 ± 32.8 %BM) were recruited for this repeated-measures study. All participants were at least 18 years old, had sufficient proficiency in performing the testing exercises with proper technique, and had no history of skeletal or neuromuscular impairments within the past six months. Participants were instructed to maintain their usual training routines throughout the study period and to avoid any form of training periodization (e.g., hypertrophy phases) as well as bulking or cutting interventions. Prior to participation, all participants were familiar with the testing process, the required equipment, and the corresponding exercises. The study protocol met all international ethical standards and complied with the Declaration of Helsinki (Harriss and Atkinson, 2015). In addition, the study received approval from the local research ethics committee (012025IST233). All participants signed a written informed consent after receiving all relevant study information.

Data sampling

Each participant completed five laboratory visits. During each visit, their one-repetition maximum (1RM) for the bench press and squat were assessed. The first four visits (1, 2, 3 and 4) were interspersed by one week, while the final visit (5) occurred four weeks after visit 4. A standardized warm-up protocol was performed prior to each testing day, consisting of 5min self-selected dynamic stretching and joint mobilization exercises, followed by the below described testing procedure. All measurements were made at comparable times of the day for each participant to account for potential circadian effects on determined physiological measures and performance. In addition to the time of the day, temperature and humidity in the testing environment were kept constant. All tests were supervised by certificated strength coaches. The participants were asked to refrain from any strenuous activity 24-48 h prior to each testing session and day. The procedure used for assessing bench press and squat 1RM was described in detail by Kraemer and colleagues (Kraemer et al., 1995). Briefly, a warm-up set of five repetitions at 50% of the predicted 1RM was performed, followed by four repetitions at 80% of the presumed 1RM. This was followed by a single repetition at 90% of the presumed 1RM. Subsequently, further sets with increasing load, using small increments, were performed until failure. To minimize fatigue and ensure maximal performance, the 1RM was typically reached within the 3rd or 4th attempt with near-maximal or maximal load, on all testing days and for all participants. During the squat, a depth of the hips below the top of the patella was required, which was visually controlled by a certified and experienced strength and conditioning coach. Participants were encouraged to perform concentric actions explosively at maximally intended concentric velocity. The mean concentric velocity of all lifts was measured with an IMU-based device (Enode Sensor, Blaumann & Meyer – Sports Technology UG, Magdeburg, Germany; VMP) (Blaumann and Meyer, 2021), which revealed good validation data (ICC = 0.91, CV = 7.6 %, SEM = 0.01 m/s) compared to a linear transducer (Held et al., 2021). The mean concentric velocity data (MCV) during the 1RM was utilized for further data processing. Furthermore, MCV data was used to determine the load-velocity profile (González-Badillo et al., 2011) for each participant for each day for both exercises. This profile was derived from 4 to 6 progressively increasing loads per session, beginning at approximately 50% of the estimated 1RM and increasing in 5–10% increments up to the actual 1RM. At each load, participants performed 1-2 technically valid repetitions, and the highest MCV value was recorded. These values were plotted against the corresponding relative load (%1RM), and a linear regression was applied to determine the individual load-velocity slope (VL-Slope). Additionally, the power profile was determined based on these load-velocity profiles. Subsequently, the peak power position (PP-position), defined as the percentage of 1RM at which the maximal power output was achieved, was identified and used for further data processing.

Statistical analysis

Data are presented as means ± standard deviation. Normal distribution was verified via the Shapiro–Wilk test ($p \geq 0.1$). Variance homogeneity was visually verified via residual plotting (Kozak and Piepho, 2018). Several separately conducted 2 (exercise: bench press vs. squat) × 2 (time: lab visit 1, 2, 3, 4 and 5) repeated measurement variance analysis with covariate (rANCOVA) (Vickers and Altman, 2001) were computed for 1RM, MCV at 1RM, VL-Slope and PP-Position. Thereby, baseline (lab visit 1) test parameters were used as covariate. rANCOVA effect sizes were given as partial eta squared (η_p^2) with ≥0.01, ≥0.06, and ≥0.14 indicating small, moderate, and large effects, respectively (Cohen, 1988). In case of significant rANCOVA effects, Bonferroni post-hoc tests were subsequently computed. For pairwise effect size comparison, standard mean differences (SMD) were additionally calculated (trivial: SMD <0.2, small: 0.2 ≤SMD <0.5, moderate: 0.5 ≤SMD <0.8, large SMD ≥0.8) (Cohen, 1988). Additionally, the minimal detectable change (MDC) for both squat and bench press was calculated using 1.654* standard error of measurement (SEM) * √2 (Furlan and Sterr, 2018). All statistical analyses were conducted using R (version 4.0.5) and RStudio (version 1.4.1106) software. For all calculations, a *p*-value of less than 0.05 was considered statistically significant.

Results

Repeated 1RM & MCV at 1RM

The rANCOVA revealed no significant time*exercise interaction effects (Figure 1) with only small to moderate effect sizes for both 1RM ($p = 0.18$; $\eta_p^2 = 0.015$) and MCV at 1RM ($p = 0.42$; $\eta_p^2 = 0.008$). Similar no significant time effects with only small to moderate effect sizes for both 1RM ($p = 0.53$; $\eta_p^2 = 0.002$) and MCV at 1RM ($p = 0.22$; $\eta_p^2 = 0.011$) were observed. Furthermore, pairwise comparison revealed only trivial SMD for both 1RM (SMD ≤ 0.23) and MCV at 1RM (SMD ≤ 0.23). Despite, non-significant ($p = 0.06$) and only small exercise effects for 1RM, pairwise comparison revealed large SMD (≥ 1.33) between bench press and squat. The corresponding mean bench press and squat 1RM data are given (see Figure 1A). Regarding the MCV at 1RM, the rANCOVA revealed statistically relevant exercise effects ($p \leq 0.001$; $\eta_p^2 = 0.301$), with lager pairwise effect sizes (SMD ≥ 1.65). The MCV at 1RM was 0.23 ± 0.05 m/s and 0.37 ± 0.08 m/s for bench press and squat, respectively. The MDC were 10.0 kg for squat and 5.6 kg for bench press.

Load-velocity & Power profiles

Load vs. velocity and load vs. power data are given in Figure 2. Both VL-Slope ($p = 0.16$; $\eta_p^2 = 0.034$) and PP-Position ($p = 0.11$; $\eta_p^2 = 0.043$) revealed no significant time*exercise interaction rANCOVA effects. In addition, no significant time effects for both VL-Slope ($p = 0.99$; $\eta_p^2 = 0.031$; pairwise SMD = 0.19 to 0.89) and PP-Position ($p = 0.97$; $\eta_p^2 = 0.036$; pairwise SMD = 0.03 to 0.98) could be observed. Furthermore, the rANCOVA revealed no significant exercise effects ($p = 0.29$; $\eta_p^2 = 0.019$; pairwise SMD = 0.2 to 1.03) for VL-Slope between bench press (-0.008 ± 0.002) and squat (-0.008 ± 0.003). In contrast, PP-Position revealed significant exercise effects ($p = 0.02$; $\eta_p^2 = 0.091$). Subsequently performed post hoc tests revealed significantly higher ($p \leq 0.05$; pairwise SMD = 0.12 to 0.93) PP-Positions for squat (80.2 ± 17.7 %1RM) compared to bench press (65.6 ± 7.5 %1RM).

Discussion

This present study did not identify any relevant training-induced adaptations over time for either the squat or the bench press in terms of 1RM and MCV at 1RM, indicating that repeated strength assessments alone did not lead to noticeable improvements in maximal strength or movement velocity. However, exercise-specific differences were evident, with higher absolute loads and mean concentric velocities observed in the squat compared to the bench press. Furthermore, the MDC values (10.0 kg for the squat and 5.6 kg for the bench press) highlight the minimum detectable strength changes required to exceed measurement variability. Similarly, no significant changes over time were observed for VL-Slope or PP-Position, suggesting that load-velocity and power profiles remained stable throughout the study period. Nevertheless, PP-Position was significantly higher in the squat compared to the bench press, indicating that peak power output occurs at a higher relative load in the squat.

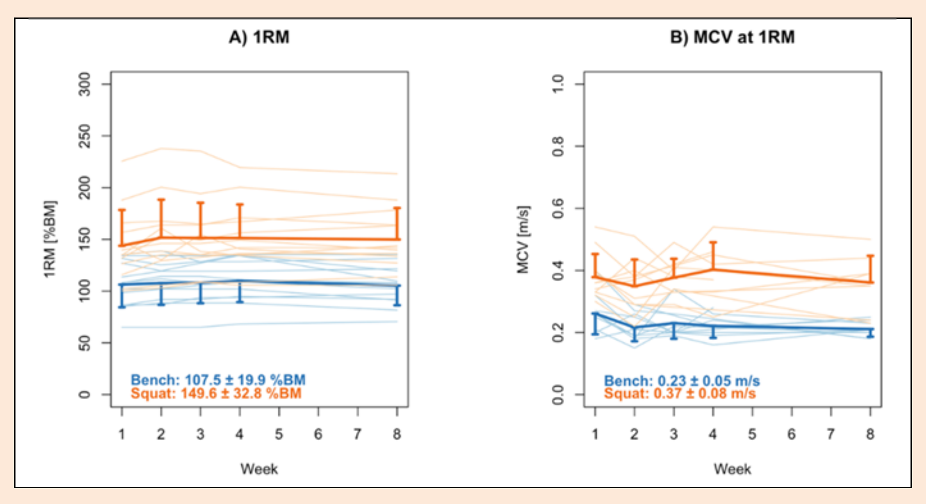

Figure 1. (A) One repletion maximum data (1RM) and (B) mean concentric velocity (MCV) at 1RM data of the whole sample are given. Thereby, bench press and squat are displayed in blue and orange, respectively. Mean and standard derivation are given in thick lines. Individual data are given in thin lines. 1RM are given as percentage of body mass (%BM).

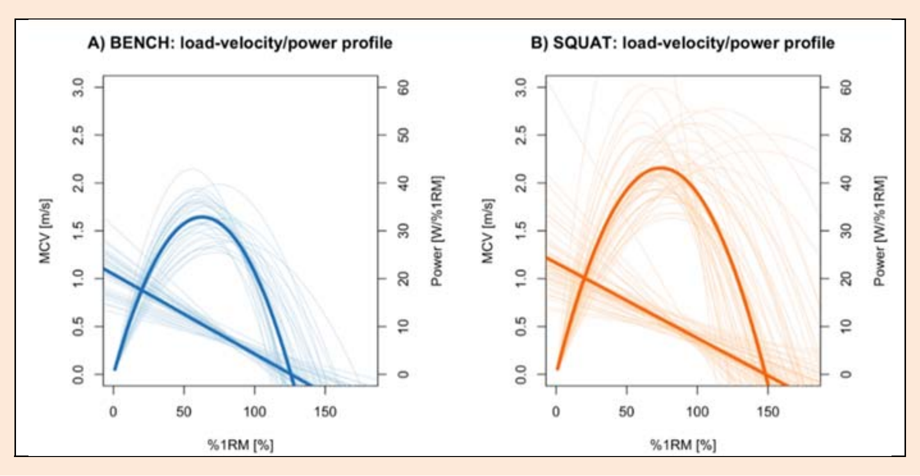

Figure 2. Load vs. velocity and load vs. power profile of (A) bench press and (B) squat data. Velocity data are as given in mean concentric velocity. Load data are given as percentage of one repetition maxim (%1RM). Power data were normed to the individual 1RM and therefore given as Watt per 1RM (W/1RM).

Our findings revealed no meaningful changes over time in either 1RM or MCV at 1RM across the five testing sessions, indicating that repeated maximal strength assessments alone do not induce measurable training adaptations. This finding aligns with previous dose-response research demonstrating that significant strength gains generally require a structured resistance training intervention (Rhea et al., 2003; Suchomel et al., 2018). Although the weekly testing protocol involved high intensities (≥90-100% 1RM) and moderate per-session volume, including warm-up and incremental 1RM attempts, the overall training dose was low, especially in terms of frequency, progression and cumulative workload. According to Peterson et al. (2005), trained individuals require at least 2 sessions per week, with an average intensity of 80-85% 1RM, and ~4 sets per muscle group to elicit significant strength gains. Grgic et al. (2018) similarly found that higher training frequencies (≥2x/week) are more effective, but effects are largely volume-dependent, not frequency per se. Although our protocol involved very high intensities, it falls below the recommended frequency and volume thresholds, especially for trained individuals with >1 year of resistance training experience. Another possible explanation for the lack of improvement could be the training history of the participants. Strength adaptations are known to result from a combination of neural and morphological factors, with early gains primarily driven by neural adaptations and hypertrophic changes typically requiring at least 6-8 weeks (Folland and Williams, 2007; Balshaw et al., 2019). The sample consisted of individuals with an average of 2.1 ± 2.0 years of resistance training experience, suggesting that most participants had already undergone some degree of neuromuscular adaptation. This is relevant, as untrained individuals often show faster initial strength improvements compared to trained athletes due to rapid neural adaptations (Moritani and deVries, 1979; Sale, 1988). In more advanced stages of strength development, progress typically requires higher training volumes or greater stimulus variation (Grgic and Schoenfeld, 2018). Additionally, the absence of a structured progression in load or volume during the testing period may have contributed to the lack of significant strength changes. Studies have demonstrated that progressive overload is a key factor for long-term strength development (Peterson et al., 2005; Schoenfeld et al., 2021). The repeated 1RM tests in the present study did not follow a structured training protocol but rather served as assessments, which may not have provided sufficient stimulus for adaptation (Wernbom et al., 2007; Zaras et al., 2014). Furthermore, a possible "familiarization effect" could have influenced the results. Research suggests that multiple testing sessions may be required for individuals to express their true maximal strength, especially in technically demanding exercises (Hopkins et al., 2001; Seo et al., 2012). However, since participants in the present study were already familiar with both the exercises and testing procedures, this factor was likely minimized.

The MCV values at 1RM observed in this study (0.23 ± 0.05 m/s for the bench press and 0.37 ± 0.08 m/s for the squat) were higher than commonly reported reference values, which typically range around 0.17 m/s and 0.30 m/s, respectively (Weakley et al., 2021). In contrast to well-trained or elite power lifters, moderately trained individuals, such as participated in this study, often lack the neuromuscular efficiency to fully express their maximal dynamic strength. As a result, 1RM attempts are frequently performed at a greater distance from the individual's isometric force capacity, which inherently allows for higher barbell velocities during the final repetition. Additionally, minor contributions may result from interindividual differences in movement strategy, bar path, and explosiveness, as well as the fact that all tests were performed with free weights, which tend to show slightly more variability in velocity profiles. Finally, even though a structured and progressive testing protocol was used, it cannot be ruled out that some participants terminated their attempts prior to reaching true maximal capacity, resulting in slightly submaximal lifts with correspondingly higher velocities.

Our analysis of VL-Slope or PP-Position showed no relevant changes over time, implying that the load-velocity relationship remains stable across multiple testing sessions. This finding aligns with previous research indicating that the slope of the load-velocity relationship (VL-Slope) is relatively consistent within individuals and primarily influenced by biomechanical and neuromuscular factors rather than short-term adaptations (García-Ramos et al., 2018; Pérez-Castilla et al., 2020). One possible explanation for the stability of VL-Slope over time is that the load-velocity relationship is an inherent characteristic of an individual's neuromuscular profile, which is not easily altered without targeted training interventions (Pérez-Castilla et al., 2020). Previous studies have shown that VL-Slope remains relatively unchanged (Ruf et al., 2018; Jukic et al., 2022). This may suggests that the slope of the load-velocity curve is largely determined by factors such as muscle fiber composition, force production capacity, and motor unit recruitment strategies, which do not fluctuate significantly over short time frames (Alcazar et al., 2018). Similarly, the lack of significant changes in PP-Position over time indicates that the relative load at which peak power output is achieved remains stable across sessions. PP-Position is a key parameter in power profiling, as it represents the optimal load for maximizing power output during resistance exercises (Cormie et al., 2007). The stability of PP-Position suggests that athletes naturally maintain a consistent force-velocity relationship, which does not fluctuate without systematic training interventions (Jiménez-Reyes et al., 2016). This finding is consistent with previous research demonstrating that PP-Position is relatively resistant to short-term changes and tends to be individualized based on movement mechanics and neuromuscular properties (Morin and Samozino, 2016). From a training perspective, the stability of VL-Slope and PP-Position supports the idea that load-velocity and power profiling can be reliably used for long-term monitoring of neuromuscular performance (Banyard et al., 2017). Since these parameters do not appear to fluctuate significantly in the absence of targeted interventions, practitioners can use VL-Slope and PP-Position to assess baseline neuromuscular characteristics and track long-term adaptations (García-Ramos et al., 2018). However, some studies suggest that velocity-based training protocols targeting specific adaptations (e.g., power development or maximal strength) can induce meaningful changes in PP-Position over longer periods (Harries et al., 2012; Jovanovic and Flanagen, 2014). This highlights the need for future research to examine whether specific training interventions can systematically shift VL-Slope or PP-Position in different populations and exercise modalities.

When comparing the squat and bench press, our data demonstrated higher absolute loads and movement velocities in the squat compared to the bench press, suggesting fundamental differences in the force-velocity characteristics of these two exercises. One potential explanation for the higher loads and movement velocities in the squat is the greater muscle mass involved. Squatting engages large muscle groups, including the quadriceps, hamstrings, gluteus maximus, and lower back muscles, which collectively produce higher absolute force outputs than the primarily upper-body muscles used in the bench press (Escamilla, 2001). Additionally, the squat exhibits a larger range of motion (ROM) than the bench press, which not only allows for greater force development throughout the movement (Fry et al., 2003) but also results in greater total mechanical work, as work is defined as force multiplied by displacement. Our study also found that PP-Position was significantly higher in the squat (80.2 ± 17.7% 1RM) than in the bench press (65.6 ± 7.5% 1RM). This indicates that peak power is generated at a higher relative load in the squat compared to the bench press, which has important implications for training design and performance optimization (Morin and Samozino, 2016). From a practical standpoint, the higher PP-Position in the squat suggests that power-focused training should emphasize heavier relative loads in lower-body exercises compared to upper-body exercises. This is consistent with prior research showing that optimal power output in lower-body movements is achieved at loads between 60-80% 1RM, whereas upper-body exercises tend to peak at 30-70% 1RM (Jidovtseff et al., 2011; Jiménez-Reyes et al., 2016). This has direct applications for velocity-based training, where training loads are adjusted based on movement velocity to maximize power output (Jovanovic and Flanagen, 2014). Additionally, the MDC (Furlan and Sterr, 2018) values (10.0 kg for the squat and 5.6 kg for the bench press) highlight the minimum strength changes required to exceed measurement variability. These values are critical for practitioners seeking to track performance changes over time (Hopkins et al., 2001), as they indicate that small increases in bench press strength may be detectable earlier than in the squat due to the lower MDC threshold (Banyard et al., 2017). This suggests that strength assessments should account for exercise-specific variability when interpreting longitudinal performance data.

While this study provides valuable findings on the stability of strength and velocity characteristics, several limitations must be acknowledged. Despite standardized technique assessments, potential variability in movement execution may have influenced the results, particularly in velocity-related measures. Although participants were instructed not to change their training or nutritional habits during the study, individual training behavior was not monitored and therefore could not be controlled or analyzed retrospectively. Additionally, the study did not differentiate between performance levels within the sample, limiting insights into potential subgroup differences. Future research should explore performance adaptations in distinct training populations, such as untrained individuals versus experienced lifters, and investigate alternative methods for assessing strength and velocity characteristics, including novel sensor technologies or machine-learning-based motion analysis.

Conclusion

In conclusion our study examined the stability of strength and velocity characteristics across repeated testing sessions in the squat and bench press. The findings indicate that no significant training-induced adaptations occurred over time for 1RM or MCV at 1RM, suggesting that repeated strength assessments alone do not elicit measurable improvements in maximal strength or movement velocity. Additionally, VL-Slope and PP-Position remained stable, reinforcing the idea that load-velocity and power profiles are relatively fixed neuromuscular characteristics in the absence of targeted training interventions. However, exercise-specific differences were evident, with higher absolute loads and movement velocities observed in the squat compared to the bench press. Furthermore, PP-Position was significantly higher in the squat, indicating that peak power output occurs at a higher relative load in lower-body exercises compared to upper-body exercises. The minimum detectable change (MDC) values (10.0 kg for the squat and 5.6 kg for the bench press) highlight the smallest strength improvements required to surpass measurement variability, emphasizing the importance of considering exercise-specific variability in strength assessments. From a practical perspective, these findings suggest that strength practitioners and coaches should consider exercise-specific differences in force-velocity characteristics when designing training programs. The MDC values indicate that small strength changes in the bench press are more easily detectable than in the squat, which is relevant for tracking training progress in longitudinal assessments. Furthermore, based on our data, performing 1RM tests alone does not appear to induce meaningful strength adaptations over time.

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Key points

- No strength gains from repeated 1RM testing: 1RM and MCV remained unchanged across five test sessions.
- Stable load-velocity and power profiles: VL-Slope and PP-Position showed no systematic changes, confirming their reliability for long-term monitoring.
- Differences between squat and bench press: Squats exhibited higher loads, velocities, and a significantly higher PP-Position than the bench press.
- Minimal detectable changes: 10.0 kg for squats, 5.6 kg for bench press – small improvements are detectable earlier in bench press.
- Relevance for training and diagnostics: Load-velocity profiles remain stable without targeted training.

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